

Supplementary Table S1. Instruments for causal estimation from BMI to BioT level.

Exposure	Outcome	SNP	Effect allele	Other allele	Chromosome	Genetic position	Effect allele frequency	Beta	Standard error of beta	P-value	Sample size
Body mass index (BMI)	Bioavailable testosterone levels	rs10630	T	C	5	140990108	0.253365	0.01367	0.00226991	1.7e-09	461
Body mass index (BMI)	Bioavailable testosterone levels	rs10993	G	A	8	143383694	0.45285	0.01242	0.00198907	4.2e-10	461
Body mass index (BMI)	Bioavailable testosterone levels	rs101607	C	G	11	76474827	0.21751	-0.0155	0.00242199	1.2e-10	461
Body mass index (BMI)	Bioavailable testosterone levels	rs101695	C	T	2	41637688	0.363139	0.01218	0.00205506	2.99e-09	461
Body mass index (BMI)	Bioavailable testosterone levels	rs101824	G	A	2	104242992	0.512223	0.01303	0.00197134	999e-11	461
Body mass index (BMI)	Bioavailable testosterone levels	rs104239	A	T	19	46182304	0.194358	-0.0340	0.00249869	3.40e-017	461
Body mass index (BMI)	Bioavailable testosterone levels	rs105058	C	A	12	19288508	0.860012	0.01848	0.00287086	1.2e-10	461
Body mass index (BMI)	Bioavailable testosterone levels	rs105100	T	C	10	118650996	0.247013	0.01756	0.00229886	2.19e-0989	461
Body mass index (BMI)	Bioavailable testosterone levels	rs106421	A	G	2	198950240	0.478377	0.01493	0.00197196	999e-14	461
Body mass	Bioavailable testosterone	rs107427	C	T	11	45438374	0.612239	0.01179	0.00202961	6.1e-09	461

index	testosterone	52							79			
(BMI)	levels											
Body	Bioavailabl											
mass	e	rs10							-0.0		1.90	
index	testosterone	7567				15885	0.44419	207	0.001994	02e-	461	
(BMI)	levels	14	G	A	9	041	6	862	08	25	460	
Body	Bioavailabl											
mass	e	rs10							-0.0		4.90	
index	testosterone	7567				16726	0.74290	190	0.002272	004e	461	
(BMI)	levels	92	T	C	9	119	1	582	01	-17	460	
Body	Bioavailabl											
mass	e	rs10							0.01			
index	testosterone	7602				12609	0.38504	387	0.002038	1e-1	461	
(BMI)	levels	77	T	C	9	3999	9	34	25	1	460	
Body	Bioavailabl											
mass	e	rs10							-0.0			
index	testosterone	7802				81370	0.55945	121	0.001994	1.2e-	461	
(BMI)	levels	48	A	G	9	555	4	232	15	09	460	
Body	Bioavailabl											
mass	e	rs10							0.01		4.90	
index	testosterone	7814				14261	0.38386	422	0.002058	004e	461	
(BMI)	levels	1	T	C	8	9393	7	39	62	-12	460	
Body	Bioavailabl											
mass	e	rs10							-0.0		6.00	
index	testosterone	7997				23313	0.83371	182	0.002648	067e	461	
(BMI)	levels	78	G	T	1	353	8	237	76	-12	460	
Body	Bioavailabl											
mass	e	rs10							-0.0		1.40	
index	testosterone	8096				11859	0.35014	125	0.002070	001e	461	
(BMI)	levels	21	G	C	9	607	3	305	43	-09	460	
Body	Bioavailabl											
mass	e	rs10							0.02		4.30	
index	testosterone	8242				76363	0.13949	076	0.002866	031e	461	
(BMI)	levels	11	T	C	10	107	1	88	31	-13	460	
Body	Bioavailabl											
mass	e	rs10							0.01		1.40	
index	testosterone	8327				17394	0.62303	156	0.002039	001e	461	
(BMI)	levels	78	G	C	11	073	8	28	85	-08	460	
Body	Bioavailabl											
mass	e	rs10							-0.0		2.30	
index	testosterone	9270				24355	0.14370	168	0.002814	001e	461	
(BMI)	levels	06	C	T	1	7659	4	156	67	-09	460	
Body	Bioavailabl	rs10				23203	0.36989	-0.0		3.89	461	
mass	e	9656	T	C	9	619	7	112	0.002052	996e	460	

index	testosterone	98						741		-08	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs10						0.01		1.39	
index	testosterone	9890				10311		695	0.002123	991e	461
(BMI)	levels	67	A	G	9	9634	0.31593	14	49	-15	460
Body	Bioavailabl										
mass	e	rs11						0.01		7.29	
index	testosterone	0019				78760	0.58133	167	0.002019	995e	461
(BMI)	levels	63	T	C	10	959	8	94	21	-09	460
Body	Bioavailabl										
mass	e	rs11						-0.0		1.40	
index	testosterone	0096				34511	0.24409	130	0.002307	001e	461
(BMI)	levels	85	T	C	10	990	6	834	66	-08	460
Body	Bioavailabl										
mass	e	rs11						0.02		7.10	
index	testosterone	0127				21830	0.33168	164	0.002101	068e	461
(BMI)	levels	32	G	A	10	104	3	25	26	-25	460
Body	Bioavailabl										
mass	e	rs11						-0.0		1.80	
index	testosterone	0798				47090	0.32853	200	0.002111	011e	461
(BMI)	levels	49	T	C	17	785	1	93	63	-21	460
Body	Bioavailabl										
mass	e	rs11						-0.0		5.60	
index	testosterone	0990				13072	0.64060	142	0.002062	015e	461
(BMI)	levels	20	T	C	4	4902	9	038	02	-12	460
Body	Bioavailabl										
mass	e	rs11						-0.0		2.19	
index	testosterone	1151				82424	0.23779	130	0.002336	999e	461
(BMI)	levels	60	A	G	12	100	7	768	41	-08	460
Body	Bioavailabl										
mass	e	rs11						-0.0		9.09	
index	testosterone	1224				23030	0.61173	116	0.002024	997e	461
(BMI)	levels	50	G	T	1	1811	9	316	25	-09	460
Body	Bioavailabl										
mass	e	rs11						0.01		1.20	
index	testosterone	1346				17062	0.68475	824	0.002132	005e	461
(BMI)	levels	79	G	A	5	3391	3	59	86	-17	460
Body	Bioavailabl										
mass	e	rs11						-0.0		2.90	
index	testosterone	1507				78757	0.31771	211	0.002129	001e	461
(BMI)	levels	45	G	A	17	626	1	611	61	-23	460
Body	Bioavailabl	rs11				17163	0.20867	-0.0	0.002437	5.39	461
mass	e	1598	T	C	4	5471	1	142	98	995e	460

index	testosterone	585						245		-09	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs11						0.01		4.90	
index	testosterone	1656				96924	0.59010	933	0.002003	004e	461
(BMI)	levels	43	T	C	1	097	3	19	37	-22	460
Body	Bioavailabl										
mass	e	rs11						-0.0		4.70	
index	testosterone	1689				27175	0.28261	136	0.002195	002e	461
(BMI)	levels	389	C	G	5	962	4	706	22	-10	460
Body	Bioavailabl										
mass	e	rs11						-0.0		8.40	
index	testosterone	2185				12192		144	0.002021	04e-	461
(BMI)	levels	10	A	G	11	2587	0.40047	616	21	13	460
Body	Bioavailabl										
mass	e	rs11						0.03			
index	testosterone	2693				49399	0.03527	226	0.005358	1.7e-	461
(BMI)	levels	0	C	G	12	132	1	95	92	09	460
Body	Bioavailabl										
mass	e	rs11						-0.0		5.80	
index	testosterone	3079				14735		155	0.002515	003e	461
(BMI)	levels	574	T	C	4	4089	0.19279	896	98	-10	460
Body	Bioavailabl										
mass	e	rs11						0.01		1.80	
index	testosterone	3603				39564		860	0.002426	011e	461
(BMI)	levels	865	T	C	1	930	0.21205	13	89	-14	460
Body	Bioavailabl										
mass	e	rs11						0.01			
index	testosterone	3624				88326		504	0.002368	2.1e-	461
(BMI)	levels	107	A	G	14	386	0.22586	61	76	10	460
Body	Bioavailabl										
mass	e	rs11						-0.0		6.59	
index	testosterone	5258				13881	0.09770	239	0.003336	933e	461
(BMI)	levels	73	C	T	7	7193	1	781	03	-13	460
Body	Bioavailabl										
mass	e	rs11						0.01		3.10	
index	testosterone	6074				11503	0.48657	571	0.001991	027e	461
(BMI)	levels	76	C	A	11	7061	4	2	79	-15	460
Body	Bioavailabl										
mass	e	rs11						0.01		3.09	
index	testosterone	6106				12167	0.14817	648	0.002783	999e	461
(BMI)	levels	21	A	T	12	1133	4	69	18	-09	460
Body	Bioavailabl	rs11				99240	0.25173	-0.0	0.002280	2.69	461
mass	e	6306	A	G	15	947	9	126	82	998e	460

index	testosterone	47						74		-08	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs11						0.03		2.80	
index	testosterone	6374				50723	0.03544	188	0.005362	001e	461
(BMI)	levels	395	A	G	5	410	4	17	36	-09	460
Body	Bioavailabl										
mass	e	rs11						0.01		2.90	
index	testosterone	6420				81730	0.37353	141	0.002059	001e	461
(BMI)	levels	90	C	T	16	582	6	84	25	-08	460
Body	Bioavailabl										
mass	e	rs11						-0.0		7.59	
index	testosterone	6560				31464	0.22477	154	0.002370	976e	461
(BMI)	levels	76	A	G	17	270	4	285	54	-11	460
Body	Bioavailabl										
mass	e	rs11						-0.0		1.59	
index	testosterone	6731				49996	0.68130	192	0.002131	993e	461
(BMI)	levels	1	A	G	1	959	9	649	09	-19	460
Body	Bioavailabl										
mass	e	rs11						0.01			
index	testosterone	6754				20405	0.56298	197	0.001985	1.6e-	461
(BMI)	levels	64	G	A	2	3742	8	51	58	09	460
Body	Bioavailabl										
mass	e	rs11						-0.0		5.60	
index	testosterone	6918				10080	0.36203	193	0.002055	015e	461
(BMI)	levels	69	A	C	2	5996	8	158	62	-21	460
Body	Bioavailabl										
mass	e	rs11						-0.0		8.60	
index	testosterone	6998				62157	0.03583	335	0.005826	003e	461
(BMI)	levels	28	A	G	20	198	2	418	77	-09	460
Body	Bioavailabl										
mass	e	rs11						0.02		4.90	
index	testosterone	7094				13155	0.27873	281	0.002207	004e	461
(BMI)	levels	02	G	A	3	1027	2	92	96	-25	460
Body	Bioavailabl										
mass	e	rs11						0.04		1.29	
index	testosterone	7118				13178	0.01771	481	0.007880	999e	461
(BMI)	levels	217	C	G	10	3328	1	86	04	-08	460
Body	Bioavailabl										
mass	e	rs11						0.03			
index	testosterone	7342				54267	0.02641	657	0.006467	1.6e-	461
(BMI)	levels	986	T	C	16	868	5	94	81	08	460
Body	Bioavailabl	rs11				13180	0.30387	-0.0	0.002148	9.89	461
mass	e	7572	C	T	6	454	9	146	34	92e-	460

index	testosterone	78						269		12	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs11						0.01		4.20	
index	testosterone	7782				87762	0.16312	579	0.002687	001e	461
(BMI)	levels	19	G	A	8	607	3	6	4	-09	460
Body	Bioavailabl										
mass	e	rs11						-0.0			
index	testosterone	8136				21681	0.28108	132	0.002201	1.7e-	461
(BMI)	levels	827	T	G	17	04	6	582	9	09	460
Body	Bioavailabl										
mass	e	rs11						-0.0		1.40	
index	testosterone	9196				48085	0.67977	127	0.002112	001e	461
(BMI)	levels	65	T	A	3	349	5	854	92	-09	460
Body	Bioavailabl										
mass	e	rs12						0.01		3.29	
index	testosterone	0727				98315	0.22447	570	0.002366	989e	461
(BMI)	levels	39	G	A	1	893	8	08	91	-11	460
Body	Bioavailabl										
mass	e	rs12						0.01		8.90	
index	testosterone	0882				80798	0.30083	393	0.002148	02e-	461
(BMI)	levels	84	T	C	1	635	8	17	54	11	460
Body	Bioavailabl										
mass	e	rs12						-0.0		1.20	
index	testosterone	1401				62579	0.09425	330	0.003458	005e	461
(BMI)	levels	53	T	G	1	891	2	75	9	-21	460
Body	Bioavailabl										
mass	e	rs12						-0.0		2.99	
index	testosterone	1496				70309	0.11495	227	0.003115	985e	461
(BMI)	levels	60	A	G	16	237	6	338	86	-13	460
Body	Bioavailabl										
mass	e	rs12						0.01		4.49	
index	testosterone	2594				53680		308	0.001986	987e	461
(BMI)	levels	64	A	G	10	099	0.48447	95	86	-11	460
Body	Bioavailabl										
mass	e	rs12						0.02		6.80	
index	testosterone	2735				11691	0.05650	483	0.004285	002e	461
(BMI)	levels	45	T	C	11	1012	5	93	51	-09	460
Body	Bioavailabl										
mass	e	rs12						0.03		4.60	
index	testosterone	2998				10023	0.97277	735	0.005993	002e	461
(BMI)	levels	4	C	T	4	9319	5	7	85	-10	460
Body	Bioavailabl	rs12				13460	0.16455	0.01	0.002665	4.90	461
mass	e	3644	G	T	11	1012	6	927	8	004e	460

index	testosterone	70						05		-13	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs12						-0.0		2.49	
index	testosterone	4593				18459	0.26820	170	0.002232	977e	461
(BMI)	levels	68	G	A	19	377	3	141	35	-14	460
Body	Bioavailabl										
mass	e	rs12						0.01		2.60	
index	testosterone	4629				30272	0.32969	958	0.002120	016e	461
(BMI)	levels	75	A	G	19	202	2	22	71	-20	460
Body	Bioavailabl										
mass	e	rs12						-0.0		1.59	
index	testosterone	5414				95585		143	0.002127	993e	461
(BMI)	levels	08	C	T	8	807	0.31742	261	23	-11	460
Body	Bioavailabl										
mass	e	rs12						0.01			
index	testosterone	6687				51779	0.34961	409	0.002071	1e-1	461
(BMI)	levels	4	G	A	6	638	9	66	2	1	460
Body	Bioavailabl										
mass	e	rs12						0.01		3.50	
index	testosterone	6817				62054		486	0.002516	002e	461
(BMI)	levels	92	A	C	8	463	0.1926	93	93	-09	460
Body	Bioavailabl										
mass	e	rs12						0.01		1.29	
index	testosterone	6925				16126		308	0.002037	999e	461
(BMI)	levels	96	T	C	2	5910	0.37185	72	38	-10	460
Body	Bioavailabl										
mass	e	rs12						-0.0		3.50	
index	testosterone	6960				15630	0.14940	152	0.002770	002e	461
(BMI)	levels	39	G	A	3	4750	5	802	5	-08	460
Body	Bioavailabl										
mass	e	rs12						0.01		6.20	
index	testosterone	8605				91458	0.70374	491	0.002169	012e	461
(BMI)	levels	8	A	T	14	523	7	26	22	-12	460
Body	Bioavailabl										
mass	e	rs12						0.02		7.69	
index	testosterone	8816				10114		207	0.003589	999e	461
(BMI)	levels	29	G	A	14	6413	0.08265	48	29	-10	460
Body	Bioavailabl										
mass	e	rs12						0.02		3.79	
index	testosterone	9219				72312	0.07798	033	0.003698	997e	461
(BMI)	levels	86	G	A	16	727	4	27	3	-08	460
Body	Bioavailabl	rs12				34950	0.40816	-0.0	0.002013	1.39	461
mass	e	9374	T	C	17	239	7	171	83	991e	460

index	testosterone	11						87		-17	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs12						-0.0		3.90	
index	testosterone	9632				13708	0.55903	188		032e	461
(BMI)	levels	8	C	A	4	3193	2	62	0.001999	-21	460
Body	Bioavailabl										
mass	e	rs12						0.01		2.29	
index	testosterone	9744				18661	0.54317	524	0.001997	985e	461
(BMI)	levels	58	T	C	19	15	5	66	17	-14	460
Body	Bioavailabl										
mass	e	rs13						-0.0			
index	testosterone	0120				35447	0.22838	136	0.002347	6.1e-	461
(BMI)	levels	70	A	G	2	243	8	501	95	09	460
Body	Bioavailabl										
mass	e	rs13						0.01		3.29	
index	testosterone	0333				13352		261	0.002282	997e	461
(BMI)	levels	10	A	G	2	3605	0.25276	1	6	-08	460
Body	Bioavailabl										
mass	e	rs13						0.01			
index	testosterone	0979				35676	0.21231	455	0.002416	1.7e-	461
(BMI)	levels	18	A	T	3	330	5	61	1	09	460
Body	Bioavailabl										
mass	e	rs13						0.04		8.49	
index	testosterone	1073				10318		757	0.003754	963e	461
(BMI)	levels	25	T	C	4	8709	0.07492	99	79	-37	460
Body	Bioavailabl										
mass	e	rs13						0.01		3.10	
index	testosterone	1764				43152	0.68760	415	0.002131	027e	461
(BMI)	levels	29	C	T	5	216	9	55	22	-11	460
Body	Bioavailabl										
mass	e	rs13						-0.0		1.50	
index	testosterone	2025				21264	0.45479	180	0.001994	003e	461
(BMI)	levels	1	T	C	17	396	1	321	07	-19	460
Body	Bioavailabl										
mass	e	rs13						-0.0		5.79	
index	testosterone	2183				12017	0.33513	144	0.002092	963e	461
(BMI)	levels	83	G	C	6	3501	2	025	36	-12	460
Body	Bioavailabl										
mass	e	rs13						-0.0		1.09	
index	testosterone	2284				20488	0.60927	131	0.002035	999e	461
(BMI)	levels	2	G	A	6	897	4	292	39	-10	460
Body	Bioavailabl	rs13				14336	0.26855	0.01	0.002241	1.99	461
mass	e	2481	C	T	8	834	7	576	55	986e	460

index	testosterone	87						4		-12	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs13						-0.0		2.80	
index	testosterone	2725				51177	0.38772	148	0.002033	027e	461
(BMI)	levels	9	G	A	6	811	2	532	63	-13	460
Body	Bioavailabl										
mass	e	rs13						0.01		3.40	
index	testosterone	2917				80510	0.57068	103	0.001998	001e	461
(BMI)	levels	23	A	G	9	077	3	18	76	-08	460
Body	Bioavailabl										
mass	e	rs13						-0.0		3.29	
index	testosterone	3019				27760	0.48313	117	0.001986	997e	461
(BMI)	levels	9	T	G	9	946	7	509	42	-09	460
Body	Bioavailabl										
mass	e	rs13						-0.0		4.60	
index	testosterone	4200				50751	0.36503	154	0.002052	045e	461
(BMI)	levels	48	A	C	2	414	7	817	72	-14	460
Body	Bioavailabl										
mass	e	rs13						-0.0		5.60	
index	testosterone	4278				21341	0.27119	181	0.002241	015e	461
(BMI)	levels	22	G	A	2	4265	8	515	42	-16	460
Body	Bioavailabl										
mass	e	rs13						-0.0		9.70	
index	testosterone	4684				65651	0.40504	130	0.002017	063e	461
(BMI)	levels	1	A	G	4	730	1	56	2	-11	460
Body	Bioavailabl										
mass	e	rs13						0.01		4.79	
index	testosterone	6020				73796	0.48154	300	0.001977	954e	461
(BMI)	levels	1	T	C	9	450	6	75	47	-11	460
Body	Bioavailabl										
mass	e	rs13						-0.0		4.30	
index	testosterone	rs13				30432	0.36065	161	0.002056	031e	461
(BMI)	levels	642	T	A	11	220	4	363	95	-15	460
Body	Bioavailabl										
mass	e	rs14						-0.0		2.80	
index	testosterone	0159				73765	0.08229	246	0.003709	027e	461
(BMI)	levels	717	T	C	15	586	2	882	67	-11	460
Body	Bioavailabl										
mass	e	rs14						-0.0		1.09	
index	testosterone	3894				15251	0.71511	133	0.002197	999e	461
(BMI)	levels	5	A	T	5	0937	9	824	91	-09	460
Body	Bioavailabl	rs14				79580	0.59368	0.01	0.002058	3.40	461
mass	e	4126	A	G	13	919	1	790	54	017e	460

index	testosterone	4						33		-18	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs14						0.02		7.39	
index	testosterone	5196				41350	0.08226	220	0.003605	997e	461
(BMI)	levels	3	T	G	14	367	6	1	85	-10	460
Body	Bioavailabl										
mass	e	rs14						0.01		1.20	
index	testosterone	5815				41887	0.48843	407	0.001979	005e	461
(BMI)	levels	6	T	C	12	940	1	5	51	-12	460
Body	Bioavailabl										
mass	e	rs14						0.02			
index	testosterone	5981				74714	0.06371	271	0.004045	2e-0	461
(BMI)	levels	104	G	A	8	869	1	1	52	8	460
Body	Bioavailabl										
mass	e	rs14						0.01			
index	testosterone	6569				21996	0.20074	395	0.002485	2e-0	461
(BMI)	levels	428	A	G	11	86	9	33	71	8	460
Body	Bioavailabl										
mass	e	rs14						0.01		4.10	
index	testosterone	7109				10803	0.61666	346	0.002039	015e	461
(BMI)	levels	3	A	G	3	1094	3	19	96	-11	460
Body	Bioavailabl										
mass	e	rs14						0.01		8.90	
index	testosterone	7174				13632		935	0.002254	02e-	461
(BMI)	levels	0	C	T	3	8270	0.7405	76	04	18	460
Body	Bioavailabl										
mass	e	rs14						-0.0		1.09	
index	testosterone	7568				93061		133	0.002330	999e	461
(BMI)	levels	678	C	T	10	851	0.23807	327	34	-08	460
Body	Bioavailabl										
mass	e	rs14						0.03		2.19	
index	testosterone	7729				87988	0.13694	377	0.002898	989e	461
(BMI)	levels	0	C	T	5	934	7	72	15	-31	460
Body	Bioavailabl										
mass	e	rs14						-0.0		1.29	
index	testosterone	7730				12302	0.08724	350	0.003583	987e	461
(BMI)	levels	268	T	G	12	4476	3	799	57	-22	460
Body	Bioavailabl										
mass	e	rs15						0.01		5.90	
index	testosterone	0352				63020	0.48007	543	0.001976	065e	461
(BMI)	levels	6	C	T	5	706	7	08	81	-15	460
Body	Bioavailabl	rs15				10484	0.75345	0.01	0.002289	8.30	461
mass	e	6201	C	G	6	7441	5	318	32	004e	460

index	testosterone							99		-09	
(BMI)	levels										
Body	Bioavailabl										
mass	e							0.01			
index	testosterone	rs15				16848	0.49178	115	0.001973	1.6e-	461
(BMI)	levels	6914	A	G	1	652	6	52	08	08	460
Body	Bioavailabl										
mass	e	rs15						-0.0		2.29	
index	testosterone	8293				12265	0.47324	133	0.001995	985e	461
(BMI)	levels	1	A	G	5	7199	2	419	6	-11	460
Body	Bioavailabl										
mass	e	rs16						-0.0		9.29	
index	testosterone	0811				15781	0.36499	117	0.002050	994e	461
(BMI)	levels	3	T	A	3	5217	8	766	86	-09	460
Body	Bioavailabl										
mass	e	rs16						0.02		7.89	
index	testosterone	0901				77227	0.56572	097	0.001996	951e	461
(BMI)	levels	0	G	A	8	464	8	73	3	-26	460
Body	Bioavailabl										
mass	e	rs16						-0.0		4.20	
index	testosterone	9163				30823	0.11973	192	0.003079	001e	461
(BMI)	levels	03	G	A	9	761	6	369	31	-10	460
Body	Bioavailabl										
mass	e	rs17						0.01		2.19	
index	testosterone	0563				15827	0.25642	358	0.002269	999e	461
(BMI)	levels	01	C	T	5	1680	5	31	7	-09	460
Body	Bioavailabl										
mass	e	rs17						-0.0		7.50	
index	testosterone	1321				21080	0.22146	178	0.002385	067e	461
(BMI)	levels	30	C	G	7	36	7	418	64	-14	460
Body	Bioavailabl										
mass	e	rs17						-0.0		7.00	
index	testosterone	1492				76634	0.80485	213	0.002558	003e	461
(BMI)	levels	54	C	T	7	463	4	507	04	-17	460
Body	Bioavailabl										
mass	e	rs17						-0.0			
index	testosterone	2890				14077		134	0.002104	1.6e-	461
(BMI)	levels	10	G	A	4	4684	0.32787	661	38	10	460
Body	Bioavailabl										
mass	e	rs17						0.02		4.40	
index	testosterone	3997				87490	0.06889	707	0.003910	048e	461
(BMI)	levels	39	G	A	10	850	3	13	06	-12	460
Body	Bioavailabl	rs17				40762	0.16554	0.01	0.002665	8.9e-	461
mass	e	4462	G	C	13	556	4	532	15	09	460

index	testosterone	99							35		
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs17						0.01		5.30	
index	testosterone	5443				11529	0.21086	409	0.002414	005e	461
(BMI)	levels	84	C	T	1	5160	4	31	34	-09	460
Body	Bioavailabl										
mass	e	rs17						-0.0		1.50	
index	testosterone	6683				61208	0.14602	230	0.002793	003e	461
(BMI)	levels	56	G	C	3	619	9	543	18	-16	460
Body	Bioavailabl										
mass	e	rs17						0.02		1.29	
index	testosterone	7703				28414	0.32243	429	0.002111	987e	461
(BMI)	levels	36	T	C	9	625	7	31	61	-30	460
Body	Bioavailabl										
mass	e	rs17						0.01		7.50	
index	testosterone	7883				15648	0.36216	407	0.002055	067e	461
(BMI)	levels	0	A	G	1	9974	5	75	96	-12	460
Body	Bioavailabl										
mass	e	rs17						-0.0		7.70	
index	testosterone	8880				21090		204	0.001982	016e	461
(BMI)	levels	8	G	A	18	023	0.49478	04	55	-25	460
Body	Bioavailabl										
mass	e	rs17						-0.0		4.70	
index	testosterone	9363				13193	0.30914	133	0.002140	002e	461
(BMI)	levels	6	C	G	11	4926	4	343	8	-10	460
Body	Bioavailabl										
mass	e	rs18						-0.0		2.99	
index	testosterone	0512				15064	0.24530	167	0.002297	985e	461
(BMI)	levels	3	G	T	7	5534	1	569	11	-13	460
Body	Bioavailabl										
mass	e	rs18						-0.0		8.60	
index	testosterone	3414				40744	0.37319	140	0.002052	003e	461
(BMI)	levels	4	A	C	18	790	2	112	13	-12	460
Body	Bioavailabl										
mass	e	rs18						-0.0		1.20	
index	testosterone	6141				58933	0.55542	212	0.001989	005e	461
(BMI)	levels	0	T	C	2	591	3	558	18	-26	460
Body	Bioavailabl										
mass	e	rs18						0.02		2.29	
index	testosterone	8489				66128	0.62737	000	0.002056	985e	461
(BMI)	levels	7	G	A	20	32	8	1	34	-22	460
Body	Bioavailabl	rs19				88778	0.48740	0.01	0.002001	5.49	461
mass	e	1924	C	T	5	861	6	167	75	997e	460

index	testosterone	3						59		-09	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs19						-0.0			
index	testosterone	6777				28036	0.28511	170	0.002203	1e-1	461
(BMI)	levels	2	A	G	13	062	7	434	77	4	460
Body	Bioavailabl										
mass	e	rs20						0.03		1.69	
index	testosterone	3593				14129	0.05589	708	0.004357	981e	461
(BMI)	levels	6	T	G	3	8124	2	63	78	-17	460
Body	Bioavailabl										
mass	e	rs20						0.02		2.80	
index	testosterone	5155				32988		040	0.002919	027e	461
(BMI)	levels	9	C	T	4	00	0.13254	78	63	-12	460
Body	Bioavailabl										
mass	e	rs20						0.01		2.80	
index	testosterone	7546				48729	0.26718	329	0.002236	001e	461
(BMI)	levels	6	C	G	16	70	2	03	27	-09	460
Body	Bioavailabl										
mass	e	rs21						0.01			
index	testosterone	0227				52818	0.32248	185	0.002113	2e-0	461
(BMI)	levels	8	G	A	4	664	6	83	9	8	460
Body	Bioavailabl										
mass	e	rs21						-0.0		5.79	
index	testosterone	3356				13908	0.61108	140	0.002047	963e	461
(BMI)	levels	1	T	A	5	6651	4	97	44	-12	460
Body	Bioavailabl										
mass	e							0.01		1.79	
index	testosterone	rs21				26941	0.14560	578	0.002804	999e	461
(BMI)	levels	3518	C	T	7	065	8	94	91	-08	460
Body	Bioavailabl										
mass	e	rs21						-0.0			
index	testosterone	5374				21260	0.47991	112	0.001993	1.6e-	461
(BMI)	levels	0	G	A	20	89	4	551	13	08	460
Body	Bioavailabl										
mass	e	rs21						-0.0		8.99	
index	testosterone	7213				13397	0.57872	149	0.002003	912e	461
(BMI)	levels	1	C	T	10	8962	3	382	86	-14	460
Body	Bioavailabl										
mass	e							0.01		2.39	
index	testosterone	rs21				62361	0.27174	701	0.002230	994e	461
(BMI)	levels	7672	C	A	14	021	1	55	46	-14	460
Body	Bioavailabl	rs21				55505	0.55330	-0.0	0.001983	3.69	461
mass	e	9215	G	A	4	360	8	150	02	999e	460

index	testosterone	8						12		-14	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs22						0.01		5.19	
index	testosterone	1693				18159	0.66196	691	0.002085	996e	461
(BMI)	levels	1	A	C	2	9070	6	09	87	-16	460
Body	Bioavailabl										
mass	e	rs22						-0.0		3.59	
index	testosterone	3445				65639	0.63951	203	0.002055	998e	461
(BMI)	levels	8	T	C	11	374	9	841	79	-23	460
Body	Bioavailabl										
mass	e	rs22						0.01		2.09	
index	testosterone	5331				10888	0.62609	732	0.002041	991e	461
(BMI)	levels	0	G	C	6	8593	9	13	15	-17	460
Body	Bioavailabl										
mass	e	rs22						-0.0		6.49	
index	testosterone	7118				56494		163	0.002018	98e-	461
(BMI)	levels	9	A	G	12	991	0.40272	086	69	16	460
Body	Bioavailabl										
mass	e	rs22						-0.0		5.19	
index	testosterone	8937				44804	0.39564	152	0.002029	996e	461
(BMI)	levels	9	T	C	7	225	8	765	52	-14	460
Body	Bioavailabl										
mass	e	rs23						-0.0		1.29	
index	testosterone	0711				75003	0.39502	280	0.002022	987e	461
(BMI)	levels	1	C	T	5	678	5	042	03	-43	460
Body	Bioavailabl										
mass	e	rs23						-0.0		1.29	
index	testosterone	4289				24540	0.51621	126	0.001977	999e	461
(BMI)	levels	2	G	T	16	806	2	972	15	-10	460
Body	Bioavailabl										
mass	e	rs23						0.01		1.29	
index	testosterone	8140				14403	0.24383	396	0.002299	999e	461
(BMI)	levels	4	C	T	2	5442	7	64	74	-09	460
Body	Bioavailabl										
mass	e	rs23						0.01		3.89	
index	testosterone	8337				33257	0.13068	612	0.002935	996e	461
(BMI)	levels	7	A	G	14	914	7	87	64	-08	460
Body	Bioavailabl										
mass	e	rs23						0.01		2.09	
index	testosterone	9886				96430	0.25916	799	0.002267	991e	461
(BMI)	levels	1	G	A	9	747	9	32	33	-15	460
Body	Bioavailabl	rs24				44895	0.41511	0.01	0.002011	1.2e-	461
mass	e	2581	A	G	20	075	1	222	06	09	460

index	testosterone	6								84		
(BMI)	levels											
Body	Bioavailabl											
mass	e	rs24								-0.0		3.80
index	testosterone	3373				23081	0.67765	171	0.002109	014e	461	
(BMI)	levels	3	A	G	2	6703	9	805	07	-16	460	
Body	Bioavailabl											
mass	e	rs24								0.01		5.30
index	testosterone	3982				99778	0.54561	919	0.001991	029e	461	
(BMI)	levels	3	G	A	10	226	2	98	08	-22	460	
Body	Bioavailabl											
mass	e	rs24								-0.0		1.29
index	testosterone	8235				94178	0.42901	113	0.001995	999e	461	
(BMI)	levels	6	C	T	9	371	8	511	06	-08	460	
Body	Bioavailabl											
mass	e	rs25								0.01		9.20
index	testosterone	1289				13145	0.56608	294	0.001998	026e	461	
(BMI)	levels	2	C	T	11	1862	5	68	19	-11	460	
Body	Bioavailabl											
mass	e	rs25								-0.0		
index	testosterone	rs25				77380	0.58796	115	0.002017	1.2e-	461	
(BMI)	levels	2761	T	G	5	723	6	046	69	08	460	
Body	Bioavailabl											
mass	e	rs25								0.02		1.59
index	testosterone	6895				72765	0.60365	229	0.002012	993e	461	
(BMI)	levels	8	A	G	1	116	6	28	04	-28	460	
Body	Bioavailabl											
mass	e	rs25										2.39
index	testosterone	6999				12926	0.32032	0.01	0.002122	999e	461	
(BMI)	levels	3	C	T	3	096	7	267	02	-09	460	
Body	Bioavailabl											
mass	e	rs26								-0.0		2.70
index	testosterone	0622				18353	0.64636	138	0.002083	023e	461	
(BMI)	levels	8	C	A	3	7759	8	791	79	-11	460	
Body	Bioavailabl											
mass	e	rs26								-0.0		6.70
index	testosterone	1614				20632	0.31986	138	0.002125	039e	461	
(BMI)	levels	3	A	G	8	022	2	738	47	-11	460	
Body	Bioavailabl											
mass	e	rs26								0.01		1.39
index	testosterone	1803				11232	0.38148	439	0.002031	991e	461	
(BMI)	levels	9	T	A	1	4111	1	63	7	-12	460	
Body	Bioavailabl	rs26				20180	0.34016	0.02	0.002081	3.80	461	
mass	e	7820	G	T	1	0511	2	416	58	014e	460	

index	testosterone	4						1		-31	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs27						-0.0		1.10	
index	testosterone	2537				30854	0.69611	160	0.002158	002e	461
(BMI)	levels	1	G	A	8	033	5	301	45	-13	460
Body	Bioavailabl										
mass	e	rs27						-0.0		7.19	
index	testosterone	9164				11207	0.76179	133	0.002313	996e	461
(BMI)	levels	3	T	C	1	269	4	837	32	-09	460
Body	Bioavailabl										
mass	e							-0.0		2.90	
index	testosterone	rs28				42418	0.82068	180	0.002582	001e	461
(BMI)	levels	350	G	A	3	446	4	335	34	-12	460
Body	Bioavailabl										
mass	e	rs28						-0.0		1.59	
index	testosterone	3661				31671	0.13059	264	0.002929	993e	461
(BMI)	levels	56	C	T	6	498	5	826	78	-19	460
Body	Bioavailabl										
mass	e	rs28						0.01		1.09	
index	testosterone	3799				42626	0.65140	266	0.002078	999e	461
(BMI)	levels	6	C	T	21	706	8	47	59	-09	460
Body	Bioavailabl										
mass	e	rs28						-0.0			
index	testosterone	4046				80874	0.36604	117	0.002055	1.2e-	461
(BMI)	levels	39	T	C	5	229	1	129	33	08	460
Body	Bioavailabl										
mass	e	rs28						-0.0		2.80	
index	testosterone	4896				41804	0.29034	153	0.002200	027e	461
(BMI)	levels	20	A	G	22	716	9	737	25	-12	460
Body	Bioavailabl										
mass	e	rs28						-0.0			
index	testosterone	5684				53462	0.10763	182	0.003208	1.2e-	461
(BMI)	levels	18	A	G	15	969	6	825	12	08	460
Body	Bioavailabl										
mass	e	rs28						-0.0			
index	testosterone	6168				67837	0.41198	171	0.001997	1e-1	461
(BMI)	levels	5	C	T	2	553	4	274	63	7	460
Body	Bioavailabl										
mass	e	rs28						-0.0		3.69	
index	testosterone	6706				14036	0.28602	124	0.002264	999e	461
(BMI)	levels	71	C	T	9	3045	4	638	26	-08	460
Body	Bioavailabl	rs28				79403	0.41206	-0.0	0.002019	7.10	461
mass	e	7011	T	C	15	585	6	157	12	068e	460

index	testosterone	1						151		-15	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs28						0.01		3.29	
index	testosterone	7576				12492	0.24295	533	0.002312	989e	461
(BMI)	levels	2	C	G	6	5032	3	9	1	-11	460
Body	Bioavailabl										
mass	e	rs28						0.01		2.30	
index	testosterone	9964				59470	0.22999	496	0.002360	001e	461
(BMI)	levels	4	T	C	15	366	5	59	9	-10	460
Body	Bioavailabl										
mass	e	rs29						-0.0			
index	testosterone	2050				12324	0.28541	140	0.002196	1.7e-	461
(BMI)	levels	3	T	C	3	230	3	307	66	10	460
Body	Bioavailabl										
mass	e	rs29						0.04		7.79	
index	testosterone	6233				86879	0.02006	325	0.007035	992e	461
(BMI)	levels	4	T	G	5	056	5	52	47	-10	460
Body	Bioavailabl										
mass	e							-0.0		6.09	
index	testosterone	rs31				69681	0.72445	144	0.002213	958e	461
(BMI)	levels	7656	A	T	12	101	2	763	03	-11	460
Body	Bioavailabl										
mass	e	rs32						-0.0		4.79	
index	testosterone	1394				13638	0.13152	179	0.002881	999e	461
(BMI)	levels	3	A	C	2	9840	5	406	63	-10	460
Body	Bioavailabl										
mass	e							0.01		2.59	
index	testosterone	rs32				16736	0.22431	323	0.002377	998e	461
(BMI)	levels	421	T	A	5	2416	5	15	57	-08	460
Body	Bioavailabl										
mass	e							-0.0		1.29	
index	testosterone	rs32				13386	0.41940	165	0.002003	987e	461
(BMI)	levels	9118	T	C	5	1663	9	734	8	-16	460
Body	Bioavailabl										
mass	e							0.01		3.29	
index	testosterone	rs32				13376	0.80397	572	0.002502	997e	461
(BMI)	levels	9651	T	G	11	7622	7	18	02	-10	460
Body	Bioavailabl										
mass	e	rs34						0.02		3.50	
index	testosterone	0452				40369	0.33443	347	0.002093	026e	461
(BMI)	levels	88	T	C	6	081	5	84	71	-29	460
Body	Bioavailabl	rs34				41339	0.02215	-0.0	0.006781	9.59	461
mass	e	1530	C	T	15	697	8	389	55	997e	460

index	testosterone	25						151		-09	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs34						-0.0		2.39	
index	testosterone	2342				17516	0.39243	149	0.002040	994e	461
(BMI)	levels	96	A	G	2	6636	7	47	32	-13	460
Body	Bioavailabl										
mass	e	rs34						-0.0		7.80	
index	testosterone	4817				47501	0.16532	185	0.002704	01e-	461
(BMI)	levels	51	A	C	20	038	9	029	04	12	460
Body	Bioavailabl										
mass	e	rs34						0.03		3.59	
index	testosterone	5174				78450	0.12178	884	0.003049	998e	461
(BMI)	levels	39	A	C	1	517	7	8	83	-37	460
Body	Bioavailabl										
mass	e	rs34						0.01		8.10	
index	testosterone	6961				93096	0.47608	143	0.001982	009e	461
(BMI)	levels	81	C	T	7	635	4	45	83	-09	460
Body	Bioavailabl										
mass	e	rs34						-0.0		4.10	
index	testosterone	8114				25408	0.23075	285	0.002342	015e	461
(BMI)	levels	74	A	G	4	838	6	293	69	-34	460
Body	Bioavailabl										
mass	e	rs34						-0.0		1.90	
index	testosterone	rs34				84776	0.50038	133	0.001982	02e-	461
(BMI)	levels	9071	A	G	11	849	8	062	31	11	460
Body	Bioavailabl										
mass	e	rs35						-0.0		5.30	
index	testosterone	1543				24862	0.27404	130	0.002234	005e	461
(BMI)	levels	26	G	A	16	414	4	427	42	-09	460
Body	Bioavailabl										
mass	e	rs35						0.02		9.20	
index	testosterone	3644				74278	0.10973	170	0.003183	026e	461
(BMI)	levels	49	T	C	15	126	9	69	35	-12	460
Body	Bioavailabl										
mass	e	rs35						0.01		3.29	
index	testosterone	rs35				15403	0.40753	527	0.002013	989e	461
(BMI)	levels	5777	C	G	3	4950	7	15	14	-14	460
Body	Bioavailabl										
mass	e	rs35						-0.0		9.20	
index	testosterone	6975				47298	0.50812	164	0.001980	026e	461
(BMI)	levels	87	A	G	14	505	1	677	67	-17	460
Body	Bioavailabl	rs35				52353	0.08934	0.02	0.003522	6.20	461
mass	e	6976	G	C	15	498	6	303	23	012e	460

index	testosterone	91						05		-11	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs35						-0.0		9.09	
index	testosterone	8090				47019	0.36320	171	0.002056	913e	461
(BMI)	levels	07	A	G	2	521	5	009	27	-17	460
Body	Bioavailabl										
mass	e	rs35						-0.0		1.10	
index	testosterone	9575				73440	0.57431	196	0.002004	002e	461
(BMI)	levels	44	T	G	8	371	6	429	38	-22	460
Body	Bioavailabl										
mass	e	rs36						-0.0		2.19	
index	testosterone	0076				16300	0.13769	210	0.002867	989e	461
(BMI)	levels	35	A	G	6	9335	8	45	88	-13	460
Body	Bioavailabl										
mass	e	rs36						0.01			
index	testosterone	0619				38329	0.39874	284	0.002019	2e-1	461
(BMI)	levels	54	T	C	8	650	7	45	28	0	460
Body	Bioavailabl										
mass	e	rs37						-0.0		5.19	
index	testosterone	6462				49649	0.58759	117	0.002015	996e	461
(BMI)	levels	5	G	T	19	051	4	714	23	-09	460
Body	Bioavailabl										
mass	e	rs37						-0.0		2.49	
index	testosterone	8471				68072	0.22660	297	0.002360	977e	461
(BMI)	levels	0	C	T	15	458	2	067	42	-36	460
Body	Bioavailabl										
mass	e	rs38						-0.0		6.40	
index	testosterone	0328				10324	0.66681	186	0.002098	03e-	461
(BMI)	levels	6	G	A	14	6470	5	417	28	19	460
Body	Bioavailabl										
mass	e	rs38						-0.0			
index	testosterone	0756				50564		120	0.001995	1.5e-	461
(BMI)	levels	6	T	G	7	204	0.43832	727	83	09	460
Body	Bioavailabl										
mass	e	rs38						0.02			
index	testosterone	1488				29994	0.48240	401	0.001984	1e-3	461
(BMI)	levels	3	T	C	16	922	2	07	24	3	460
Body	Bioavailabl										
mass	e	rs38						-0.0			
index	testosterone	5199				13187	0.74306	136	0.002268	2e-0	461
(BMI)	levels	8	G	C	3	6605	4	071	74	9	460
Body	Bioavailabl	rs38				66574	0.35568	0.01	0.002065	1.2e-	461
mass	e	6680	A	C	1	24	3	178	46	08	460

index	testosterone	5								35		
(BMI)	levels											
Body	Bioavailabl											
mass	e	rs38								0.01		
index	testosterone	9710				12349	0.41115	208	0.002027	2.5e-	461	
(BMI)	levels	2	T	C	12	2112	7	38	16	09	460	
Body	Bioavailabl											
mass	e	rs39								-0.0	2.70	
index	testosterone	0128				99107		225	0.002756	023e	461	
(BMI)	levels	6	A	C	7	727	0.15244	553	02	-16	460	
Body	Bioavailabl											
mass	e	rs39								0.01		
index	testosterone	0295				69789	0.23715	410	0.002352	2e-0	461	
(BMI)	levels	1	G	T	14	755	1	19	67	9	460	
Body	Bioavailabl											
mass	e	rs39								-0.0	4.00	
index	testosterone	3519				79084	0.53678	144	0.001997	037e	461	
(BMI)	levels	0	A	G	17	367	4	864	01	-13	460	
Body	Bioavailabl											
mass	e									0.01	9.49	
index	testosterone	rs39				46581	0.53769	863	0.001994	948e	461	
(BMI)	levels	4608	C	T	21	798	7	53	84	-21	460	
Body	Bioavailabl											
mass	e									-0.0	3.80	
index	testosterone	rs40				10749	0.17953	261	0.002581	014e	461	
(BMI)	levels	071	C	T	5	6102	6	666	63	-24	460	
Body	Bioavailabl											
mass	e	rs40								-0.0		
index	testosterone	1742				44028	0.47020	125	0.001980	2.1e-	461	
(BMI)	levels	5	T	C	3	764	8	817	35	10	460	
Body	Bioavailabl											
mass	e	rs40								-0.0	7.39	
index	testosterone	5579				59266	0.41680	178	0.002008	946e	461	
(BMI)	levels	1	T	C	13	053	4	082	01	-19	460	
Body	Bioavailabl											
mass	e									0.01	8.30	
index	testosterone	rs40				18226	0.17726	597	0.002601	004e	461	
(BMI)	levels	6388	G	C	22	997	6	3	81	-10	460	
Body	Bioavailabl											
mass	e	rs41								0.06	4.00	
index	testosterone	2797				11008	0.02598	842	0.006222	037e	461	
(BMI)	levels	38	G	T	1	2551	8	63	5	-28	460	
Body	Bioavailabl	rs41				89054	0.11326	-0.0	0.003106	1.39	461	
mass	e	4815	G	A	4	667	8	229	59	991e	460	

index	testosterone	5						681		-13	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs42						0.01		1.59	
index	testosterone	6194				31003	0.36493	385	0.002056	993e	461
(BMI)	levels	4	G	T	4	636	5	53	52	-11	460
Body	Bioavailabl										
mass	e	rs42						0.01		1.40	
index	testosterone	6710				60966	0.18634	539	0.002543	001e	461
(BMI)	levels	3	C	T	12	740	7	16	12	-09	460
Body	Bioavailabl										
mass	e	rs42						0.01			
index	testosterone	8460				31843	0.46712	196	0.001995	2e-0	461
(BMI)	levels	0	C	T	15	528	2	73	06	9	460
Body	Bioavailabl										
mass	e							-0.0		3.29	
index	testosterone	rs42				14790	0.57657	173	0.001997	989e	461
(BMI)	levels	9343	G	A	2	3382	3	795	29	-18	460
Body	Bioavailabl										
mass	e							-0.0		2.39	
index	testosterone	rs42				45411	0.15416	266	0.002743	994e	461
(BMI)	levels	9358	C	T	19	941	6	723	73	-22	460
Body	Bioavailabl										
mass	e	rs43						0.01			
index	testosterone	0723				24354	0.45894	214	0.001988	1e-0	461
(BMI)	levels	9	G	A	7	300	1	13	16	9	460
Body	Bioavailabl										
mass	e	rs44						0.01		1.09	
index	testosterone	1947				96150	0.40732	148	0.002010	999e	461
(BMI)	levels	5	T	A	4	044	7	7	6	-08	460
Body	Bioavailabl										
mass	e	rs44						-0.0		2.49	
index	testosterone	4431				92573	0.21614	161	0.002421	977e	461
(BMI)	levels	7	G	A	15	234	1	604	04	-11	460
Body	Bioavailabl										
mass	e	rs44						0.01		3.59	
index	testosterone	5676				25190	0.33344	461	0.002101	998e	461
(BMI)	levels	9	T	C	20	777	4	11	38	-12	460
Body	Bioavailabl										
mass	e	rs44						0.02		2.90	
index	testosterone	7756				54104	0.12864	961	0.002980	001e	461
(BMI)	levels	2	T	C	13	968	4	18	11	-23	460
Body	Bioavailabl	rs44				20537	0.92300	-0.0	0.003706	2.99	461
mass	e	8246	A	C	2	5909	2	313	92	985e	460

index	testosterone	3						175		-17	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs45						0.02			
index	testosterone	4861				22448	0.06568	576	0.004037	1.7e-	461
(BMI)	levels	97	A	G	19	49	5	6	37	10	460
Body	Bioavailabl										
mass	e	rs46						-0.0		8.40	
index	testosterone	4845				27232	0.46682	148	0.001987	04e-	461
(BMI)	levels	0	A	C	1	14	4	37	75	14	460
Body	Bioavailabl										
mass	e	rs46						0.01		8.00	
index	testosterone	7233				60217	0.33622	356	0.002086	018e	461
(BMI)	levels	8	T	C	2	457	8	46	69	-11	460
Body	Bioavailabl										
mass	e	rs47						0.01		7.89	
index	testosterone	2239				31252	0.13613	869	0.002875	951e	461
(BMI)	levels	8	T	C	7	20	7	93	45	-11	460
Body	Bioavailabl										
mass	e	rs47						-0.0		3.10	
index	testosterone	6494				10365	0.32589	183	0.002111	027e	461
(BMI)	levels	9	G	A	12	8096	2	924	97	-18	460
Body	Bioavailabl										
mass	e	rs47						-0.0		2.60	
index	testosterone	9029				18243	0.15369	254	0.002756	016e	461
(BMI)	levels	2	A	C	17	05	3	509	03	-20	460
Body	Bioavailabl										
mass	e	rs48						-0.0		1.69	
index	testosterone	2041				40690	0.34531	177	0.002085	981e	461
(BMI)	levels	0	G	A	22	385	7	457	27	-17	460
Body	Bioavailabl										
mass	e	rs48						-0.0		5.40	
index	testosterone	3229				86764	0.68614	159	0.002122	008e	461
(BMI)	levels	8	T	C	2	004	2	65	68	-14	460
Body	Bioavailabl										
mass	e	rs48						0.01		3.29	
index	testosterone	7661				11667	0.72024	975	0.002205	989e	461
(BMI)	levels	1	G	A	8	1848	3	49	02	-19	460
Body	Bioavailabl										
mass	e	rs50						0.01			
index	testosterone	1157				69187	0.71515	402	0.002193	1.6e-	461
(BMI)	levels	9	G	C	16	318	2	68	22	10	460
Body	Bioavailabl	rs51				75485	0.19205	-0.0	0.002521	2.59	461
mass	e	2121	C	T	18	01	4	159	76	998e	460

index	testosterone							359		-10	
(BMI)	levels										
Body	Bioavailabl										
mass	e							0.01		1.29	
index	testosterone	rs52				17311	0.52782	689	0.001978	987e	461
(BMI)	levels	9200	G	A	3	4305	9	65	5	-17	460
Body	Bioavailabl										
mass	e							0.04		1.99	
index	testosterone	rs53				17788	0.20494	952	0.002442	986e	461
(BMI)	levels	9515	C	A	1	9025	2	91	6	-91	460
Body	Bioavailabl										
mass	e	rs55						0.01		6.00	
index	testosterone	7145				18207	0.34358	757	0.002100	067e	461
(BMI)	levels	39	C	A	19	397	7	19	43	-17	460
Body	Bioavailabl										
mass	e	rs55								1.39	
index	testosterone	7266				99130	0.20970	0.02	0.002426	991e	461
(BMI)	levels	87	A	G	12	6	9	483	28	-24	460
Body	Bioavailabl										
mass	e	rs55						0.01		1.20	
index	testosterone	7690				13331	0.59038	609	0.002010	005e	461
(BMI)	levels	38	A	G	11	808	4	61	96	-15	460
Body	Bioavailabl										
mass	e							-0.0			
index	testosterone	rs55				28712	0.30750	129	0.002148	1.5e-	461
(BMI)	levels	8887	G	A	11	741	7	976	81	09	460
Body	Bioavailabl										
mass	e							0.01		3.40	
index	testosterone	rs55				39644	0.39305	349	0.002035	017e	461
(BMI)	levels	9231	T	G	18	247	3	07	62	-11	460
Body	Bioavailabl										
mass	e	rs56						0.01		8.99	
index	testosterone	0383				69925		392	0.002148	912e	461
(BMI)	levels	22	A	G	3	128	0.31062	76	33	-11	460
Body	Bioavailabl										
mass	e	rs56						0.07			
index	testosterone	0946				53806	0.40456	349	0.002014	1e-2	461
(BMI)	levels	41	G	A	16	453	4	67	12	00	460
Body	Bioavailabl										
mass	e	rs56						0.01		2.69	
index	testosterone	1335				17281	0.19687	376	0.002473	998e	461
(BMI)	levels	07	G	T	2	8467	5	22	85	-08	460
Body	Bioavailabl	rs56				15702	0.25638	0.01	0.002265	2.30	461
mass	e	1432	T	C	3	0444	8	266	33	001e	460

index	testosterone	36						67		-08	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs56						0.02		1.39	
index	testosterone	1618				46288	0.13284	245	0.002917	991e	461
(BMI)	levels	55	T	A	17	649	7	75	84	-14	460
Body	Bioavailabl										
mass	e	rs56						0.01		1.40	
index	testosterone	2036				13104	0.14552	797	0.002801	001e	461
(BMI)	levels	22	C	T	9	0874	9	69	83	-10	460
Body	Bioavailabl										
mass	e	rs56						-0.0		2.90	
index	testosterone	3523				19352	0.15489	163	0.002750	001e	461
(BMI)	levels	36	C	T	19	155	4	27	21	-09	460
Body	Bioavailabl										
mass	e	rs56						-0.0		6.40	
index	testosterone	3997				33381	0.44912	161	0.001996	03e-	461
(BMI)	levels	37	T	C	13	721	4	325	46	16	460
Body	Bioavailabl										
mass	e	rs56						0.01		2.39	
index	testosterone	8587				86511	0.29686	591	0.002173	994e	461
(BMI)	levels	68	A	G	13	730	1	88	78	-13	460
Body	Bioavailabl										
mass	e	rs56						0.01		6.19	
index	testosterone	8930				25662	0.30334	251	0.002153	998e	461
(BMI)	levels	62	G	T	8	655	2	41	83	-09	460
Body	Bioavailabl										
mass	e	rs56						0.01		3.69	
index	testosterone	9301				10982	0.13929	575	0.002861	999e	461
(BMI)	levels	05	T	C	2	487	5	57	87	-08	460
Body	Bioavailabl										
mass	e	rs57						-0.0		1.10	
index	testosterone	6363				58048		412	0.003583	002e	461
(BMI)	levels	86	C	T	18	295	0.08383	553	26	-30	460
Body	Bioavailabl										
mass	e	rs57						0.01			
index	testosterone	9897				10062	0.24499	334	0.002363	1.6e-	461
(BMI)	levels	73	C	T	6	9078	5	88	15	08	460
Body	Bioavailabl										
mass	e	rs58						-0.0		2.39	
index	testosterone	8620				75081	0.41926	229	0.002007	994e	461
(BMI)	levels	95	T	C	7	418	6	877	86	-30	460
Body	Bioavailabl	rs59				11325	0.41023	0.01	0.002010	3.79	461
mass	e	0680	T	G	4	6737	2	105	48	997e	460

index	testosterone	84						52		-08	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs59						0.02		1.50	
index	testosterone	2278				43692		296	0.002153	003e	461
(BMI)	levels	42	G	A	11	423	0.31149	75	13	-26	460
Body	Bioavailabl										
mass	e							-0.0		1.69	
index	testosterone	rs59				69443	0.55416	146	0.001990	981e	461
(BMI)	levels	4024	C	T	11	822	2	771	81	-13	460
Body	Bioavailabl										
mass	e	rs60						-0.0		3.59	
index	testosterone	2365				53479	0.76574	147	0.002349	998e	461
(BMI)	levels	5	G	A	20	658	1	346	97	-10	460
Body	Bioavailabl										
mass	e	rs60								1.10	
index	testosterone	7646				18399	0.14488	0.02	0.002826	002e	461
(BMI)	levels	13	T	G	18	11	3	099	88	-13	460
Body	Bioavailabl										
mass	e	rs61						-0.0		5.60	
index	testosterone	7404				19934	0.23720	135	0.002318	003e	461
(BMI)	levels	66	A	G	1	900	3	153	85	-09	460
Body	Bioavailabl										
mass	e	rs61						0.02		2.80	
index	testosterone	8133				15604	0.13572	902	0.002920	027e	461
(BMI)	levels	24	T	C	1	9877	8	59	38	-23	460
Body	Bioavailabl										
mass	e	rs61						0.02		1.20	
index	testosterone	8286				17432		245	0.003159	005e	461
(BMI)	levels	41	A	G	1	1997	0.10925	85	13	-12	460
Body	Bioavailabl										
mass	e	rs61						-0.0			
index	testosterone	8716				10248	0.09155	267	0.003592	1e-1	461
(BMI)	levels	15	T	C	10	7140	1	159	69	3	460
Body	Bioavailabl										
mass	e	rs61						0.01		2.49	
index	testosterone	9036				89922	0.25496	662	0.002271	977e	461
(BMI)	levels	95	G	A	11	417	4	35	15	-13	460
Body	Bioavailabl										
mass	e	rs61						-0.0		5.10	
index	testosterone	9926				10153		161	0.002069	035e	461
(BMI)	levels	71	G	A	14	1854	0.49195	925	24	-15	460
Body	Bioavailabl	rs62				78029	0.26509	-0.0	0.002242	9.39	461
mass	e	0077	A	G	15	797	1	167	15	94e-	460

index	testosterone	82						007		14	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs62						-0.0		7.19	
index	testosterone	0207				89960		165	0.002863	996e	461
(BMI)	levels	75	A	T	15	286	0.14168	665	5	-09	460
Body	Bioavailabl										
mass	e	rs62						0.01		2.99	
index	testosterone	0720				52938	0.14454	564	0.002823	999e	461
(BMI)	levels	06	C	A	17	468	1	92	74	-08	460
Body	Bioavailabl										
mass	e	rs62						-0.0		4.60	
index	testosterone	1072				42214	0.04832	911	0.004608	045e	461
(BMI)	levels	61	C	T	2	4	7	559	82	-87	460
Body	Bioavailabl										
mass	e	rs62						-0.0		6.09	
index	testosterone	1762				16619	0.24498	149	0.002288	958e	461
(BMI)	levels	43	T	A	2	0881	7	699	78	-11	460
Body	Bioavailabl										
mass	e	rs62						-0.0			
index	testosterone	1900				18256	0.39044	111	0.002036	4e-0	461
(BMI)	levels	49	C	G	2	6998	6	798	14	8	460
Body	Bioavailabl										
mass	e	rs62						-0.0		5.30	
index	testosterone	2418				20466	0.31444	124	0.002128	005e	461
(BMI)	levels	47	G	A	3	465	3	263	97	-09	460
Body	Bioavailabl										
mass	e	rs62						0.02		1.79	
index	testosterone	2463				94981	0.10236	075	0.003254	999e	461
(BMI)	levels	11	A	G	3	43	4	39	87	-10	460
Body	Bioavailabl										
mass	e	rs62						0.01			
index	testosterone	3792				10587	0.57851	172	0.002005	5e-0	461
(BMI)	levels	71	G	T	5	0033	1	37	57	9	460
Body	Bioavailabl										
mass	e	rs62						0.01		8.49	
index	testosterone	4075				33530	0.26858	443	0.002224	963e	461
(BMI)	levels	62	A	T	6	346	4	93	63	-11	460
Body	Bioavailabl										
mass	e	rs62						-0.0		3.29	
index	testosterone	rs62				27679	0.18847	399	0.002527	989e	461
(BMI)	levels	65	T	C	11	916	2	185	19	-56	460
Body	Bioavailabl	rs64				14562	0.10855	0.01	0.003188	5.30	461
mass	e	3006	A	G	2	7927	9	860	2	005e	460

index	testosterone	8						66		-09	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs64						0.01		8.30	
index	testosterone	4495				17060	0.23747	585	0.002320	042e	461
(BMI)	levels	0	A	G	3	2073	4	25	07	-12	460
Body	Bioavailabl										
mass	e	rs65						-0.0		2.39	
index	testosterone	4571				59307	0.60144	205	0.002015	994e	461
(BMI)	levels	4	A	G	2	725	8	219	73	-24	460
Body	Bioavailabl										
mass	e	rs65						-0.0			
index	testosterone	6090				13341	0.69187	121	0.002141	1.2e-	461
(BMI)	levels	6	C	T	12	4054	4	98	36	08	460
Body	Bioavailabl										
mass	e	rs65						-0.0		4.60	
index	testosterone	6193				58257	0.75358	159	0.002303	045e	461
(BMI)	levels	7	A	T	13	667	7	34	46	-12	460
Body	Bioavailabl										
mass	e	rs65						0.05		2.30	
index	testosterone	6716				57829	0.23271	417	0.002342	144e	461
(BMI)	levels	0	C	T	18	135	4	23	13	-118	460
Body	Bioavailabl										
mass	e	rs65						0.02		8.69	
index	testosterone	7534				94023	0.63603	073	0.002061	961e	461
(BMI)	levels	0	A	G	14	972	8	33	89	-24	460
Body	Bioavailabl										
mass	e	rs66						0.01		6.89	
index	testosterone	6792				18351	0.44582	488	0.001987	922e	461
(BMI)	levels	56	T	C	4	898	6	64	59	-14	460
Body	Bioavailabl										
mass	e	rs66						-0.0		1.59	
index	testosterone	6934				47678	0.58267	170	0.001998	993e	461
(BMI)	levels	1	G	A	1	458	9	287	6	-17	460
Body	Bioavailabl										
mass	e	rs66						0.01		3.69	
index	testosterone	8243				33784	0.67308	315	0.002100	999e	461
(BMI)	levels	8	C	T	1	146	1	86	47	-10	460
Body	Bioavailabl										
mass	e	rs67						-0.0		9.79	
index	testosterone	0556				55320		146	0.002049	941e	461
(BMI)	levels	7	C	T	2	173	0.37596	168	19	-13	460
Body	Bioavailabl	rs67				10012	0.70362	0.01	0.002173	3.89	461
mass	e	0782	G	A	2	3030	7	194	32	996e	460

index	testosterone	7						37		-08	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs67						-0.0			
index	testosterone	1009				23959	0.34817	116	0.002067	1.6e-	461
(BMI)	levels	1	G	C	2	7	4	835	07	08	460
Body	Bioavailabl										
mass	e	rs67						-0.0		2.19	
index	testosterone	1378				40291	0.40188	135	0.002027	989e	461
(BMI)	levels	1	C	G	2	940	2	736	99	-11	460
Body	Bioavailabl										
mass	e	rs67						0.01		3.29	
index	testosterone	2593				22020	0.84765	910	0.002744	989e	461
(BMI)	levels	1	T	C	2	5146	8	46	03	-12	460
Body	Bioavailabl										
mass	e	rs67						0.05		4.49	
index	testosterone	4464				62850	0.82829	546	0.002612	987e	461
(BMI)	levels	6	G	A	2	4	9	84	13	-100	460
Body	Bioavailabl										
mass	e	rs67						0.01		3.29	
index	testosterone	5297				81741		252	0.002117	997e	461
(BMI)	levels	9	A	G	2	750	0.31688	35	21	-09	460
Body	Bioavailabl										
mass	e	rs67						-0.0		8.10	
index	testosterone	6961				62687		135	0.002089	028e	461
(BMI)	levels	7	T	A	3	746	0.66386	754	02	-11	460
Body	Bioavailabl										
mass	e	rs67						0.01		9.70	
index	testosterone	7489				19611	0.35814	330	0.002056	063e	461
(BMI)	levels	4	A	T	3	6393	8	88	74	-11	460
Body	Bioavailabl										
mass	e	rs67						0.01			
index	testosterone	7778				62376		161	0.002027	1e-0	461
(BMI)	levels	4	T	G	3	645	0.61678	25	53	8	460
Body	Bioavailabl										
mass	e	rs68						-0.0		2.19	
index	testosterone	3108				20257	0.64013	115	0.002059	999e	461
(BMI)	levels	8	A	G	4	769	9	222	1	-08	460
Body	Bioavailabl										
mass	e	rs68						0.01		3.50	
index	testosterone	4385				16213	0.50786	308	0.001976	026e	461
(BMI)	levels	2	T	C	4	2758	1	97	07	-11	460
Body	Bioavailabl	rs69				97753	0.32680	-0.0	0.002113	4.70	461
mass	e	0968	T	C	6	952	9	146	52	002e	460

index	testosterone	5						12		-12	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs69						0.01			
index	testosterone	2260				14270	0.18984	488	0.002514	3.2e-	461
(BMI)	levels	7	G	A	6	3483	7	48	79	09	460
Body	Bioavailabl										
mass	e	rs69						0.01		1.80	
index	testosterone	3897				98421	0.60145	822	0.002018	011e	461
(BMI)	levels	3	C	T	6	721	6	23	72	-19	460
Body	Bioavailabl										
mass	e	rs69						0.01		2.30	
index	testosterone	5038				12706	0.79508	552	0.002448	001e	461
(BMI)	levels	8	A	G	7	99	6	19	06	-10	460
Body	Bioavailabl										
mass	e	rs69						-0.0			
index	testosterone	6298				11345	0.55601	159	0.001988	1e-1	461
(BMI)	levels	0	C	A	7	2183	9	568	14	5	460
Body	Bioavailabl										
mass	e	rs69						-0.0		9.60	
index	testosterone	rs69				35134	0.54359	128	0.001985	064e	461
(BMI)	levels	8147	G	A	5	85	6	512	14	-11	460
Body	Bioavailabl										
mass	e	rs70						0.01		3.10	
index	testosterone	2730				12940	0.65266	454	0.002087	027e	461
(BMI)	levels	4	T	C	9	8290	1	92	03	-12	460
Body	Bioavailabl										
mass	e	rs70						-0.0			
index	testosterone	3455				37081	0.37382	129	0.002042	2.1e-	461
(BMI)	levels	4	G	A	9	301	5	826	52	10	460
Body	Bioavailabl										
mass	e	rs70						-0.0		1.80	
index	testosterone	3894				12037		140	0.002086	011e	461
(BMI)	levels	3	C	T	9	7178	0.33879	202	41	-11	460
Body	Bioavailabl										
mass	e	rs70						0.01		1.69	
index	testosterone	rs70				89771		463	0.001985	981e	461
(BMI)	levels	4061	C	T	12	903	0.45505	74	52	-13	460
Body	Bioavailabl										
mass	e	rs70						-0.0		5.99	
index	testosterone	7067				61842	0.32792	123	0.002119	998e	461
(BMI)	levels	0	T	C	10	645	3	274	28	-09	460
Body	Bioavailabl	rs70				13295	0.20573	-0.0	0.002452	6.19	461
mass	e	8125	C	T	10	5696	9	142	16	998e	460

index	testosterone	4							516		-09	
(BMI)	levels											
Body	Bioavailabl											
mass	e	rs71							0.02		1.50	
index	testosterone	2468				47529	0.40835	569	0.002006	003e	461	
(BMI)	levels	1	A	C	11	947	3	77	3	-37	460	
Body	Bioavailabl											
mass	e	rs71							0.02		1.39	
index	testosterone	3290				50263	0.38445	979	0.002033	991e	461	
(BMI)	levels	8	A	G	12	148	8	04	63	-48	460	
Body	Bioavailabl											
mass	e	rs71							0.02		6.70	
index	testosterone	4950				33971	0.07693	779	0.003709	039e	461	
(BMI)	levels	38	A	G	10	383	6	98	69	-14	460	
Body	Bioavailabl											
mass	e	rs72							-0.0		6.00	
index	testosterone	0189				40772	0.35429	149	0.002079	067e	461	
(BMI)	levels	5	A	G	16	3	1	781	99	-13	460	
Body	Bioavailabl											
mass	e	rs72							0.01		1.79	
index	testosterone	0660				82872		351	0.002117	999e	461	
(BMI)	levels	8	G	C	16	628	0.32162	22	97	-10	460	
Body	Bioavailabl											
mass	e	rs72							0.01		2.90	
index	testosterone	1801				65832	0.19730	895	0.002492	001e	461	
(BMI)	levels	4	C	T	17	016	5	24	16	-14	460	
Body	Bioavailabl											
mass	e	rs72							0.01			
index	testosterone	3217				31251		234	0.002008	8e-1	461	
(BMI)	levels	1	T	G	18	221	0.58263	04	21	0	460	
Body	Bioavailabl											
mass	e	rs72							0.01		2.99	
index	testosterone	rs72				21615		112	0.002006	999e	461	
(BMI)	levels	3672	T	C	12	61	0.43151	73	98	-08	460	
Body	Bioavailabl											
mass	e	rs72							0.01		6.69	
index	testosterone	5083				33937	0.28886	350		993e	461	
(BMI)	levels	3	T	C	19	277	6	41	0.002188	-10	460	
Body	Bioavailabl											
mass	e	rs72							0.02		6.59	
index	testosterone	5907				47562	0.59606	186	0.002036	933e	461	
(BMI)	levels	0	C	T	19	509	2	9	28	-27	460	
Body	Bioavailabl	rs72				16010	0.25985	-0.0	0.002280	1e-2	461	
mass	e	6348	A	G	1	52	8	212	01	0	460	

index	testosterone	26								77		
(BMI)	levels											
Body	Bioavailabl											
mass	e	rs72								0.01		
index	testosterone	6493				80609	0.14318	780	0.002878	6.1e-	461	
(BMI)	levels	73	C	T	4	966	8	62	05	10	460	
Body	Bioavailabl											
mass	e	rs72								0.02	9.89	
index	testosterone	6739				11888	0.10703	188	0.003214	92e-	461	
(BMI)	levels	47	G	A	8	4379	1	64	96	12	460	
Body	Bioavailabl											
mass	e	rs72								0.03	1.50	
index	testosterone	8929				50816	0.17223	877	0.002620	003e	461	
(BMI)	levels	10	T	G	6	887	2	98	53	-49	460	
Body	Bioavailabl											
mass	e	rs72								-0.0	7.59	
index	testosterone	9769				40504	0.19012	232	0.002547	976e	461	
(BMI)	levels	86	A	G	19	24	3	257	12	-20	460	
Body	Bioavailabl											
mass	e	rs73								-0.0	4.90	
index	testosterone	0267				31017	0.15353	223	0.002750	004e	461	
(BMI)	levels	25	A	C	19	686	4	18	52	-16	460	
Body	Bioavailabl											
mass	e	rs73								-0.0	7.70	
index	testosterone	0520				18582		303	0.002546	016e	461	
(BMI)	levels	33	C	T	3	8465	0.18493	929	34	-33	460	
Body	Bioavailabl											
mass	e	rs73								-0.0	3.09	
index	testosterone	1243				71579	0.20514	154	0.002454	999e	461	
(BMI)	levels	96	C	T	7	606	4	472	8	-10	460	
Body	Bioavailabl											
mass	e	rs73								-0.0	3.59	
index	testosterone	1428				51195	0.19229	266	0.002522	998e	461	
(BMI)	levels	79	T	C	20	932	7	936	57	-26	460	
Body	Bioavailabl											
mass	e	rs73								-0.0	2.19	
index	testosterone	1937				10829	0.24393	177	0.002320	989e	461	
(BMI)	levels	36	G	A	12	4381	4	165	02	-14	460	
Body	Bioavailabl											
mass	e	rs73								-0.0	1.69	
index	testosterone	2134				28489	0.14123	225	0.002836	981e	461	
(BMI)	levels	84	T	A	4	339	6	766	4	-15	460	
Body	Bioavailabl	rs73				99236	0.28527	-0.0	0.002200	6.59	461	
mass	e	3142	A	G	13	471	6	143	81	933e	460	

index	testosterone	0						702		-11	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs73						0.01		1.10	
index	testosterone	5775				92207	0.50013	411	0.001983	002e	461
(BMI)	levels	4	G	A	9	308	9	46	62	-12	460
Body	Bioavailabl										
mass	e	rs73						0.01		1.29	
index	testosterone	6015				18549	0.11452	773	0.003116	999e	461
(BMI)	levels	48	T	C	10	889	7	54	39	-08	460
Body	Bioavailabl										
mass	e	rs73						0.01			
index	testosterone	9854				21229	0.30729	366	0.002140	1.7e-	461
(BMI)	levels	39	C	A	2	9249	9	16	59	10	460
Body	Bioavailabl										
mass	e	rs74						-0.0		3.19	
index	testosterone	4288				87682	0.21404	228	0.002412	963e	461
(BMI)	levels	5	G	C	5	877	9	163	51	-21	460
Body	Bioavailabl										
mass	e	rs74						0.01		1.10	
index	testosterone	rs74				10546	0.28194	761	0.002197	002e	461
(BMI)	levels	5249	T	C	2	0333	5	18	24	-15	460
Body	Bioavailabl										
mass	e	rs74						-0.0			
index	testosterone	7502				11474	0.08662	196	0.003525	2.5e-	461
(BMI)	levels	82	C	T	7	4463	3	382	61	08	460
Body	Bioavailabl										
mass	e	rs75						0.01		2.59	
index	testosterone	1655				21030	0.39994	200	0.002015	998e	461
(BMI)	levels	4	T	C	1	1331	1	66	65	-09	460
Body	Bioavailabl										
mass	e	rs75						0.01		1.69	
index	testosterone	1925				66434		400	0.001983	981e	461
(BMI)	levels	9	A	G	1	743	0.52836	28	81	-12	460
Body	Bioavailabl										
mass	e	rs75						0.02		1.50	
index	testosterone	rs75				42305	0.88658	199	0.003109	003e	461
(BMI)	levels	4635	G	C	3	131	2	25	3	-12	460
Body	Bioavailabl										
mass	e	rs75						-0.0		8.90	
index	testosterone	4995				26145	0.22010	180	0.002418	02e-	461
(BMI)	levels	03	T	C	6	217	1	331	45	14	460
Body	Bioavailabl	rs75				61693	0.26054	-0.0	0.002254	1.80	461
mass	e	7149	G	A	2	51	5	158	54	011e	460

index	testosterone	6						916		-12	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs76						-0.0			
index	testosterone	1838				11437	0.08074	219	0.003644	1.7e-	461
(BMI)	levels	94	C	T	3	1939	7	584	37	09	460
Body	Bioavailabl										
mass	e	rs76						0.01		2.19	
index	testosterone	1913				25110	0.58861	345	0.002010	989e	461
(BMI)	levels	9	A	T	3	415	6	37	61	-11	460
Body	Bioavailabl										
mass	e	rs76						-0.0		1.20	
index	testosterone	7025				19514	0.21062	164	0.002432	005e	461
(BMI)	levels	14	G	C	1	8296	3	862	78	-11	460
Body	Bioavailabl										
mass	e	rs76						-0.0		8.19	
index	testosterone	8383				18016	0.55721	122	0.001994	993e	461
(BMI)	levels	6	A	G	4	7906	5	469	27	-10	460
Body	Bioavailabl										
mass	e	rs77						-0.0		1.39	
index	testosterone	0858				15354	0.57234	159	0.001994	991e	461
(BMI)	levels	4	G	A	5	3466	4	321	9	-15	460
Body	Bioavailabl										
mass	e	rs77						-0.0		1.29	
index	testosterone	6167				70357		135	0.002390	999e	461
(BMI)	levels	3	A	T	6	368	0.21988	915	1	-08	460
Body	Bioavailabl										
mass	e	rs77						0.01		9.09	
index	testosterone	6279				15338	0.28540	490	0.002186	913e	461
(BMI)	levels	4	G	A	6	0228	8	77	06	-12	460
Body	Bioavailabl										
mass	e							0.01		3.29	
index	testosterone	rs77				48011	0.31046	498	0.002151	989e	461
(BMI)	levels	74	A	C	17	63	7	8	69	-12	460
Body	Bioavailabl										
mass	e	rs77						0.01		1.40	
index	testosterone	7602				73742	0.28759	237	0.002182	001e	461
(BMI)	levels	1	A	G	6	152	9	01	51	-08	460
Body	Bioavailabl										
mass	e	rs78						0.01		1.79	
index	testosterone	0234				13743	0.28856	227	0.002181	999e	461
(BMI)	levels	2	G	T	7	5925	6	48	45	-08	460
Body	Bioavailabl	rs78				78121	0.50226	0.01	0.001988	1.80	461
mass	e	0544	T	C	7	458	1	337	84	011e	460

index	testosterone	1							47		-11	
(BMI)	levels											
Body	Bioavailabl											
mass	e	rs78							0.03		3.59	
index	testosterone	0866				24024	0.03983	183	0.005076	998e	461	
(BMI)	levels	98	C	T	12	639	8	57	1	-10	460	
Body	Bioavailabl											
mass	e								0.01		1.99	
index	testosterone	rs78				53397	0.81254	793	0.002549	986e	461	
(BMI)	levels	4257	C	T	18	199	1	15	68	-12	460	
Body	Bioavailabl											
mass	e	rs78							-0.0		1.80	
index	testosterone	6058				83631		327	0.004446	011e	461	
(BMI)	levels	11	C	A	3	491	0.05405	37	73	-13	460	
Body	Bioavailabl											
mass	e	rs78							0.01		2.29	
index	testosterone	9357				16750	0.66589	405	0.002101	985e	461	
(BMI)	levels	1	T	G	10	129	7	53	52	-11	460	
Body	Bioavailabl											
mass	e	rs79							-0.0		5.10	
index	testosterone	2403				65191	0.50326	142	0.001977	035e	461	
(BMI)	levels	6	T	G	10	645	5	836	8	-13	460	
Body	Bioavailabl											
mass	e	rs79							0.01		3.29	
index	testosterone	2510				11894	0.39611	472	0.002022	989e	461	
(BMI)	levels	0	A	G	11	1596	7	5	1	-13	460	
Body	Bioavailabl											
mass	e	rs79							0.01		2.19	
index	testosterone	4478				13079	0.50978	576	0.001987	989e	461	
(BMI)	levels	2	G	T	11	5698	4	06	48	-15	460	
Body	Bioavailabl											
mass	e	rs79							-0.0		8.30	
index	testosterone	4714				64090	0.16348	182	0.002675	042e	461	
(BMI)	levels	3	A	G	11	422	3	782	22	-12	460	
Body	Bioavailabl											
mass	e	rs79							0.02			
index	testosterone	7809				10495	0.07742	368	0.003695	1.5e-	461	
(BMI)	levels	63	T	C	10	2499	8	03	91	10	460	
Body	Bioavailabl											
mass	e	rs79							0.01		3.59	
index	testosterone	9663				97019	0.44935	455	0.002002	998e	461	
(BMI)	levels	9	A	G	13	090	4	59	45	-13	460	
Body	Bioavailabl	rs80				52862	0.07032	0.02	0.003881	3.79	461	
mass	e	1352	T	A	17	77	4	133	13	997e	460	

index	testosterone	74						9		-08	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs80						0.02		6.70	
index	testosterone	1540				25930	0.67709	134	0.002117	039e	461
(BMI)	levels	0	A	C	14	988	7	22	09	-24	460
Body	Bioavailabl										
mass	e	rs80						0.02			
index	testosterone	2036				79937	0.22046	510	0.002395	1e-2	461
(BMI)	levels	5	A	T	14	216	4	68	17	5	460
Body	Bioavailabl										
mass	e	rs80						0.01			
index	testosterone	2413				35837	0.84820	563	0.002767	1.6e-	461
(BMI)	levels	7	T	A	15	297	7	29	78	08	460
Body	Bioavailabl										
mass	e	rs80						-0.0		1.69	
index	testosterone	2551				95271	0.64592	146	0.002075	981e	461
(BMI)	levels	6	G	T	15	872	8	558	78	-12	460
Body	Bioavailabl										
mass	e	rs80						0.01		1.80	
index	testosterone	7666				15888	0.56156	406	0.001996	011e	461
(BMI)	levels	9	C	T	17	448	1	81	01	-12	460
Body	Bioavailabl										
mass	e	rs80						0.01		3.89	
index	testosterone	8951				69224		298	0.002075	996e	461
(BMI)	levels	4	A	T	18	478	0.36868	8	88	-10	460
Body	Bioavailabl										
mass	e	rs81						-0.0		1.80	
index	testosterone	1281				18812	0.40032	206	0.002027	011e	461
(BMI)	levels	8	G	A	19	785	9	96	12	-24	460
Body	Bioavailabl										
mass	e	rs81						-0.0		2.39	
index	testosterone	3249				40288	0.31302	153	0.002193	994e	461
(BMI)	levels	1	A	G	21	577	3	75	17	-12	460
Body	Bioavailabl										
mass	e							-0.0			
index	testosterone	rs81				19029	0.56314	164	0.001985	1e-1	461
(BMI)	levels	5163	C	T	1	4726	8	85	82	6	460
Body	Bioavailabl										
mass	e							-0.0		1.40	
index	testosterone	rs85				17091	0.75857	131	0.002313	001e	461
(BMI)	levels	2042	G	A	20	233	5	207	09	-08	460
Body	Bioavailabl	rs86				69651		-0.0	0.002013	1.20	461
mass	e	2320	T	C	16	866	0.40965	231	45	005e	460

index	testosterone							703		-30	
(BMI)	levels										
Body	Bioavailabl										
mass	e							0.02		2.29	
index	testosterone	rs87				40157	0.61323	411	0.002035	985e	461
(BMI)	levels	9620	T	C	16	29	7	36	95	-32	460
Body	Bioavailabl										
mass	e							-0.0		2.59	
index	testosterone	rs90				41982	0.13481	184	0.002912	998e	461
(BMI)	levels	9892	A	G	20	698	7	105	55	-10	460
Body	Bioavailabl										
mass	e							-0.0		1.29	
index	testosterone	rs92				67802	0.78319	145	0.002402	999e	461
(BMI)	levels	3994	G	A	4	992	5	761	19	-09	460
Body	Bioavailabl										
mass	e	rs92						-0.0		8.60	
index	testosterone	9182				64076	0.51486	142	0.001994	003e	461
(BMI)	levels	2	T	C	5	515	8	63	64	-13	460
Body	Bioavailabl										
mass	e	rs92						0.01			
index	testosterone	9426				83433	0.47655	478	0.001988	1e-1	461
(BMI)	levels	0	A	G	6	228	9	2	18	3	460
Body	Bioavailabl										
mass	e	rs93						0.01		2.59	
index	testosterone	4923				42516	0.41063	118	0.002009	998e	461
(BMI)	levels	5	T	C	6	718	5	09	24	-08	460
Body	Bioavailabl										
mass	e							-0.0		3.19	
index	testosterone	rs93				26949	0.50680	161	0.001972	963e	461
(BMI)	levels	5166	A	G	2	366	5	066	92	-16	460
Body	Bioavailabl										
mass	e	rs94								4.39	
index	testosterone	6317				95100	0.33895	-0.0	0.002101	997e	461
(BMI)	levels	5	T	C	6	30	8	115	15	-08	460
Body	Bioavailabl										
mass	e	rs94						0.01		1.10	
index	testosterone	7849				15433	0.16422	818	0.002674	002e	461
(BMI)	levels	6	C	T	6	3183	5	36	93	-11	460
Body	Bioavailabl										
mass	e	rs95						0.01		3.19	
index	testosterone	1544				11221	0.44770	510	0.001990	963e	461
(BMI)	levels	6	G	A	13	7108	9	51	52	-14	460
Body	Bioavailabl	rs95				11197	0.55339	-0.0	0.001993	1.50	461
mass	e	2218	T	C	13	0212	2	141	25	003e	460

index	testosterone	0						095		-12	
(BMI)	levels										
Body	Bioavailabl										
mass	e	rs95						-0.0		1.40	
index	testosterone	7168				67472	0.32936	135	0.002109	001e	461
(BMI)	levels	7	A	C	13	713	3	388	4	-10	460
Body	Bioavailabl										
mass	e	rs96						-0.0			
index	testosterone	3871				14645		361	0.006353	1.2e-	461
(BMI)	levels	3	G	A	7	949	0.97477	735	99	08	460
Body	Bioavailabl										
mass	e	rs96						0.01		5.50	
index	testosterone	7383				76895	0.49096	303	0.001987	047e	461
(BMI)	levels	9	G	A	16	693	7	37	83	-11	460
Body	Bioavailabl										
mass	e	rs96						0.15		3.09	
index	testosterone	7448				80191	0.00133	844	0.028617	999e	461
(BMI)	levels	7	G	C	17	995	8	5	1	-08	460
Body	Bioavailabl										
mass	e	rs98						0.01			
index	testosterone	3059				10463	0.58242	548	0.002001	1e-1	461
(BMI)	levels	2	A	C	3	1603	1	49	64	4	460
Body	Bioavailabl										
mass	e	rs98						-0.0		4.60	
index	testosterone	3908				12305	0.32523	117	0.002140	002e	461
(BMI)	levels	1	A	G	3	1230	2	01	45	-08	460
Body	Bioavailabl										
mass	e	rs98						-0.0		9.60	
index	testosterone	7666				85806	0.37538	180	0.002041	064e	461
(BMI)	levels	4	T	G	3	313	9	478	74	-19	460
Body	Bioavailabl										
mass	e	rs98						0.01		2.69	
index	testosterone	8853				10785	0.53807	200	0.002018	998e	461
(BMI)	levels	3	T	C	13	4612	9	38	2	-09	460
Body	Bioavailabl										
mass	e	rs99						-0.0		8.60	
index	testosterone	2678				19941	0.18457	238	0.002546	003e	461
(BMI)	levels	4	C	T	16	968	6	18	77	-21	460
Body	Bioavailabl										
mass	e	rs99						0.01		9.49	
index	testosterone	5161				56882	0.76736	442	0.002357	992e	461
(BMI)	levels	9	G	T	18	326	9	31	77	-10	460

Supplementary Table S2. Instruments for causal estimation from BMI to estradiol level.

			Eff	Oth	Chr	Gene	Effect		Stand		Sa
Exposu	Out	SN	ect	er	omo	tic	allele		ard		mpl
re	com	NP	alle	alle	som	positi	freque	Bet	error	Pva	e
	e	P	le	le	e	on	ncy	a	of beta	lue	size
Body	Estra										
mass	diol	rs10				1409		0.0			
index	level	063				9010	0.2533	136	0.00226	1.7e	461
(BMI)	s	055	T	C	5	8	65	775	991	-09	460
Body	Estra										
mass	diol	rs10				1433		0.0		4.20	
index	level	099				8369	0.4528	124	0.00198	001	461
(BMI)	s	330	G	A	8	4	5	247	907	e-10	460
Body	Estra							-0.			
mass	diol	rs10						015			
index	level	160				7647	0.2175	586	0.00242	1.2e	461
(BMI)	s	769	C	G	11	4827	1	2	199	-10	460
Body	Estra										
mass	diol	rs10						0.0		2.99	
index	level	169				4163	0.3631	121	0.00205	999	461
(BMI)	s	594	C	T	2	7688	39	875	506	e-09	460
Body	Estra										
mass	diol	rs10				1042		0.0		3.69	
index	level	182				4299	0.5122	130	0.00197	999	461
(BMI)	s	416	G	A	2	2	23	378	134	e-11	460
Body	Estra							-0.			
mass	diol	rs10						034		3.40	
index	level	423				4618	0.1943	013	0.00249	017	461
(BMI)	s	928	A	T	19	2304	58	6	869	e-42	460
Body	Estra										
mass	diol	rs10						0.0			
index	level	505				1928	0.8600	184	0.00287	1.2e	461
(BMI)	s	836	C	A	12	8508	12	851	086	-10	460
Body	Estra										
mass	diol	rs10				1186		0.0		2.19	
index	level	510				5099	0.2470	175	0.00229	989	461
(BMI)	s	025	T	C	10	6	13	643	886	e-14	460
Body	Estra										
mass	diol	rs10				1989		0.0		3.69	
index	level	642				5024	0.4783	149	0.00197	999	461
(BMI)	s	13	A	G	2	0	77	301	196	e-14	460
Body	Estra	rs10				4543	0.6122	0.0	0.00202	6.1e	461
mass	diol	742	C	T	11	8374	39	117	961	-09	460

index	level	752						979				
(BMI)	s											
Body	Estra							-0.				
mass	diol	rs10						020		1.90		
index	level	756	1588					0.4441	786	0.00199	02e-	461
(BMI)	s	714	G	A	9	5041	96	2	408	25	460	
Body	Estra							-0.				
mass	diol	rs10						019		4.90		
index	level	756	1672					0.7429	058	0.00227	004	461
(BMI)	s	792	T	C	9	6119	01	2	201	e-17	460	
Body	Estra											
mass	diol	rs10	1260					0.0				
index	level	760	9399					0.3850	138	0.00203	1e-1	461
(BMI)	s	277	T	C	9	9	49	734	825	1	460	
Body	Estra							-0.				
mass	diol	rs10						012				
index	level	780	8137					0.5594	123	0.00199	1.2e	461
(BMI)	s	248	A	G	9	0555	54	2	415	-09	460	
Body	Estra											
mass	diol	rs10	1426					0.0		4.90		
index	level	781	1939					0.3838	142	0.00205	004	461
(BMI)	s	41	T	C	8	3	67	239	862	e-12	460	
Body	Estra							-0.				
mass	diol	rs10						018		6.00		
index	level	799	2331					0.8337	223	0.00264	067	461
(BMI)	s	778	G	T	1	3353	18	7	876	e-12	460	
Body	Estra							-0.				
mass	diol	rs10						012		1.40		
index	level	809	1185					0.3501	530	0.00207	001	461
(BMI)	s	621	G	C	9	9607	43	5	043	e-09	460	
Body	Estra											
mass	diol	rs10						0.0		4.30		
index	level	824	7636					0.1394	207	0.00286	031	461
(BMI)	s	211	T	C	10	3107	91	688	631	e-13	460	
Body	Estra											
mass	diol	rs10						0.0		1.40		
index	level	832	1739					0.6230	115	0.00203	001	461
(BMI)	s	778	G	C	11	4073	38	628	985	e-08	460	
Body	Estra							-0.				
mass	diol	rs10	2435					016		2.30		
index	level	927	5765					0.1437	815	0.00281	001	461
(BMI)	s	006	C	T	1	9	04	6	467	e-09	460	
Body	Estra	rs10	2320					0.3698	-0.	0.00205	3.89	461
mass	diol	965	T	C	9	3619	97	011	2	996	460	

index	level	698						274		e-08	
(BMI)	s							1			
Body	Estra										
mass	diol	rs10				1031		0.0		1.39	
index	level	989				1963	0.3159	169	0.00212	991	461
(BMI)	s	067	A	G	9	4	3	514	349	e-15	460
Body	Estra										
mass	diol	rs11						0.0		7.29	
index	level	001				7876	0.5813	116	0.00201	995	461
(BMI)	s	963	T	C	10	0959	38	794	921	e-09	460
Body	Estra							-0.			
mass	diol	rs11						013		1.40	
index	level	009				3451	0.2440	083	0.00230	001	461
(BMI)	s	685	T	C	10	1990	96	4	766	e-08	460
Body	Estra										
mass	diol	rs11						0.0		7.10	
index	level	012				2183	0.3316	216	0.00210	068	461
(BMI)	s	732	G	A	10	0104	83	425	126	e-25	460
Body	Estra										
mass	diol	rs11						-0.		1.80	
index	level	079				4709	0.3285	020	0.00211	011	461
(BMI)	s	849	T	C	17	0785	31	093	163	e-21	460
Body	Estra							-0.			
mass	diol	rs11				1307		014		5.60	
index	level	099				2490	0.6406	203	0.00206	015	461
(BMI)	s	020	T	C	4	2	09	8	202	e-12	460
Body	Estra							-0.			
mass	diol	rs11						013		2.19	
index	level	115				8242	0.2377	076	0.00233	999	461
(BMI)	s	160	A	G	12	4100	97	8	641	e-08	460
Body	Estra							-0.			
mass	diol	rs11				2303		011		9.09	
index	level	122				0181	0.6117	631	0.00202	997	461
(BMI)	s	450	G	T	1	1	39	6	425	e-09	460
Body	Estra										
mass	diol	rs11				1706		0.0		1.20	
index	level	134				2339	0.6847	182	0.00213	005	461
(BMI)	s	679	G	A	5	1	53	459	286	e-17	460
Body	Estra							-0.			
mass	diol	rs11						021		2.90	
index	level	150				7875	0.3177	161	0.00212	001	461
(BMI)	s	745	G	A	17	7626	11	1	961	e-23	460
Body	Estra	rs11				1716	0.2086	-0.	0.00243	5.39	461
mass	diol	159	T	C	4	3547	71	014	798	995	460

index	level	858				1		224		e-09	
(BMI)	s	5						5			
Body	Estra										
mass	diol	rs11						0.0		4.90	
index	level	165				9692	0.5901	193	0.00200	004	461
(BMI)	s	643	T	C	1	4097	03	319	337	e-22	460
Body	Estra	rs11						-0.			
mass	diol	168						013		4.70	
index	level	938				2717	0.2826	670	0.00219	002	461
(BMI)	s	9	C	G	5	5962	14	6	522	e-10	460
Body	Estra							-0.			
mass	diol	rs11				1219		014		8.40	
index	level	218				2258	0.4004	461	0.00202	04e-	461
(BMI)	s	510	A	G	11	7	7	6	121	13	460
Body	Estra										
mass	diol	rs11						0.0			
index	level	269				4939	0.0352	322	0.00535	1.7e	461
(BMI)	s	30	C	G	12	9132	71	695	892	-09	460
Body	Estra	rs11						-0.			
mass	diol	307				1473		015		5.80	
index	level	957				5408	0.1927	589	0.00251	003	461
(BMI)	s	4	T	C	4	9	9	6	598	e-10	460
Body	Estra	rs11									
mass	diol	360						0.0		1.80	
index	level	386				3956	0.2120	186	0.00242	011	461
(BMI)	s	5	T	C	1	4930	5	013	689	e-14	460
Body	Estra	rs11									
mass	diol	362						0.0			
index	level	410				8832	0.2258	150	0.00236	2.1e	461
(BMI)	s	7	A	G	14	6386	6	461	876	-10	460
Body	Estra							-0.			
mass	diol	rs11				1388		023		6.59	
index	level	525				1719	0.0977	978	0.00333	933	461
(BMI)	s	873	C	T	7	3	01	1	603	e-13	460
Body	Estra										
mass	diol	rs11				1150		0.0		3.10	
index	level	607				3706	0.4865	157	0.00199	027	461
(BMI)	s	476	C	A	11	1	74	12	179	e-15	460
Body	Estra										
mass	diol	rs11				1216		0.0		3.09	
index	level	610				7113	0.1481	164	0.00278	999	461
(BMI)	s	621	A	T	12	3	74	869	318	e-09	460
Body	Estra	rs11				9924	0.2517	-0.	0.00228	2.69	461
mass	diol	630	A	G	15	0947	39	012	082	998	460

index	level	647						674		e-08	
(BMI)	s										
Body	Estra	rs11									
mass	diol	637						0.0		2.80	
index	level	439				5072	0.0354	318	0.00536	001	461
(BMI)	s	5	A	G	5	3410	44	817	236	e-09	460
Body	Estra										
mass	diol	rs11						0.0		2.90	
index	level	642				8173	0.3735	114	0.00205	001	461
(BMI)	s	090	C	T	16	0582	36	184	925	e-08	460
Body	Estra							-0.			
mass	diol	rs11						015		7.59	
index	level	656				3146	0.2247	428	0.00237	976	461
(BMI)	s	076	A	G	17	4270	74	5	054	e-11	460
Body	Estra							-0.			
mass	diol	rs11						019		1.59	
index	level	673				4999	0.6813	264	0.00213	993	461
(BMI)	s	11	A	G	1	6959	09	9	109	e-19	460
Body	Estra										
mass	diol	rs11				2040		0.0			
index	level	675				5374	0.5629	119	0.00198	1.6e	461
(BMI)	s	464	G	A	2	2	88	751	558	-09	460
Body	Estra							-0.			
mass	diol	rs11				1008		019		5.60	
index	level	691				0599	0.3620	315	0.00205	015	461
(BMI)	s	869	A	C	2	6	38	8	562	e-21	460
Body	Estra							-0.			
mass	diol	rs11						033		8.60	
index	level	699				6215	0.0358	541	0.00582	003	461
(BMI)	s	828	A	G	20	7198	32	8	677	e-09	460
Body	Estra										
mass	diol	rs11				1315		0.0		4.90	
index	level	709				5102	0.2787	228	0.00220	004	461
(BMI)	s	402	G	A	3	7	32	192	796	e-25	460
Body	Estra	rs11									
mass	diol	711				1317		0.0		1.29	
index	level	821				8332	0.0177	448	0.00788	999	461
(BMI)	s	7	C	G	10	8	11	186	004	e-08	460
Body	Estra	rs11									
mass	diol	734						0.0			
index	level	298				5426	0.0264	365	0.00646	1.6e	461
(BMI)	s	6	T	C	16	7868	15	794	781	-08	460
Body	Estra	rs11				1318	0.3038	-0.	0.00214	9.89	461
mass	diol	757	C	T	6	0454	79	014	834	92e-	460

index	level	278						626		12	
(BMI)	s							9			
Body	Estra										
mass	diol	rs11						0.0		4.20	
index	level	778				8776	0.1631	157	0.00268	001	461
(BMI)	s	219	G	A	8	2607	23	96	74	e-09	460
Body	Estra	rs11						-0.			
mass	diol	813						013			
index	level	682				2168	0.2810	258	0.00220	1.7e	461
(BMI)	s	7	T	G	17	104	86	2	19	-09	460
Body	Estra							-0.			
mass	diol	rs11						012		1.40	
index	level	919				4808	0.6797	785	0.00211	001	461
(BMI)	s	665	T	A	3	5349	75	4	292	e-09	460
Body	Estra										
mass	diol	rs12						0.0		2.80	
index	level	001				3407	0.3676	121	0.00205	001	461
(BMI)	s	437	C	T	9	4476	78	836	069	e-09	460
Body	Estra										
mass	diol	rs12						0.0		3.29	
index	level	072				9831	0.2244	157	0.00236	989	461
(BMI)	s	739	G	A	1	5893	78	008	691	e-11	460
Body	Estra										
mass	diol	rs12						0.0		8.90	
index	level	088				8079	0.3008	139	0.00214	02e-	461
(BMI)	s	284	T	C	1	8635	38	317	854	11	460
Body	Estra							-0.			
mass	diol	rs12						012		5.69	
index	level	089				9118	0.5486	312	0.00198	994	461
(BMI)	s	815	A	G	1	9933	1	1	606	e-10	460
Body	Estra										
mass	diol	rs12						-0.		1.20	
index	level	140				6257	0.0942	033	0.00345	005	461
(BMI)	s	153	T	G	1	9891	52	075	89	e-21	460
Body	Estra							-0.			
mass	diol	rs12						022		2.99	
index	level	149				7030	0.1149	733	0.00311	985	461
(BMI)	s	660	A	G	16	9237	56	8	586	e-13	460
Body	Estra										
mass	diol	rs12						0.0		4.49	
index	level	259				5368	0.4844	130	0.00198	987	461
(BMI)	s	464	A	G	10	0099	7	895	686	e-11	460
Body	Estra	rs12				1169	0.0565	0.0	0.00428	6.80	461
mass	diol	273	T	C	11	1101	05	248	551	002	460

index	level	545				2		393		e-09	
(BMI)	s										
Body	Estra										
mass	diol	rs12				1002		0.0		4.60	
index	level	299				3931	0.9727	373	0.00599	002	461
(BMI)	s	84	C	T	4	9	75	57	385	e-10	460
Body	Estra										
mass	diol	rs12				1346		0.0		4.90	
index	level	364				0101	0.1645	192	0.00266	004	461
(BMI)	s	470	G	T	11	2	56	705	58	e-13	460
Body	Estra										
mass	diol	rs12						0.0		3.40	
index	level	440				4658	0.4336	139	0.00200	017	461
(BMI)	s	603	T	C	15	5722	93	285	11	e-12	460
Body	Estra							-0.			
mass	diol	rs12						017		2.49	
index	level	459				1845	0.2682	014	0.00223	977	461
(BMI)	s	368	G	A	19	9377	03	1	235	e-14	460
Body	Estra										
mass	diol	rs12						0.0		2.60	
index	level	462				3027	0.3296	195	0.00212	016	461
(BMI)	s	975	A	G	19	2202	92	822	071	e-20	460
Body	Estra							-0.			
mass	diol	rs12						014		1.59	
index	level	541				9558	0.3174	326	0.00212	993	461
(BMI)	s	408	C	T	8	5807	2	1	723	e-11	460
Body	Estra										
mass	diol	rs12						0.0			
index	level	668				5177	0.3496	140	0.00207	1e-1	461
(BMI)	s	74	G	A	6	9638	19	966	12	1	460
Body	Estra										
mass	diol	rs12						0.0		3.50	
index	level	681				6205		148	0.00251	002	461
(BMI)	s	792	A	C	8	4463	0.1926	693	693	e-09	460
Body	Estra										
mass	diol	rs12				1612		0.0		1.29	
index	level	692				6591	0.3718	130	0.00203	999	461
(BMI)	s	596	T	C	2	0	5	872	738	e-10	460
Body	Estra							-0.			
mass	diol	rs12				1563		015		3.50	
index	level	696				0475	0.1494	280	0.00277	002	461
(BMI)	s	039	G	A	3	0	05	2	05	e-08	460
Body	Estra	rs12				9145	0.7037	0.0	0.00216	6.20	461
mass	diol	860	A	T	14	8523	47	149	922	012	460

index	level	58						126		e-12	
(BMI)	s										
Body	Estra										
mass	diol	rs12				1011		0.0		7.69	
index	level	881				4641	0.0826	220	0.00358	999	461
(BMI)	s	629	G	A	14	3	5	748	929	e-10	460
Body	Estra										
mass	diol	rs12						0.0		3.79	
index	level	921				7231	0.0779	203	0.00369	997	461
(BMI)	s	986	G	A	16	2727	84	327	83	e-08	460
Body	Estra										
mass	diol	rs12						-0.		1.39	
index	level	937				3495	0.4081	017	0.00201	991	461
(BMI)	s	411	T	C	17	0239	67	187	383	e-17	460
Body	Estra										
mass	diol	rs12				1370		-0.		3.90	
index	level	963				8319	0.5590	018	0.00199	032	461
(BMI)	s	28	C	A	4	3	32	862	9	e-21	460
Body	Estra										
mass	diol	rs12						0.0		2.29	
index	level	974				1866	0.5431	152	0.00199	985	461
(BMI)	s	458	T	C	19	115	75	466	717	e-14	460
Body	Estra							-0.			
mass	diol	rs13						013			
index	level	012				3544	0.2283	650	0.00234	6.1e	461
(BMI)	s	070	A	G	2	7243	88	1	795	-09	460
Body	Estra										
mass	diol	rs13				1335		0.0		3.29	
index	level	033				2360	0.2527	126	0.00228	997	461
(BMI)	s	310	A	G	2	5	6	11	26	e-08	460
Body	Estra										
mass	diol	rs13						0.0			
index	level	097				3567	0.2123	145	0.00241	1.7e	461
(BMI)	s	918	A	T	3	6330	15	561	61	-09	460
Body	Estra										
mass	diol	rs13				1031		0.0		8.49	
index	level	107				8870	0.0749	475	0.00375	963	461
(BMI)	s	325	T	C	4	9	2	799	479	e-37	460
Body	Estra										
mass	diol	rs13						0.0		3.10	
index	level	176				4315	0.6876	141	0.00213	027	461
(BMI)	s	429	C	T	5	2216	09	555	122	e-11	460
Body	Estra	rs13				2126	0.4547	-0.	0.00199	1.50	461
mass	diol	202	T	C	17	4396	91	018	407	003	460

index	level	51								032		e-19		
(BMI)	s									1				
Body	Estra									-0.				
mass	diol	rs13						1201		014		5.79		
index	level	218						7350	0.3351	402	0.00209	963	461	
(BMI)	s	383	G	C	6		1	32		5	236	e-12	460	
Body	Estra									-0.				
mass	diol	rs13								013		1.09		
index	level	228						2048	0.6092	129	0.00203	999	461	
(BMI)	s	42	G	A	6		8897	74		2	539	e-10	460	
Body	Estra													
mass	diol	rs13								0.0		1.99		
index	level	248						1433	0.2685	157	0.00224	986	461	
(BMI)	s	187	C	T	8		6834	57		64	155	e-12	460	
Body	Estra									-0.				
mass	diol	rs13								014		2.80		
index	level	272						5117	0.3877	853	0.00203	027	461	
(BMI)	s	59	G	A	6		7811	22		2	363	e-13	460	
Body	Estra													
mass	diol	rs13								0.0		3.40		
index	level	291						8051	0.5706	110	0.00199	001	461	
(BMI)	s	723	A	G	9		0077	83		318	876	e-08	460	
Body	Estra									-0.				
mass	diol	rs13								011		3.29		
index	level	301						2776	0.4831	750	0.00198	997	461	
(BMI)	s	99	T	G	9		0946	37		9	642	e-09	460	
Body	Estra									-0.				
mass	diol	rs13								015		4.60		
index	level	420						5075	0.3650	481	0.00205	045	461	
(BMI)	s	048	A	C	2		1414	37		7	272	e-14	460	
Body	Estra									-0.				
mass	diol	rs13						2134		018		5.60		
index	level	427						1426	0.2711	151	0.00224	015	461	
(BMI)	s	822	G	A	2		5	98		5	142	e-16	460	
Body	Estra													
mass	diol	rs13								-0.		9.70		
index	level	468						6565	0.4050	013	0.00201	063	461	
(BMI)	s	41	A	G	4		1730	41		056	72	e-11	460	
Body	Estra													
mass	diol	rs13								0.0		4.79		
index	level	602						7379	0.4815	130	0.00197	954	461	
(BMI)	s	01	T	C	9		6450	46		075	747	e-11	460	
Body	Estra	rs13						3043	0.3606	-0.	0.00205	4.30	461	
mass	diol	642	T	A	11		2220	54		016	695	031	460	

index	level							136		e-15	
(BMI)	s							3			
Body	Estra	rs14						-0.			
mass	diol	015						024		2.80	
index	level	971				7376	0.0822	688	0.00370	027	461
(BMI)	s	7	T	C	15	5586	92	2	967	e-11	460
Body	Estra							-0.			
mass	diol	rs14				1525		013		1.09	
index	level	389				1093	0.7151	382	0.00219	999	461
(BMI)	s	45	A	T	5	7	19	4	791	e-09	460
Body	Estra										
mass	diol	rs14						0.0		3.40	
index	level	412				7958	0.5936	179	0.00205	017	461
(BMI)	s	64	A	G	13	0919	81	033	854	e-18	460
Body	Estra										
mass	diol	rs14						0.0		7.39	
index	level	519				4135	0.0822	222	0.00360	997	461
(BMI)	s	63	T	G	14	0367	66	01	585	e-10	460
Body	Estra										
mass	diol	rs14						0.0		1.20	
index	level	581				4188	0.4884	140	0.00197	005	461
(BMI)	s	56	T	C	12	7940	31	75	951	e-12	460
Body	Estra	rs14									
mass	diol	598						0.0			
index	level	110				7471	0.0637	227	0.00404	2e-0	461
(BMI)	s	4	G	A	8	4869	11	11	552	8	460
Body	Estra	rs14									
mass	diol	656						0.0			
index	level	942				2199	0.2007	139	0.00248	2e-0	461
(BMI)	s	8	A	G	11	686	49	533	571	8	460
Body	Estra										
mass	diol	rs14				1080		0.0		4.10	
index	level	710				3109	0.6166	134	0.00203	015	461
(BMI)	s	93	A	G	3	4	63	619	996	e-11	460
Body	Estra										
mass	diol	rs14				1363		0.0		8.90	
index	level	717				2827		193	0.00225	02e-	461
(BMI)	s	40	C	T	3	0	0.7405	576	404	18	460
Body	Estra	rs14						-0.			
mass	diol	756						013		1.09	
index	level	867				9306	0.2380	332	0.00233	999	461
(BMI)	s	8	C	T	10	1851	7	7	034	e-08	460
Body	Estra	rs14				8798	0.1369	0.0	0.00289	2.19	461
mass	diol	772	C	T	5	8934	47	337	815	989	460

index	level	90							772		e-31	
(BMI)	s											
Body	Estra	rs14							-0.			
mass	diol	773				1230			035		1.29	
index	level	026				2447	0.0872		079	0.00358	987	461
(BMI)	s	8	T	G	12	6	43		9	357	e-22	460
Body	Estra											
mass	diol	rs15							0.0		5.90	
index	level	035				6302	0.4800		154	0.00197	065	461
(BMI)	s	26	C	T	5	0706	77		308	681	e-15	460
Body	Estra											
mass	diol	rs15				1048			0.0		8.30	
index	level	620				4744	0.7534		131	0.00228	004	461
(BMI)	s	1	C	G	6	1	55		899	932	e-09	460
Body	Estra											
mass	diol	rs15							0.0			
index	level	691				1684	0.4917		111	0.00197	1.6e	461
(BMI)	s	4	A	G	1	8652	86		552	308	-08	460
Body	Estra								-0.			
mass	diol	rs15				1226			013		2.29	
index	level	829				5719	0.4732		341	0.00199	985	461
(BMI)	s	31	A	G	5	9	42		9	56	e-11	460
Body	Estra								-0.			
mass	diol	rs16				1578			011		9.29	
index	level	081				1521	0.3649		776	0.00205	994	461
(BMI)	s	13	T	A	3	7	98		6	086	e-09	460
Body	Estra											
mass	diol	rs16							0.0		7.89	
index	level	090				7722	0.5657		209	0.00199	951	461
(BMI)	s	10	G	A	8	7464	28		773	63	e-26	460
Body	Estra								-0.			
mass	diol	rs16							019		4.20	
index	level	916				3082	0.1197		236	0.00307	001	461
(BMI)	s	303	G	A	9	3761	36		9	931	e-10	460
Body	Estra											
mass	diol	rs17				1582			0.0		2.19	
index	level	056				7168	0.2564		135	0.00226	999	461
(BMI)	s	301	C	T	5	0	25		831	97	e-09	460
Body	Estra								-0.			
mass	diol	rs17							017		7.50	
index	level	132				2108	0.2214		841	0.00238	067	461
(BMI)	s	130	C	G	7	036	67		8	564	e-14	460
Body	Estra	rs17				7663	0.8048		-0.	0.00255	7.00	461
mass	diol	149	C	T	7	4463	54		021	804	003	460

index	level	254							350		e-17	
(BMI)	s								7			
Body	Estra								-0.			
mass	diol	rs17					1407		013			
index	level	289					7468	0.3278	466	0.00210	1.6e	461
(BMI)	s	010	G	A	4		4	7	1	438	-10	460
Body	Estra											
mass	diol	rs17							0.0		4.40	
index	level	399					8749	0.0688	270	0.00391	048	461
(BMI)	s	739	G	A	10		0850	93	713	006	e-12	460
Body	Estra											
mass	diol	rs17							0.0			
index	level	446					4076	0.1655	153	0.00266	8.9e	461
(BMI)	s	299	G	C	13		2556	44	235	515	-09	460
Body	Estra											
mass	diol	rs17					1152		0.0		5.30	
index	level	544					9516	0.2108	140	0.00241	005	461
(BMI)	s	384	C	T	1		0	64	931	434	e-09	460
Body	Estra								-0.			
mass	diol	rs17							023		1.50	
index	level	668					6120	0.1460	054	0.00279	003	461
(BMI)	s	356	G	C	3		8619	29	3	318	e-16	460
Body	Estra											
mass	diol	rs17							0.0		1.29	
index	level	770					2841	0.3224	242	0.00211	987	461
(BMI)	s	336	T	C	9		4625	37	931	161	e-30	460
Body	Estra											
mass	diol	rs17					1564		0.0		7.50	
index	level	788					8997	0.3621	140	0.00205	067	461
(BMI)	s	30	A	G	1		4	65	775	596	e-12	460
Body	Estra											
mass	diol	rs17							-0.		7.70	
index	level	888					2109	0.4947	020	0.00198	016	461
(BMI)	s	08	G	A	18		0023	8	404	255	e-25	460
Body	Estra								-0.			
mass	diol	rs17					1319		013		4.70	
index	level	936					3492	0.3091	334	0.00214	002	461
(BMI)	s	36	C	G	11		6	44	3	08	e-10	460
Body	Estra								-0.			
mass	diol	rs18					1506		016		2.99	
index	level	051					4553	0.2453	756	0.00229	985	461
(BMI)	s	23	G	T	7		4	01	9	711	e-13	460
Body	Estra	rs18					4074	0.3731	-0.	0.00205	8.60	461
mass	diol	341	A	C	18		4790	92	014	213	003	460

index	level	44							011		e-12	
(BMI)	s								2			
Body	Estra								-0.			
mass	diol	rs18							021		1.20	
index	level	614				5893	0.5554	255	0.00198	005	461	
(BMI)	s	10	T	C	2	3591	23	8	918	e-26	460	
Body	Estra											
mass	diol	rs18							0.0		2.29	
index	level	848				6612	0.6273	200	0.00205	985	461	
(BMI)	s	97	G	A	20	832	78	01	634	e-22	460	
Body	Estra											
mass	diol	rs19							0.0		5.49	
index	level	192				8877	0.4874	116	0.00200	997	461	
(BMI)	s	43	C	T	5	8861	06	759	175	e-09	460	
Body	Estra								-0.			
mass	diol	rs19							017			
index	level	677				2803	0.2851	043	0.00220	1e-1	461	
(BMI)	s	72	A	G	13	6062	17	4	377	4	460	
Body	Estra											
mass	diol	rs20				1412			0.0		1.69	
index	level	359				9812	0.0558	370	0.00435	981	461	
(BMI)	s	36	T	G	3	4	92	863	778	e-17	460	
Body	Estra											
mass	diol	rs20							0.0		2.80	
index	level	515				3298	0.1325	204	0.00291	027	461	
(BMI)	s	59	C	T	4	800	4	078	963	e-12	460	
Body	Estra											
mass	diol	rs20							0.0		2.80	
index	level	754				4872	0.2671	132	0.00223	001	461	
(BMI)	s	66	C	G	16	970	82	903	627	e-09	460	
Body	Estra											
mass	diol	rs21							0.0			
index	level	022				5281	0.3224	118	0.00211	2e-0	461	
(BMI)	s	78	G	A	4	8664	86	583	39	8	460	
Body	Estra											
mass	diol	rs21				1390			-0.		5.79	
index	level	335				8665	0.6110	014	0.00204	963	461	
(BMI)	s	61	T	A	5	1	84	097	744	e-12	460	
Body	Estra											
mass	diol	rs21							0.0		1.79	
index	level	351				2694	0.1456	157	0.00280	999	461	
(BMI)	s	8	C	T	7	1065	08	894	491	e-08	460	
Body	Estra	rs21				2126	0.4799	-0.	0.00199	1.6e	461	
mass	diol	537	G	A	20	089	14	011	313	-08	460	

index	level	40										255
(BMI)	s											1
Body	Estra											-0.
mass	diol	rs21										015
												2.39
index	level	563				3236	0.6118	522	0.00203	994	461	
(BMI)	s	4	G	A	7	9148	79	3	492	e-14	460	
Body	Estra											-0.
mass	diol	rs21				1339		014				8.99
index	level	721				7896	0.5787	938	0.00200	912	461	
(BMI)	s	31	C	T	10	2	23	2	386	e-14	460	
Body	Estra											-0.
mass	diol	rs21										0.0
												2.39
index	level	767				6236	0.2717	170	0.00223	994	461	
(BMI)	s	2	C	A	14	1021	41	155	046	e-14	460	
Body	Estra											-0.
mass	diol	rs21										-0.
												3.69
index	level	921				5550	0.5533	015	0.00198	999	461	
(BMI)	s	58	G	A	4	5360	08	012	302	e-14	460	
Body	Estra											-0.
mass	diol	rs22				1815		0.0				5.19
index	level	169				9907	0.6619	169	0.00208	996	461	
(BMI)	s	31	A	C	2	0	66	109	587	e-16	460	
Body	Estra											-0.
mass	diol	rs22										020
												3.59
index	level	344				6563	0.6395	384	0.00205	998	461	
(BMI)	s	58	T	C	11	9374	19	1	579	e-23	460	
Body	Estra											-0.
mass	diol	rs22				1319		0.0				3.79
index	level	485				2468	0.1645	146	0.00266	997	461	
(BMI)	s	51	A	G	6	9	22	523	497	e-08	460	
Body	Estra											-0.
mass	diol	rs22				1088		0.0				2.09
index	level	533				8859	0.6260	173	0.00204	991	461	
(BMI)	s	10	G	C	6	3	99	213	115	e-17	460	
Body	Estra											-0.
mass	diol	rs22										016
												5.19
index	level	711				5649	0.4027	308	0.00201	98e-	461	
(BMI)	s	89	A	G	12	4991	2	6	869	16	460	
Body	Estra											-0.
mass	diol	rs22										015
												5.19
index	level	893				4480	0.3956	276	0.00202	996	461	
(BMI)	s	79	T	C	7	4225	48	5	952	e-14	460	
Body	Estra	rs23				7500	0.3950	-0.	0.00202	1.29	461	
mass	diol	071	C	T	5	3678	25	028	203	987	460	

index	level	11							004		e-43	
(BMI)	s								2			
Body	Estra								-0.			
mass	diol	rs23							012		1.29	
index	level	428				2454	0.5162	697	0.00197	999	461	
(BMI)	s	92	G	T	16	0806	12	2	715	e-10	460	
Body	Estra											
mass	diol	rs23				1440		0.0		1.29		
index	level	814				3544	0.2438	139	0.00229	999	461	
(BMI)	s	04	C	T	2	2	37	664	974	e-09	460	
Body	Estra											
mass	diol	rs23						0.0		3.89		
index	level	833				3325	0.1306	161	0.00293	996	461	
(BMI)	s	77	A	G	14	7914	87	287	564	e-08	460	
Body	Estra											
mass	diol	rs23						0.0		2.09		
index	level	988				9643	0.2591	179	0.00226	991	461	
(BMI)	s	61	G	A	9	0747	69	932	733	e-15	460	
Body	Estra											
mass	diol	rs24						0.0				
index	level	258				4489	0.4151	122	0.00201	1.2e	461	
(BMI)	s	16	A	G	20	5075	11	284	106	-09	460	
Body	Estra							-0.				
mass	diol	rs24				2308		017		3.80		
index	level	337				1670	0.6776	180	0.00210	014	461	
(BMI)	s	33	A	G	2	3	59	5	907	e-16	460	
Body	Estra											
mass	diol	rs24						0.0		5.30		
index	level	398				9977	0.5456	191	0.00199	029	461	
(BMI)	s	23	G	A	10	8226	12	998	108	e-22	460	
Body	Estra							-0.				
mass	diol	rs24						011		1.29		
index	level	823				9417	0.4290	351	0.00199	999	461	
(BMI)	s	56	C	T	9	8371	18	1	506	e-08	460	
Body	Estra											
mass	diol	rs25				1314		0.0		9.20		
index	level	128				5186	0.5660	129	0.00199	026	461	
(BMI)	s	92	C	T	11	2	85	468	819	e-11	460	
Body	Estra							-0.				
mass	diol	rs25						011				
index	level	276				7738	0.5879	504	0.00201	1.2e	461	
(BMI)	s	1	T	G	5	0723	66	6	769	-08	460	
Body	Estra	rs25				7276	0.6036	0.0	0.00201	1.59	461	
mass	diol	689	A	G	1	5116	56	222	204	993	460	

index	level	58							928		e-28	
(BMI)	s											
Body	Estra											
mass	diol	rs25							0.0		2.39	
index	level	699				1292	0.3203	126	0.00212	999	461	
(BMI)	s	93	C	T	3	6096	27	7	202	e-09	460	
Body	Estra								-0.			
mass	diol	rs26				1835			013		2.70	
index	level	062				3775	0.6463	879	0.00208	023	461	
(BMI)	s	28	C	A	3	9	68	1	379	e-11	460	
Body	Estra								-0.			
mass	diol	rs26							013		6.70	
index	level	161				2063	0.3198	873	0.00212	039	461	
(BMI)	s	43	A	G	8	2022	62	8	547	e-11	460	
Body	Estra											
mass	diol	rs26				1123			0.0		1.39	
index	level	180				2411	0.3814	143	0.00203	991	461	
(BMI)	s	39	T	A	1	1	81	963	17	e-12	460	
Body	Estra											
mass	diol	rs26				2018			0.0		3.80	
index	level	782				0051	0.3401	241	0.00208	014	461	
(BMI)	s	04	G	T	1	1	62	61	158	e-31	460	
Body	Estra								-0.			
mass	diol	rs27							016		1.10	
index	level	253				3085	0.6961	030	0.00215	002	461	
(BMI)	s	71	G	A	8	4033	15	1	845	e-13	460	
Body	Estra								-0.			
mass	diol	rs27							013		7.19	
index	level	916				1120	0.7617	383	0.00231	996	461	
(BMI)	s	43	T	C	1	7269	94	7	332	e-09	460	
Body	Estra								-0.			
mass	diol								018		2.90	
index	level	rs28				4241	0.8206	033	0.00258	001	461	
(BMI)	s	350	G	A	3	8446	84	5	234	e-12	460	
Body	Estra								-0.			
mass	diol	rs28							026		1.59	
index	level	366				3167	0.1305	482	0.00292	993	461	
(BMI)	s	156	C	T	6	1498	95	6	978	e-19	460	
Body	Estra											
mass	diol	rs28							0.0		1.09	
index	level	379				4262	0.6514	126	0.00207	999	461	
(BMI)	s	96	C	T	21	6706	08	647	859	e-09	460	
Body	Estra	rs28				8087	0.3660	-0.	0.00205	1.2e	461	
mass	diol	404	T	C	5	4229	41	011	533	-08	460	

index	level	639						712			
(BMI)	s							9			
Body	Estra							-0.			
mass	diol	rs28						015		2.80	
index	level	489				4180	0.2903	373	0.00220	027	461
(BMI)	s	620	A	G	22	4716	49	7	025	e-12	460
Body	Estra							-0.			
mass	diol	rs28						018			
index	level	568				5346	0.1076	282	0.00320	1.2e	461
(BMI)	s	418	A	G	15	2969	36	5	812	-08	460
Body	Estra							-0.			
mass	diol	rs28						017			
index	level	616				6783	0.4119	127	0.00199	1e-1	461
(BMI)	s	85	C	T	2	7553	84	4	763	7	460
Body	Estra							-0.			
mass	diol	rs28				1403		012		3.69	
index	level	670				6304	0.2860	463	0.00226	999	461
(BMI)	s	671	C	T	9	5	24	8	426	e-08	460
Body	Estra							-0.			
mass	diol	rs28						015		7.10	
index	level	701				7940	0.4120	715	0.00201	068	461
(BMI)	s	11	T	C	15	3585	66	1	912	e-15	460
Body	Estra										
mass	diol	rs28				1249		0.0		3.29	
index	level	757				2503	0.2429	153	0.00231	989	461
(BMI)	s	62	C	G	6	2	53	39	21	e-11	460
Body	Estra										
mass	diol	rs28						0.0		2.30	
index	level	996				5947	0.2299	149	0.00236	001	461
(BMI)	s	44	T	C	15	0366	95	659	09	e-10	460
Body	Estra							-0.			
mass	diol	rs29						014			
index	level	205				1232	0.2854	030	0.00219	1.7e	461
(BMI)	s	03	T	C	3	4230	13	7	666	-10	460
Body	Estra										
mass	diol	rs29						0.0		7.79	
index	level	623				8687	0.0200	432	0.00703	992	461
(BMI)	s	34	T	G	5	9056	65	552	547	e-10	460
Body	Estra							-0.			
mass	diol	rs31						014		6.09	
index	level	765				6968	0.7244	476	0.00221	958	461
(BMI)	s	6	A	T	12	1101	52	3	303	e-11	460
Body	Estra	rs32				1363	0.1315	-0.	0.00288	4.79	461
mass	diol	139	A	C	2	8984	25	017	163	999	460

index	level	43				0		940		e-10	
(BMI)	s							6			
Body	Estra										
mass	diol					1673		0.0		2.59	
index	level	rs32				6241	0.2243	132	0.00237	998	461
(BMI)	s	421	T	A	5	6	15	315	757	e-08	460
Body	Estra							-0.			
mass	diol	rs32				1338		016		1.29	
index	level	911				6166	0.4194	573	0.00200	987	461
(BMI)	s	8	T	C	5	3	09	4	38	e-16	460
Body	Estra										
mass	diol	rs32				1337		0.0		3.29	
index	level	965				6762	0.8039	157	0.00250	997	461
(BMI)	s	1	T	G	11	2	77	218	202	e-10	460
Body	Estra										
mass	diol	rs34						0.0		3.50	
index	level	045				4036	0.3344	234	0.00209	026	461
(BMI)	s	288	T	C	6	9081	35	784	371	e-29	460
Body	Estra							-0.			
mass	diol	rs34						038		9.59	
index	level	153				4133	0.0221	915	0.00678	997	461
(BMI)	s	025	C	T	15	9697	58	1	155	e-09	460
Body	Estra										
mass	diol	rs34				1751		-0.		2.39	
index	level	234				6663	0.3924	014	0.00204	994	461
(BMI)	s	296	A	G	2	6	37	947	032	e-13	460
Body	Estra							-0.			
mass	diol	rs34						018		7.80	
index	level	481				4750	0.1653	502	0.00270	01e-	461
(BMI)	s	751	A	C	20	1038	29	9	404	12	460
Body	Estra										
mass	diol	rs34						0.0		3.59	
index	level	517				7845	0.1217	388	0.00304	998	461
(BMI)	s	439	A	C	1	0517	87	48	983	e-37	460
Body	Estra										
mass	diol	rs34						0.0		8.10	
index	level	696				9309	0.4760	114	0.00198	009	461
(BMI)	s	181	C	T	7	6635	84	345	283	e-09	460
Body	Estra							-0.			
mass	diol	rs34						028		4.10	
index	level	811				2540	0.2307	529	0.00234	015	461
(BMI)	s	474	A	G	4	8838	56	3	269	e-34	460
Body	Estra	rs34				8477	0.5003	-0.	0.00198	1.90	461
mass	diol	907	A	G	11	6849	88	013	231	02e-	460

index	level	1							306		11		
(BMI)	s								2				
Body	Estra								-0.				
mass	diol	rs35							013		5.30		
index	level	154				2486	0.2740		042	0.00223	005	461	
(BMI)	s	326	G	A	16	2414	44		7	442	e-09	460	
Body	Estra												
mass	diol	rs35							0.0		9.20		
index	level	364				7427	0.1097		217	0.00318	026	461	
(BMI)	s	449	T	C	15	8126	39		069	335	e-12	460	
Body	Estra												
mass	diol	rs35				1540			0.0		3.29		
index	level	577				3495	0.4075		152	0.00201	989	461	
(BMI)	s	7	C	G	3	0	37		715	314	e-14	460	
Body	Estra								-0.				
mass	diol	rs35							016		9.20		
index	level	697				4729	0.5081		467	0.00198	026	461	
(BMI)	s	587	A	G	14	8505	21		7	067	e-17	460	
Body	Estra												
mass	diol	rs35							0.0		6.20		
index	level	697				5235	0.0893		230	0.00352	012	461	
(BMI)	s	691	G	C	15	3498	46		305	223	e-11	460	
Body	Estra								-0.				
mass	diol	rs35							017		9.09		
index	level	809				4701	0.3632		100	0.00205	913	461	
(BMI)	s	007	A	G	2	9521	05		9	627	e-17	460	
Body	Estra								-0.				
mass	diol	rs35							019		1.10		
index	level	957				7344	0.5743		642	0.00200	002	461	
(BMI)	s	544	T	G	8	0371	16		9	438	e-22	460	
Body	Estra												
mass	diol	rs36				1630			-0.		2.19		
index	level	007				0933	0.1376		021	0.00286	989	461	
(BMI)	s	635	A	G	6	5	98		045	788	e-13	460	
Body	Estra												
mass	diol	rs36							0.0				
index	level	061				3832	0.3987		128	0.00201	2e-1	461	
(BMI)	s	954	T	C	8	9650	47		445	928	0	460	
Body	Estra								-0.				
mass	diol	rs37							011		5.19		
index	level	646				4964	0.5875		771	0.00201	996	461	
(BMI)	s	25	G	T	19	9051	94		4	523	e-09	460	
Body	Estra	rs37				6807	0.2266		-0.	0.00236	2.49	461	
mass	diol	847	C	T	15	2458	02		029	042	977	460	

index	level	10							706		e-36	
(BMI)	s								7			
Body	Estra								-0.			
mass	diol	rs38					1032		018		6.40	
index	level	032					4647	0.6668	641	0.00209	03e-	461
(BMI)	s	86	G	A	14		0	15	7	828	19	460
Body	Estra								-0.			
mass	diol	rs38							012			
index	level	075					5056	0.4383	072	0.00199	1.5e	461
(BMI)	s	66	T	G	7		4204	2	7	583	-09	460
Body	Estra											
mass	diol	rs38							0.0			
index	level	148					2999	0.4824	240	0.00198	1e-3	461
(BMI)	s	83	T	C	16		4922	02	107	424	3	460
Body	Estra											
mass	diol	rs38							0.0		5.40	
index	level	453					7500	0.3911	163	0.00201	008	461
(BMI)	s	44	T	C	1		1480	15	609	927	e-16	460
Body	Estra								-0.			
mass	diol	rs38					1318		013			
index	level	519					7660	0.7430	607	0.00226	2e-0	461
(BMI)	s	98	G	C	3		5	64	1	874	9	460
Body	Estra											
mass	diol	rs38							0.0			
index	level	668					6657	0.3556	117	0.00206	1.2e	461
(BMI)	s	05	A	C	1		424	83	835	546	-08	460
Body	Estra											
mass	diol	rs38					1234		0.0			
index	level	971					9211	0.4111	120	0.00202	2.5e	461
(BMI)	s	02	T	C	12		2	57	838	716	-09	460
Body	Estra											
mass	diol	rs39							0.0			
index	level	029					6978	0.2371	141	0.00235	2e-0	461
(BMI)	s	51	G	T	14		9755	51	019	267	9	460
Body	Estra								-0.			
mass	diol	rs39							014		4.00	
index	level	351					7908	0.5367	486	0.00199	037	461
(BMI)	s	90	A	G	17		4367	84	4	701	e-13	460
Body	Estra											
mass	diol	rs39							0.0		9.49	
index	level	460					4658	0.5376	186	0.00199	948	461
(BMI)	s	8	C	T	21		1798	97	353	484	e-21	460
Body	Estra	rs40					1074	0.1795	-0.	0.00258	3.80	461
mass	diol	071	C	T	5		9610	36	026	163	014	460

index	level					2		166		e-24	
(BMI)	s							6			
Body	Estra							-0.			
mass	diol	rs40						012			
index	level	174				4402	0.4702	581	0.00198	2.1e	461
(BMI)	s	25	T	C	3	8764	08	7	035	-10	460
Body	Estra							-0.			
mass	diol	rs40						017		7.39	
index	level	557				5926	0.4168	808	0.00200	946	461
(BMI)	s	91	T	C	13	6053	04	2	801	e-19	460
Body	Estra										
mass	diol	rs40						0.0		8.30	
index	level	638				1822	0.1772	159	0.00260	004	461
(BMI)	s	8	G	C	22	6997	66	73	181	e-10	460
Body	Estra										
mass	diol	rs41				1100		0.0		4.00	
index	level	279				8255	0.0259	684	0.00622	037	461
(BMI)	s	738	G	T	1	1	88	263	25	e-28	460
Body	Estra							-0.			
mass	diol	rs41						022		1.39	
index	level	481				8905	0.1132	968	0.00310	991	461
(BMI)	s	55	G	A	4	4667	68	1	659	e-13	460
Body	Estra										
mass	diol	rs42						0.0		1.59	
index	level	619				3100	0.3649	138	0.00205	993	461
(BMI)	s	44	G	T	4	3636	35	553	652	e-11	460
Body	Estra										
mass	diol	rs42						0.0		1.40	
index	level	671				6096	0.1863	153	0.00254	001	461
(BMI)	s	03	C	T	12	6740	47	916	312	e-09	460
Body	Estra										
mass	diol	rs42						0.0			
index	level	846				3184	0.4671	119	0.00199	2e-0	461
(BMI)	s	00	C	T	15	3528	22	673	506	9	460
Body	Estra							-0.			
mass	diol	rs42				1479		017		3.29	
index	level	934				0338	0.5765	379	0.00199	989	461
(BMI)	s	3	G	A	2	2	73	5	729	e-18	460
Body	Estra							-0.			
mass	diol	rs42						026		2.39	
index	level	935				4541	0.1541	672	0.00274	994	461
(BMI)	s	8	C	T	19	1941	66	3	373	e-22	460
Body	Estra	rs43				2435	0.4589	0.0	0.00198	1e-0	461
mass	diol	072	G	A	7	4300	41	121	816	9	460

index	level	39										413	
(BMI)	s												
Body	Estra												
mass	diol	rs44										0.0	1.09
index	level	194				9615	0.4073	114	0.00201	999	461		
(BMI)	s	75	T	A	4	0044	27	87	06	e-08	460		
Body	Estra												
mass	diol	rs44											
index	level	443				9257	0.2161	160	0.00242	977	461		
(BMI)	s	17	G	A	15	3234	41	4	104	e-11	460		
Body	Estra												
mass	diol	rs44											
index	level	567				2519	0.3334	146	0.00210	998	461		
(BMI)	s	69	T	C	20	0777	44	111	138	e-12	460		
Body	Estra												
mass	diol	rs44											
index	level	775				5410	0.1286	296	0.00298	001	461		
(BMI)	s	62	T	C	13	4968	44	118	011	e-23	460		
Body	Estra												
mass	diol	rs44				2053		031		2.99			
index	level	824				7590	0.9230	317	0.00370	985	461		
(BMI)	s	63	A	C	2	9	02	5	692	e-17	460		
Body	Estra												
mass	diol	rs45											
index	level	486				2244	0.0656	257	0.00403	1.7e	461		
(BMI)	s	197	A	G	19	849	85	66	737	-10	460		
Body	Estra												
mass	diol	rs46				2290		0.0		3.29			
index	level	053				1096	0.3415	163	0.00207	989	461		
(BMI)	s	63	C	A	2	0	95	638	733	e-15	460		
Body	Estra												
mass	diol	rs46											
index	level	484				2723	0.4668	014	0.00198	04e-	461		
(BMI)	s	50	A	C	1	214	24	837	775	14	460		
Body	Estra												
mass	diol	rs46				2438		018					
index	level	584				3256	0.8336	887	0.00264	1e-1	461		
(BMI)	s	03	T	C	1	0	59	7	997	2	460		
Body	Estra												
mass	diol	rs46											
index	level	723				6021	0.3362	135	0.00208	018	461		
(BMI)	s	38	T	C	2	7457	28	646	669	e-11	460		
Body	Estra	rs47				3125	0.1361	0.0	0.00287	7.89	461		
mass	diol	223	T	C	7	220	37	186	545	951	460		

index	level	98							993		e-11	
(BMI)	s											
Body	Estra								-0.			
mass	diol	rs47				1036			018		3.10	
index	level	649				5809	0.3258	392	0.00211	027	461	
(BMI)	s	49	G	A	12	6	92	4	197	e-18	460	
Body	Estra								-0.			
mass	diol	rs47							025		2.60	
index	level	902				1824	0.1536	450	0.00275	016	461	
(BMI)	s	92	A	C	17	305	93	9	603	e-20	460	
Body	Estra								-0.			
mass	diol	rs48							017		1.69	
index	level	204				4069	0.3453	745	0.00208	981	461	
(BMI)	s	10	G	A	22	0385	17	7	527	e-17	460	
Body	Estra											
mass	diol	rs48							-0.		5.40	
index	level	322				8676	0.6861	015	0.00212	008	461	
(BMI)	s	98	T	C	2	4004	42	965	268	e-14	460	
Body	Estra											
mass	diol	rs48							0.0		1.39	
index	level	589				8825	0.8855	229	0.00309	991	461	
(BMI)	s	40	C	T	3	4820	69	281	976	e-13	460	
Body	Estra											
mass	diol	rs48				1166			0.0		3.29	
index	level	766				7184	0.7202	197	0.00220	989	461	
(BMI)	s	11	G	A	8	8	43	549	502	e-19	460	
Body	Estra											
mass	diol	rs49							0.0		4.49	
index	level	299				8639	0.6452	189	0.00206	987	461	
(BMI)	s	23	C	T	11	200	04	424	436	e-20	460	
Body	Estra											
mass	diol	rs50							0.0			
index	level	115				6918	0.7151	140	0.00219	1.6e	461	
(BMI)	s	79	G	C	16	7318	52	268	322	-10	460	
Body	Estra								-0.			
mass	diol	rs51							015		2.59	
index	level	212				7548	0.1920	935	0.00252	998	461	
(BMI)	s	1	C	T	18	501	54	9	176	e-10	460	
Body	Estra											
mass	diol	rs52				1731			0.0		1.29	
index	level	920				1430	0.5278	168	0.00197	987	461	
(BMI)	s	0	G	A	3	5	29	965	85	e-17	460	
Body	Estra	rs53				1778	0.2049	0.0	0.00244	1.99	461	
mass	diol	951	C	A	1	8902	42	495	26	986	460	

index	level	5				5		291		e-91	
(BMI)	s										
Body	Estra										
mass	diol	rs55						0.0		6.20	
index	level	707				4615	0.0154	531	0.00812	012	461
(BMI)	s	359	G	T	11	9333	32	292	381	e-11	460
Body	Estra										
mass	diol	rs55						0.0		6.00	
index	level	714				1820	0.3435	175	0.00210	067	461
(BMI)	s	539	C	A	19	7397	87	719	043	e-17	460
Body	Estra										
mass	diol	rs55						0.0		1.39	
index	level	726				9913	0.2097	248	0.00242	991	461
(BMI)	s	687	A	G	12	06	09	3	628	e-24	460
Body	Estra										
mass	diol	rs55						0.0		1.20	
index	level	769				1333	0.5903	160	0.00201	005	461
(BMI)	s	038	A	G	11	1808	84	961	096	e-15	460
Body	Estra							-0.			
mass	diol	rs55						012			
index	level	888				2871	0.3075	997	0.00214	1.5e	461
(BMI)	s	7	G	A	11	2741	07	6	881	-09	460
Body	Estra										
mass	diol	rs55						0.0		3.40	
index	level	923				3964	0.3930	134	0.00203	017	461
(BMI)	s	1	T	G	18	4247	53	907	562	e-11	460
Body	Estra										
mass	diol	rs56						0.0		8.99	
index	level	038				6992	0.3106	139	0.00214	912	461
(BMI)	s	322	A	G	3	5128	2	276	833	e-11	460
Body	Estra										
mass	diol	rs56						0.0			
index	level	094				5380	0.4045	734	0.00201	1e-2	461
(BMI)	s	641	G	A	16	6453	64	967	412	00	460
Body	Estra										
mass	diol	rs56				1728		0.0		2.69	
index	level	133				1846	0.1968	137	0.00247	998	461
(BMI)	s	507	G	T	2	7	75	622	385	e-08	460
Body	Estra										
mass	diol	rs56				1570		0.0		2.30	
index	level	143				2044	0.2563	126	0.00226	001	461
(BMI)	s	236	T	C	3	4	88	667	533	e-08	460
Body	Estra	rs56				4628	0.1328	0.0	0.00291	1.39	461
mass	diol	161	T	A	17	8649	47	224	784	991	460

index	level	855						575		e-14	
(BMI)	s										
Body	Estra										
mass	diol	rs56				1310		0.0		1.40	
index	level	203				4087	0.1455	179	0.00280	001	461
(BMI)	s	622	C	T	9	4	29	769	183	e-10	460
Body	Estra										
mass	diol	rs56						-0.		2.90	
index	level	352				1935	0.1548	016	0.00275	001	461
(BMI)	s	336	C	T	19	2155	94	327	021	e-09	460
Body	Estra							-0.			
mass	diol	rs56						016		6.40	
index	level	399				3338	0.4491	132	0.00199	03e-	461
(BMI)	s	737	T	C	13	1721	24	5	646	16	460
Body	Estra										
mass	diol	rs56						0.0		2.39	
index	level	858				8651	0.2968	159	0.00217	994	461
(BMI)	s	768	A	G	13	1730	61	188	378	e-13	460
Body	Estra										
mass	diol	rs56						0.0		6.19	
index	level	893				2566	0.3033	125	0.00215	998	461
(BMI)	s	062	G	T	8	2655	42	141	383	e-09	460
Body	Estra										
mass	diol	rs56						0.0		3.69	
index	level	930				1098	0.1392	157	0.00286	999	461
(BMI)	s	105	T	C	2	2487	95	557	187	e-08	460
Body	Estra							-0.			
mass	diol	rs57						041		1.10	
index	level	636				5804	0.0838	255	0.00358	002	461
(BMI)	s	386	C	T	18	8295	3	3	326	e-30	460
Body	Estra										
mass	diol	rs57				1006		0.0			
index	level	989				2907	0.2449	133	0.00236	1.6e	461
(BMI)	s	773	C	T	6	8	95	488	315	-08	460
Body	Estra							-0.			
mass	diol	rs58						022		2.39	
index	level	862				7508	0.4192	987	0.00200	994	461
(BMI)	s	095	T	C	7	1418	66	7	786	e-30	460
Body	Estra										
mass	diol	rs59				1132		0.0		3.79	
index	level	068				5673	0.4102	110	0.00201	997	461
(BMI)	s	084	T	G	4	7	32	552	048	e-08	460
Body	Estra	rs59				4369	0.3114	0.0	0.00215	1.50	461
mass	diol	227	G	A	11	2423	9	229	313	003	460

index	level	842							675		e-26	
(BMI)	s											
Body	Estra								-0.			
mass	diol	rs59							014		1.69	
index	level	402				6944	0.5541	677	0.00199	981	461	
(BMI)	s	4	C	T	11	3822	62	1	081	e-13	460	
Body	Estra								-0.			
mass	diol	rs60							014		3.59	
index	level	236				5347	0.7657	734	0.00234	998	461	
(BMI)	s	55	G	A	20	9658	41	6	997	e-10	460	
Body	Estra											
mass	diol	rs60							0.0		1.10	
index	level	764				1839	0.1448	209	0.00282	002	461	
(BMI)	s	613	T	G	18	911	83	9	688	e-13	460	
Body	Estra								-0.			
mass	diol	rs61							013		5.60	
index	level	740				1993	0.2372	515	0.00231	003	461	
(BMI)	s	466	A	G	1	4900	03	3	885	e-09	460	
Body	Estra											
mass	diol	rs61				1560			0.0		2.80	
index	level	813				4987	0.1357	290	0.00292	027	461	
(BMI)	s	324	T	C	1	7	28	259	038	e-23	460	
Body	Estra											
mass	diol	rs61				1743			0.0		1.20	
index	level	828				2199	0.1092	224	0.00315	005	461	
(BMI)	s	641	A	G	1	7	5	585	913	e-12	460	
Body	Estra								-0.			
mass	diol	rs61				1024			026			
index	level	871				8714	0.0915	715	0.00359	1e-1	461	
(BMI)	s	615	T	C	10	0	51	9	269	3	460	
Body	Estra											
mass	diol	rs61							0.0		2.49	
index	level	903				8992	0.2549	166	0.00227	977	461	
(BMI)	s	695	G	A	11	2417	64	235	115	e-13	460	
Body	Estra								-0.			
mass	diol	rs61				1015			016		5.10	
index	level	992				3185	0.4919	192	0.00206	035	461	
(BMI)	s	671	G	A	14	4	5	5	924	e-15	460	
Body	Estra								-0.			
mass	diol	rs62							016		9.39	
index	level	007				7802	0.2650	700	0.00224	94e-	461	
(BMI)	s	782	A	G	15	9797	91	7	215	14	460	
Body	Estra	rs62				8996	0.1416	-0.	0.00286	7.19	461	
mass	diol	020	A	T	15	0286	8	016	35	996	460	

index	level	775						566		e-09	
(BMI)	s							5			
Body	Estra										
mass	diol	rs62						0.0		2.99	
index	level	072				5293	0.1445	156	0.00282	999	461
(BMI)	s	006	C	A	17	8468	41	492	374	e-08	460
Body	Estra							-0.			
mass	diol	rs62						091		4.60	
index	level	107				4221	0.0483	155	0.00460	045	461
(BMI)	s	261	C	T	2	44	27	9	882	e-87	460
Body	Estra							-0.			
mass	diol	rs62				1661		014		6.09	
index	level	176				9088	0.2449	969	0.00228	958	461
(BMI)	s	243	T	A	2	1	87	9	878	e-11	460
Body	Estra							-0.			
mass	diol	rs62				1825		011			
index	level	190				6699	0.3904	179	0.00203	4e-0	461
(BMI)	s	049	C	G	2	8	46	8	614	8	460
Body	Estra							-0.			
mass	diol	rs62						012		5.30	
index	level	241				2046	0.3144	426	0.00212	005	461
(BMI)	s	847	G	A	3	6465	43	3	897	e-09	460
Body	Estra										
mass	diol	rs62						0.0		1.79	
index	level	246				9498	0.1023	207	0.00325	999	461
(BMI)	s	311	A	G	3	143	64	539	487	e-10	460
Body	Estra										
mass	diol	rs62				1058		0.0			
index	level	379				7003	0.5785	117	0.00200	5e-0	461
(BMI)	s	271	G	T	5	3	11	237	557	9	460
Body	Estra										
mass	diol	rs62						0.0		8.49	
index	level	407				3353	0.2685	144	0.00222	963	461
(BMI)	s	562	A	T	6	0346	84	393	463	e-11	460
Body	Estra							-0.			
mass	diol							039		3.29	
index	level	rs62				2767	0.1884	918	0.00252	989	461
(BMI)	s	65	T	C	11	9916	72	5	719	e-56	460
Body	Estra										
mass	diol	rs64				1456		0.0		5.30	
index	level	300				2792	0.1085	186	0.00318	005	461
(BMI)	s	68	A	G	2	7	59	066	82	e-09	460
Body	Estra	rs64				1706	0.2374	0.0	0.00232	8.30	461
mass	diol	449	A	G	3	0207	74	158	007	042	460

index	level	50				3		525		e-12	
(BMI)	s										
Body	Estra							-0.			
mass	diol	rs65						020		2.39	
index	level	457				5930	0.6014	521	0.00201	994	461
(BMI)	s	14	A	G	2	7725	48	9	573	e-24	460
Body	Estra										
mass	diol	rs65				1334		-0.			
index	level	609				1405	0.6918	012	0.00214	1.2e	461
(BMI)	s	06	C	T	12	4	74	198	136	-08	460
Body	Estra										
mass	diol	rs65						-0.		4.60	
index	level	619				5825	0.7535	015	0.00230	045	461
(BMI)	s	37	A	T	13	7667	87	934	346	e-12	460
Body	Estra									2.30	
mass	diol	rs65						0.0		144	
index	level	671				5782	0.2327	541	0.00234	e-11	461
(BMI)	s	60	C	T	18	9135	14	723	213	8	460
Body	Estra										
mass	diol	rs65						0.0		8.69	
index	level	753				9402	0.6360	207	0.00206	961	461
(BMI)	s	40	A	G	14	3972	38	333	189	e-24	460
Body	Estra										
mass	diol	rs66						0.0		6.89	
index	level	679				1835	0.4458	148	0.00198	922	461
(BMI)	s	256	T	C	4	1898	26	864	759	e-14	460
Body	Estra							-0.			
mass	diol	rs66						017		1.59	
index	level	693				4767	0.5826	028	0.00199	993	461
(BMI)	s	41	G	A	1	8458	79	7	86	e-17	460
Body	Estra										
mass	diol	rs66						0.0		3.69	
index	level	824				3378	0.6730	131	0.00210	999	461
(BMI)	s	38	C	T	1	4146	81	586	047	e-10	460
Body	Estra							-0.			
mass	diol	rs67						014		9.79	
index	level	055				5532	0.3759	616	0.00204	941	461
(BMI)	s	67	C	T	2	0173	6	8	919	e-13	460
Body	Estra										
mass	diol	rs67				1001		0.0		3.89	
index	level	078				2303	0.7036	119	0.00217	996	461
(BMI)	s	27	G	A	2	0	27	437	332	e-08	460
Body	Estra	rs67				2395	0.3481	-0.	0.00206	1.6e	461
mass	diol	100	G	C	2	97	74	011	707	-08	460

index	level	91											683
(BMI)	s												5
Body	Estra												-0.
mass	diol	rs67											013
index	level	137					4029	0.4018		573	0.00202	989	461
(BMI)	s	81	C	G	2		1940	82		6	799	e-11	460
Body	Estra												
mass	diol	rs67					2202			0.0			3.29
index	level	259					0514	0.8476		191	0.00274	989	461
(BMI)	s	31	T	C	2		6	58		046	403	e-12	460
Body	Estra												4.49
mass	diol	rs67											
index	level	446					6285	0.8282		554	0.00261	e-10	461
(BMI)	s	46	G	A	2		04	99		684	213	0	460
Body	Estra												
mass	diol	rs67								0.0			3.29
index	level	529					8174	0.3168		125	0.00211	997	461
(BMI)	s	79	A	G	2		1750	8		235	721	e-09	460
Body	Estra												
mass	diol	rs67					1266			0.0			8.60
index	level	609					4093	0.2836		170	0.00220	003	461
(BMI)	s	008	C	T	10		6	14		863	21	e-15	460
Body	Estra									-0.			
mass	diol	rs67											
index	level	696					6268	0.6638		575	0.00208	028	461
(BMI)	s	17	T	A	3		7746	6		4	902	e-11	460
Body	Estra												
mass	diol	rs67					1961			0.0			9.70
index	level	748					1639	0.3581		133	0.00205	063	461
(BMI)	s	94	A	T	3		3	48		088	674	e-11	460
Body	Estra												
mass	diol	rs67											
index	level	777					6237	0.6167		116	0.00202	1e-0	461
(BMI)	s	84	T	G	3		6645	8		125	753	8	460
Body	Estra									-0.			
mass	diol	rs68											
index	level	310					2025	0.6401		522	0.00205	999	461
(BMI)	s	88	A	G	4		7769	39		2	91	e-08	460
Body	Estra												
mass	diol	rs68					1621			0.0			3.50
index	level	438					3275	0.5078		130	0.00197	026	461
(BMI)	s	52	T	C	4		8	61		897	607	e-11	460
Body	Estra	rs69					9775	0.3268		-0.	0.00211	4.70	461
mass	diol	096	T	C	6		3952	09		014	352	002	460

index	level	85						612		e-12	
(BMI)	s										
Body	Estra										
mass	diol	rs69				1427		0.0			
index	level	226				0348	0.1898	148	0.00251	3.2e	461
(BMI)	s	07	G	A	6	3	47	848	479	-09	460
Body	Estra										
mass	diol	rs69						0.0		1.80	
index	level	389				9842	0.6014	182	0.00201	011	461
(BMI)	s	73	C	T	6	1721	56	223	872	e-19	460
Body	Estra										
mass	diol	rs69						0.0		2.30	
index	level	503				1270	0.7950	155	0.00244	001	461
(BMI)	s	88	A	G	7	699	86	219	806	e-10	460
Body	Estra							-0.			
mass	diol	rs69				1134		015			
index	level	629				5218	0.5560	956	0.00198	1e-1	461
(BMI)	s	80	C	A	7	3	19	8	814	5	460
Body	Estra							-0.			
mass	diol	rs69						012		9.60	
index	level	814				3513	0.5435	851	0.00198	064	461
(BMI)	s	7	G	A	5	485	96	2	514	e-11	460
Body	Estra							-0.			
mass	diol	rs70				1090		013		6.69	
index	level	243				7207	0.7791	817	0.00238	993	461
(BMI)	s	34	G	T	9	5	4	7	338	e-09	460
Body	Estra										
mass	diol	rs70				1294		0.0		3.10	
index	level	273				0829	0.6526	145	0.00208	027	461
(BMI)	s	04	T	C	9	0	61	492	703	e-12	460
Body	Estra							-0.			
mass	diol	rs70						012			
index	level	345				3708	0.3738	982	0.00204	2.1e	461
(BMI)	s	54	G	A	9	1301	25	6	252	-10	460
Body	Estra							-0.			
mass	diol	rs70				1203		014		1.80	
index	level	389				7717	0.3387	020	0.00208	011	461
(BMI)	s	43	C	T	9	8	9	2	641	e-11	460
Body	Estra										
mass	diol	rs70						0.0		1.69	
index	level	406				8977	0.4550	146	0.00198	981	461
(BMI)	s	1	C	T	12	1903	5	374	552	e-13	460
Body	Estra	rs70				6184	0.3279	-0.	0.00211	5.99	461
mass	diol	706	T	C	10	2645	23	012	928	998	460

index	level	70							327		e-09	
(BMI)	s								4			
Body	Estra								-0.			
mass	diol	rs70					1329		014		6.19	
index	level	812					5569	0.2057	251	0.00245	998	461
(BMI)	s	54	C	T	10	6	39		6	216	e-09	460
Body	Estra											
mass	diol	rs71							0.0		1.50	
index	level	246					4752	0.4083	256	0.00200	003	461
(BMI)	s	81	A	C	11	9947	53		977	63	e-37	460
Body	Estra											
mass	diol	rs71							0.0		1.39	
index	level	329					5026	0.3844	297	0.00203	991	461
(BMI)	s	08	A	G	12	3148	58		904	363	e-48	460
Body	Estra											
mass	diol	rs71							0.0		6.70	
index	level	495					3397	0.0769	277	0.00370	039	461
(BMI)	s	038	A	G	10	1383	36		998	969	e-14	460
Body	Estra								-0.			
mass	diol	rs72							014		6.00	
index	level	018					4077	0.3542	978	0.00207	067	461
(BMI)	s	95	A	G	16	23	91		1	999	e-13	460
Body	Estra											
mass	diol	rs72							0.0		1.79	
index	level	066					8287	0.3216	135	0.00211	999	461
(BMI)	s	08	G	C	16	2628	2		122	797	e-10	460
Body	Estra											
mass	diol	rs72							0.0		2.90	
index	level	180					6583	0.1973	189	0.00249	001	461
(BMI)	s	14	C	T	17	2016	05		524	216	e-14	460
Body	Estra											
mass	diol	rs72							0.0			
index	level	321					3125	0.5826	123	0.00200	8e-1	461
(BMI)	s	71	T	G	18	1221	3		404	821	0	460
Body	Estra											
mass	diol	rs72							0.0		2.99	
index	level	367					2161	0.4315	111	0.00200	999	461
(BMI)	s	2	T	C	12	561	1		273	698	e-08	460
Body	Estra											
mass	diol	rs72							0.0		6.69	
index	level	508					3393	0.2888	135	0.00218	993	461
(BMI)	s	33	T	C	19	7277	66		041	8	e-10	460
Body	Estra	rs72					4756	0.5960	0.0	0.00203	6.59	461
mass	diol	590	C	T	19	2509	62		218	628	933	460

index	level	70						69		e-27	
(BMI)	s										
Body	Estra										
mass	diol	rs72						-0.			
index	level	634				1601	0.2598	021	0.00228	1e-2	461
(BMI)	s	826	A	G	1	052	58	277	001	0	460
Body	Estra										
mass	diol	rs72						0.0			
index	level	649				8060	0.1431	178	0.00287	6.1e	461
(BMI)	s	373	C	T	4	9966	88	062	805	-10	460
Body	Estra										
mass	diol	rs72				1188		0.0		9.89	
index	level	673				8437	0.1070	218	0.00321	92e-	461
(BMI)	s	947	G	A	8	9	31	864	496	12	460
Body	Estra										
mass	diol	rs72						0.0		1.50	
index	level	892				5081	0.1722	387	0.00262	003	461
(BMI)	s	910	T	G	6	6887	32	798	053	e-49	460
Body	Estra							-0.			
mass	diol	rs72						023		7.59	
index	level	976				4050	0.1901	225	0.00254	976	461
(BMI)	s	986	A	G	19	424	23	7	712	e-20	460
Body	Estra										
mass	diol	rs73						-0.		4.90	
index	level	026				3101	0.1535	022	0.00275	004	461
(BMI)	s	725	A	C	19	7686	34	318	052	e-16	460
Body	Estra							-0.			
mass	diol	rs73				1858		030		7.70	
index	level	052				2846	0.1849	392	0.00254	016	461
(BMI)	s	033	C	T	3	5	3	9	634	e-33	460
Body	Estra							-0.			
mass	diol	rs73						011		4.09	
index	level	065				6810	0.6217	275	0.00205	996	461
(BMI)	s	34	A	G	12	7914	12	4	437	e-08	460
Body	Estra							-0.			
mass	diol	rs73						015		3.09	
index	level	124				7157	0.2051	447	0.00245	999	461
(BMI)	s	396	C	T	7	9606	44	2	48	e-10	460
Body	Estra							-0.			
mass	diol	rs73						026		3.59	
index	level	142				5119	0.1922	693	0.00252	998	461
(BMI)	s	879	T	C	20	5932	97	6	257	e-26	460
Body	Estra	rs73				1082	0.2439	-0.	0.00232	2.19	461
mass	diol	193	G	A	12	9438	34	017	002	989	460

index	level	736				1		716		e-14	
(BMI)	s							5			
Body	Estra							-0.			
mass	diol	rs73						022		1.69	
index	level	213				2848	0.1412	576	0.00283	981	461
(BMI)	s	484	T	A	4	9339	36	6	64	e-15	460
Body	Estra							-0.			
mass	diol	rs73						014		6.59	
index	level	314				9923	0.2852	370	0.00220	933	461
(BMI)	s	20	A	G	13	6471	76	2	081	e-11	460
Body	Estra										
mass	diol	rs73						0.0		1.10	
index	level	577				9220	0.5001	141	0.00198	002	461
(BMI)	s	54	G	A	9	7308	39	146	362	e-12	460
Body	Estra										
mass	diol	rs73						0.0		1.29	
index	level	601				1854	0.1145	177	0.00311	999	461
(BMI)	s	548	T	C	10	9889	27	354	639	e-08	460
Body	Estra										
mass	diol	rs73				2122		0.0			
index	level	985				9924	0.3072	136	0.00214	1.7e	461
(BMI)	s	439	C	A	2	9	99	616	059	-10	460
Body	Estra							-0.			
mass	diol	rs74						022		3.19	
index	level	428				8768	0.2140	816	0.00241	963	461
(BMI)	s	85	G	C	5	2877	49	3	251	e-21	460
Body	Estra										
mass	diol	rs74				1054		0.0		1.10	
index	level	524				6033	0.2819	176	0.00219	002	461
(BMI)	s	9	T	C	2	3	45	118	724	e-15	460
Body	Estra							-0.			
mass	diol	rs74				1147		019			
index	level	750				4446	0.0866	638	0.00352	2.5e	461
(BMI)	s	282	C	T	7	3	23	2	561	-08	460
Body	Estra										
mass	diol	rs74						0.0		2.29	
index	level	986				2888	0.3996	268	0.00201	985	461
(BMI)	s	65	G	A	16	3241	59	646	997	e-40	460
Body	Estra										
mass	diol	rs75				2103		0.0		2.59	
index	level	165				0133	0.3999	120	0.00201	998	461
(BMI)	s	54	T	C	1	1	41	066	565	e-09	460
Body	Estra	rs75				6643	0.5283	0.0	0.00198	1.69	461
mass	diol	192	A	G	1	4743	6	140	381	981	460

index	level	59							028		e-12	
(BMI)	s											
Body	Estra											
mass	diol	rs75							0.0		1.50	
index	level	463				4230	0.8865	219	0.00310	003	461	
(BMI)	s	5	G	C	3	5131	82	925	93	e-12	460	
Body	Estra								-0.			
mass	diol	rs75							018		8.90	
index	level	499				2614	0.2201	033	0.00241	02e-	461	
(BMI)	s	503	T	C	6	5217	01	1	845	14	460	
Body	Estra								-0.			
mass	diol	rs75							015		1.80	
index	level	714				6169	0.2605	891	0.00225	011	461	
(BMI)	s	96	G	A	2	351	45	6	454	e-12	460	
Body	Estra								-0.			
mass	diol	rs76				1143			021			
index	level	183				7193	0.0807	958	0.00364	1.7e	461	
(BMI)	s	894	C	T	3	9	47	4	437	-09	460	
Body	Estra											
mass	diol	rs76							0.0		2.19	
index	level	191				2511	0.5886	134	0.00201	989	461	
(BMI)	s	39	A	T	3	0415	16	537	061	e-11	460	
Body	Estra								-0.			
mass	diol	rs76				1951			016		1.20	
index	level	702				4829	0.2106	486	0.00243	005	461	
(BMI)	s	514	G	C	1	6	23	2	278	e-11	460	
Body	Estra								-0.			
mass	diol	rs76				1801			012		8.19	
index	level	838				6790	0.5572	246	0.00199	993	461	
(BMI)	s	36	A	G	4	6	15	9	427	e-10	460	
Body	Estra								-0.			
mass	diol	rs77				1535			015		1.39	
index	level	085				4346	0.5723	932	0.00199	991	461	
(BMI)	s	84	G	A	5	6	44	1	49	e-15	460	
Body	Estra								-0.			
mass	diol	rs77							013		1.29	
index	level	616				7035	0.2198	591	0.00239	999	461	
(BMI)	s	73	A	T	6	7368	8	5	01	e-08	460	
Body	Estra											
mass	diol	rs77				1533			0.0		9.09	
index	level	627				8022	0.2854	149	0.00218	913	461	
(BMI)	s	94	G	A	6	8	08	077	606	e-12	460	
Body	Estra	rs77				4801	0.3104	0.0	0.00215	3.29	461	
mass	diol	74	A	C	17	163	67	149	169	989	460	

index	level							88		e-12	
(BMI)	s										
Body	Estra										
mass	diol	rs77						0.0		1.40	
index	level	760				7374	0.2875	123	0.00218	001	461
(BMI)	s	21	A	G	6	2152	99	701	251	e-08	460
Body	Estra										
mass	diol	rs78				1374		0.0		1.79	
index	level	023				3592	0.2885	122	0.00218	999	461
(BMI)	s	42	G	T	7	5	66	748	145	e-08	460
Body	Estra										
mass	diol	rs78						0.0		1.80	
index	level	054				7812	0.5022	133	0.00198	011	461
(BMI)	s	41	T	C	7	1458	61	747	884	e-11	460
Body	Estra										
mass	diol	rs78						0.0		3.59	
index	level	086				2402	0.0398	318	0.00507	998	461
(BMI)	s	698	C	T	12	4639	38	357	61	e-10	460
Body	Estra										
mass	diol	rs78						0.0		1.99	
index	level	425				5339	0.8125	179	0.00254	986	461
(BMI)	s	7	C	T	18	7199	41	315	968	e-12	460
Body	Estra										
mass	diol	rs78						-0.		1.80	
index	level	605				8363	0.0540	032	0.00444	011	461
(BMI)	s	811	C	A	3	1491	5	737	673	e-13	460
Body	Estra										
mass	diol	rs78						0.0		2.29	
index	level	935				1675	0.6658	140	0.00210	985	461
(BMI)	s	71	T	G	10	0129	97	553	152	e-11	460
Body	Estra										
mass	diol	rs79				1189		0.0		3.29	
index	level	251				4159	0.3961	147	0.00202	989	461
(BMI)	s	00	A	G	11	6	17	25	21	e-13	460
Body	Estra										
mass	diol	rs79				1307		0.0		2.19	
index	level	447				9569	0.5097	157	0.00198	989	461
(BMI)	s	82	G	T	11	8	84	606	748	e-15	460
Body	Estra							-0.			
mass	diol	rs79						018		8.30	
index	level	471				6409	0.1634	278	0.00267	042	461
(BMI)	s	43	A	G	11	0422	83	2	522	e-12	460
Body	Estra	rs79				1049	0.0774	0.0	0.00369	1.5e	461
mass	diol	780	T	C	10	5249	28	236	591	-10	460

index	level	963					9					803		
(BMI)	s													
Body	Estra													
mass	diol	rs79										0.0	3.59	
index	level	966					9701	0.4493	145	0.00200	998	461		
(BMI)	s	39	A	G	13	9090	54	559	245	e-13	460			
Body	Estra													
mass	diol	rs80										0.0	3.79	
index	level	135					5286	0.0703	213	0.00388	997	461		
(BMI)	s	274	T	A	17	277	24	39	113	e-08	460			
Body	Estra													
mass	diol	rs80										0.0	6.70	
index	level	154					2593	0.6770	213	0.00211	039	461		
(BMI)	s	00	A	C	14	0988	97	422	709	e-24	460			
Body	Estra													
mass	diol	rs80										0.0		
index	level	203					7993	0.2204	251	0.00239	1e-2	461		
(BMI)	s	65	A	T	14	7216	64	068	517	5	460			
Body	Estra													
mass	diol	rs80										0.0		
index	level	241					3583	0.8482	156	0.00276	1.6e	461		
(BMI)	s	37	T	A	15	7297	07	329	778	-08	460			
Body	Estra											-0.		
mass	diol	rs80										014	1.69	
index	level	255					9527	0.6459	655	0.00207	981	461		
(BMI)	s	16	G	T	15	1872	28	8	578	e-12	460			
Body	Estra													
mass	diol	rs80										0.0	1.80	
index	level	766					1588	0.5615	140	0.00199	011	461		
(BMI)	s	69	C	T	17	8448	61	681	601	e-12	460			
Body	Estra													
mass	diol	rs80										0.0	3.89	
index	level	895					6922	0.3686	129	0.00207	996	461		
(BMI)	s	14	A	T	18	4478	8	88	588	e-10	460			
Body	Estra													
mass	diol	rs81										-0.	1.80	
index	level	128					1881	0.4003	020	0.00202	011	461		
(BMI)	s	18	G	A	19	2785	29	696	712	e-24	460			
Body	Estra													
mass	diol	rs81										-0.	2.39	
index	level	324					4028	0.3130	015	0.00219	994	461		
(BMI)	s	91	A	G	21	8577	23	375	317	e-12	460			
Body	Estra	rs81					1902	0.5631	-0.	0.00198	1e-1	461		
mass	diol	516	C	T	1	9472	48	016	582	6	460			

index	level	3				6			485				
(BMI)	s												
Body	Estra								-0.				
mass	diol	rs85							013		1.40		
index	level	204				1709	0.7585	120	0.00231	001	461		
(BMI)	s	2	G	A	20	1233	75	7	309	e-08	460		
Body	Estra								-0.				
mass	diol	rs86							023		1.20		
index	level	232				6965	0.4096	170	0.00201	005	461		
(BMI)	s	0	T	C	16	1866	5	3	345	e-30	460		
Body	Estra												
mass	diol	rs87							0.0		2.29		
index	level	962				4015	0.6132	241	0.00203	985	461		
(BMI)	s	0	T	C	16	729	37	136	595	e-32	460		
Body	Estra								-0.				
mass	diol	rs90							018		2.59		
index	level	989				4198	0.1348	410	0.00291	998	461		
(BMI)	s	2	A	G	20	2698	17	5	255	e-10	460		
Body	Estra								-0.				
mass	diol	rs92							014		1.29		
index	level	399				6780	0.7831	576	0.00240	999	461		
(BMI)	s	4	G	A	4	2992	95	1	219	e-09	460		
Body	Estra												
mass	diol	rs92							0.0		2.59		
index	level	676				3188	0.0607	261	0.00413	998	461		
(BMI)	s	71	A	G	6	0480	33	49	587	e-10	460		
Body	Estra												
mass	diol	rs92							-0.		8.60		
index	level	918				6407	0.5148	014	0.00199	003	461		
(BMI)	s	22	T	C	5	6515	68	263	464	e-13	460		
Body	Estra												
mass	diol	rs92							0.0				
index	level	942				8343	0.4765	147	0.00198	1e-1	461		
(BMI)	s	60	A	G	6	3228	59	82	818	3	460		
Body	Estra												
mass	diol	rs93							0.0		2.59		
index	level	492				4251	0.4106	111	0.00200	998	461		
(BMI)	s	35	T	C	6	6718	35	809	924	e-08	460		
Body	Estra								-0.				
mass	diol	rs93							016		3.19		
index	level	516				2694	0.5068	106	0.00197	963	461		
(BMI)	s	6	A	G	2	9366	05	6	292	e-16	460		
Body	Estra	rs94				9510	0.3389	-0.	0.00210	4.39	461		
mass	diol	631	T	C	6	030	58	011	115	997	460		

index	level	75						5		e-08	
(BMI)	s										
Body	Estra										
mass	diol	rs94				1543		0.0		1.10	
index	level	784				3318	0.1642	181	0.00267	002	461
(BMI)	s	96	C	T	6	3	25	836	493	e-11	460
Body	Estra										
mass	diol	rs95				1122		0.0		3.19	
index	level	154				1710	0.4477	151	0.00199	963	461
(BMI)	s	46	G	A	13	8	09	051	052	e-14	460
Body	Estra							-0.			
mass	diol	rs95				1119		014		1.50	
index	level	221				7021	0.5533	109	0.00199	003	461
(BMI)	s	80	T	C	13	2	92	5	325	e-12	460
Body	Estra							-0.			
mass	diol	rs95						013		1.40	
index	level	716				6747	0.3293	538	0.00210	001	461
(BMI)	s	87	A	C	13	2713	63	8	94	e-10	460
Body	Estra							-0.			
mass	diol	rs96						036			
index	level	387				1464	0.9747	173	0.00635	1.2e	461
(BMI)	s	13	G	A	7	5949	7	5	399	-08	460
Body	Estra										
mass	diol	rs96						0.0		5.50	
index	level	738				7689	0.4909	130	0.00198	047	461
(BMI)	s	39	G	A	16	5693	67	337	783	e-11	460
Body	Estra										
mass	diol	rs96						0.1		3.09	
index	level	744				8019	0.0013	584	0.02861	999	461
(BMI)	s	87	G	C	17	1995	38	45	71	e-08	460
Body	Estra										
mass	diol	rs98				1046		0.0			
index	level	305				3160	0.5824	154	0.00200	1e-1	461
(BMI)	s	92	A	C	3	3	21	849	164	4	460
Body	Estra										
mass	diol	rs98				1230		-0.		4.60	
index	level	390				5123	0.3252	011	0.00214	002	461
(BMI)	s	81	A	G	3	0	32	701	045	e-08	460
Body	Estra										
mass	diol	rs98						0.0		2.90	
index	level	436				4992	0.5116	294	0.00197	001	461
(BMI)	s	53	C	T	3	0571	52	509	538	e-50	460
Body	Estra	rs98				8580	0.3753	-0.	0.00204	9.60	461
mass	diol	766	T	G	3	6313	89	018	174	064	460

index	level	64								047		e-19
(BMI)	s									8		
Body	Estra											
mass	diol	rs98				1078				0.0		2.69
index	level	885				5461	0.5380	120	0.00201	998	461	
(BMI)	s	33	T	C	13	2	79	038	82	e-09	460	
Body	Estra											
mass	diol	rs99								-0.		8.60
index	level	267				1994	0.1845	023	0.00254	003	461	
(BMI)	s	84	C	T	16	1968	76	818	677	e-21	460	
Body	Estra											
mass	diol	rs99								0.0		9.49
index	level	516				5688	0.7673	144	0.00235	992	461	
(BMI)	s	19	G	T	18	2326	69	231	777	e-10	460	

Supplementary Table S3. Instruments for causal estimation from BMI to SHBG level.

Exposure	Outcome	SN P	Effect allele	Other allele	Chromosome	Genetic position	Effect allele frequency	Beta	Standard error of beta	P-value	Sample size
Body mass index (BMI)	Sex										
	hormone-binding globulin levels	rs1006305						0.013			
						1409					
						9010	0.2533	67	0.0022	1.7e-09	461
Body mass index (BMI)	Sex										
	hormone-binding globulin levels	rs1009933						0.012		4.2000	
						1433					
						8369	0.4528	42	0.0019	1e-10	461
Body mass index (BMI)	Sex										
	hormone-binding globulin levels	rs1016076						-0.0155			
						7647	0.2175	86	0.0024	1.2e-10	461
						4827	1	2	2199		460
Body mass index (BMI)	Sex										
	hormone-binding globulin levels	rs1016959						0.012		2.9999	
						4163	0.3631	18	0.0020	9e-09	461
						7688	39	75	5506		460
Body mass index (BMI)	Sex										
	hormone-binding globulin levels	rs1018241						0.013		3.6999	
						1042					
						4299	0.5122	03	0.0019	9e-11	461
Body mass index (BMI)	Sex										
	hormone-binding globulin levels	rs1042392						-0.0340		3.4001	
						4618	0.1943	13	0.0024	7e-04	461
						2304	58	6	9869	42	460
Body mass index (BMI)	Sex										
	hormone-binding globulin levels	rs1050583						0.018			
						1928	0.8600	48	0.0028	1.2e-10	461
						8508	12	51	7086		460
Body mass	Sex	rs11186					0.2470	0.0	0.0022	2.1	461
	hormone-binding globulin levels	rs1051	T	C	10	5099	13	17	9886	998	460

index	inding	002				6		56		9e-	
(BMI)	globulin	5						43		14	
	levels										
	Sex										
Body	hormone-b							0.0		3.6	
mass	inding	rs1				1989		14		999	
index	globulin	064				5024	0.4783	93	0.0019	9e-	461
(BMI)	levels	213	A	G	2	0	77	01	7196	14	460
	Sex										
Body	hormone-b	rs1						0.0			
mass	inding	074						11			
index	globulin	275				4543	0.6122	79	0.0020	6.1e	461
(BMI)	levels	2	C	T	11	8374	39	79	2961	-09	460
	Sex							-0.			
Body	hormone-b	rs1						02		1.9	
mass	inding	075						07		002	
index	globulin	671				1588	0.4441	86	0.0019	e-2	461
(BMI)	levels	4	G	A	9	5041	96	2	9408	5	460
	Sex							-0.			
Body	hormone-b	rs1						01		4.9	
mass	inding	075						90		000	
index	globulin	679				1672	0.7429	58	0.0022	4e-	461
(BMI)	levels	2	T	C	9	6119	01	2	7201	17	460
	Sex										
Body	hormone-b	rs1						0.0			
mass	inding	076				1260		13			
index	globulin	027				9399	0.3850	87	0.0020	1e-	461
(BMI)	levels	7	T	C	9	9	49	34	3825	11	460
	Sex							-0.			
Body	hormone-b	rs1						01			
mass	inding	078						21			
index	globulin	024				8137	0.5594	23	0.0019	1.2e	461
(BMI)	levels	8	A	G	9	0555	54	2	9415	-09	460
	Sex										
Body	hormone-b							0.0		4.9	
mass	inding	rs1				1426		14		000	
index	globulin	078				1939	0.3838	22	0.0020	4e-	461
(BMI)	levels	141	T	C	8	3	67	39	5862	12	460
	Sex							-0.			
Body	hormone-b	rs1						01		6.0	
mass	inding	079						82		006	
index	globulin	977				2331	0.8337	23	0.0026	7e-	461
(BMI)	levels	8	G	T	1	3353	18	7	4876	12	460
Body	Sex	rs1	G	C	9	1185	0.3501	-0.	0.0020	1.4	461

mass	hormone-b	080				9607	43	01	7043	000	460
index	inding	962						25		1e-	
(BMI)	globulin	1						30		09	
	levels							5			
	Sex										
Body	hormone-b	rs1						0.0		4.3	
mass	inding	082						20		003	
index	globulin	421				7636	0.1394	76	0.0028	1e-	461
(BMI)	levels	1	T	C	10	3107	91	88	6631	13	460
	Sex										
Body	hormone-b	rs1						0.0		1.4	
mass	inding	083						11		000	
index	globulin	277				1739	0.6230	56	0.0020	1e-	461
(BMI)	levels	8	G	C	11	4073	38	28	3985	08	460
	Sex							-0.			
Body	hormone-b	rs1						01		2.3	
mass	inding	092				2435		68		000	
index	globulin	700				5765	0.1437	15	0.0028	1e-	461
(BMI)	levels	6	C	T	1	9	04	6	1467	09	460
	Sex							-0.			
Body	hormone-b	rs1						01		3.8	
mass	inding	096						12		999	
index	globulin	569				2320	0.3698	74	0.0020	6e-	461
(BMI)	levels	8	T	C	9	3619	97	1	52	08	460
	Sex										
Body	hormone-b	rs1						0.0		1.3	
mass	inding	098				1031		16		999	
index	globulin	906				1963	0.3159	95	0.0021	1e-	461
(BMI)	levels	7	A	G	9	4	3	14	2349	15	460
	Sex										
Body	hormone-b	rs1						0.0		7.2	
mass	inding	100						11		999	
index	globulin	196				7876	0.5813	67	0.0020	5e-	461
(BMI)	levels	3	T	C	10	0959	38	94	1921	09	460
	Sex							-0.			
Body	hormone-b	rs1						01		1.4	
mass	inding	100						30		000	
index	globulin	968				3451	0.2440	83	0.0023	1e-	461
(BMI)	levels	5	T	C	10	1990	96	4	0766	08	460
	Sex										
Body	hormone-b	rs1						0.0		7.1	
mass	inding	101						21		006	
index	globulin	273				2183	0.3316	64	0.0021	8e-	461
(BMI)	levels	2	G	A	10	0104	83	25	0126	25	460

	Sex											
Body	hormone-b	rs1						-0.			1.8	
mass	inding	107						02			001	
index	globulin	984				4709	0.3285	00	0.0021	1e-	461	
(BMI)	levels	9	T	C	17	0785	31	93	1163	21	460	
	Sex							-0.				
Body	hormone-b	rs1						01			5.6	
mass	inding	109				1307		42			001	
index	globulin	902				2490	0.6406	03	0.0020	5e-	461	
(BMI)	levels	0	T	C	4	2	09	8	6202	12	460	
	Sex							-0.				
Body	hormone-b	rs1						01			2.1	
mass	inding	111						30			999	
index	globulin	516				8242	0.2377	76	0.0023	9e-	461	
(BMI)	levels	0	A	G	12	4100	97	8	3641	08	460	
	Sex							-0.				
Body	hormone-b	rs1						01			9.0	
mass	inding	112				2303		16			999	
index	globulin	245				0181	0.6117	31	0.0020	7e-	461	
(BMI)	levels	0	G	T	1	1	39	6	2425	09	460	
	Sex							-0.				
Body	hormone-b	rs1						0.0			1.2	
mass	inding	113				1706		18			000	
index	globulin	467				2339	0.6847	24	0.0021	5e-	461	
(BMI)	levels	9	G	A	5	1	53	59	3286	17	460	
	Sex							-0.				
Body	hormone-b	rs1						02			2.9	
mass	inding	115						11			000	
index	globulin	074				7875	0.3177	61	0.0021	1e-	461	
(BMI)	levels	5	G	A	17	7626	11	1	2961	23	460	
	Sex							-0.				
Body	hormone-b	rs1						01			5.3	
mass	inding	115				1716		42			999	
index	globulin	985				3547	0.2086	24	0.0024	5e-	461	
(BMI)	levels	85	T	C	4	1	71	5	3798	09	460	
	Sex							-0.				
Body	hormone-b	rs1						0.0			4.9	
mass	inding	116						19			000	
index	globulin	564				9692	0.5901	33	0.0020	4e-	461	
(BMI)	levels	3	T	C	1	4097	03	19	0337	22	460	
Body	Sex	rs1						-0.			4.7	
mass	hormone-b	116						01			000	
index	inding	893				2717	0.2826	36	0.0021	2e-	461	
(BMI)	globulin	89	C	G	5	5962	14	70	9522	10	460	

	levels							6			
	Sex							-0.			
Body	hormone-b	rs1						01		8.4	
mass	inding	121					1219	44		004	
index	globulin	851					2258	0.4004	61	0.0020	e-1 461
(BMI)	levels	0	A	G	11	7	7	6	2121	3	460
	Sex							-0.			
Body	hormone-b	rs1						01		5.8	
mass	inding	130					1473	55		000	
index	globulin	795					5408	0.1927	89	0.0025	3e- 461
(BMI)	levels	74	T	C	4	9	9	6	1598	10	460
	Sex										
Body	hormone-b	rs1						0.0			
mass	inding	136						15			
index	globulin	241					8832	0.2258	04	0.0023	2.1e 461
(BMI)	levels	07	A	G	14	6386	6	61	6876	-10	460
	Sex							-0.			
Body	hormone-b	rs1						02		6.5	
mass	inding	152					1388	39		993	
index	globulin	587					1719	0.0977	78	0.0033	3e- 461
(BMI)	levels	3	C	T	7	3	01	1	3603	13	460
	Sex										
Body	hormone-b	rs1						0.0		3.1	
mass	inding	160					1150	15		002	
index	globulin	747					3706	0.4865	71	0.0019	7e- 461
(BMI)	levels	6	C	A	11	1	74	2	9179	15	460
	Sex										
Body	hormone-b	rs1						0.0		3.0	
mass	inding	161					1216	16		999	
index	globulin	062					7113	0.1481	48	0.0027	9e- 461
(BMI)	levels	1	A	T	12	3	74	69	8318	09	460
	Sex										
Body	hormone-b	rs1						-0.		2.6	
mass	inding	163						01		999	
index	globulin	064					9924	0.2517	26	0.0022	8e- 461
(BMI)	levels	7	A	G	15	0947	39	74	8082	08	460
	Sex										
Body	hormone-b	rs1						0.0		2.8	
mass	inding	163						31		000	
index	globulin	743					5072	0.0354	88	0.0053	1e- 461
(BMI)	levels	95	A	G	5	3410	44	17	6236	09	460
Body	Sex	rs1						0.0		2.9	
mass	hormone-b	164					8173	0.3735	11	0.0020	000 461
index	inding	209	C	T	16	0582	36	41	5925	1e-	460

(BMI)	globulin levels	0						84		08	
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1165607				3146	0.2247	28	0.0023	6e-	461
		6	A	G	17	4270	74	5	7054	11	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1167311				4999	0.6813	64	0.0021	3e-	461
		311	A	G	1	6959	09	9	3109	19	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1167546				2040		11			
		4	G	A	2	5374	0.5629	97	0.0019	1.6e	461
		4				2	88	51	8558	-09	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1169186				1008		93		5.6	
		9	A	C	2	0599	0.3620	15	0.0020	5e-	461
		9				6	38	8	5562	21	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1169982				6215	0.0358	41	0.0058	3e-	461
		8	A	G	20	7198	32	8	2677	09	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1170940				1315		22		4.9	
		2	G	A	3	5102	0.2787	81	0.0022	4e-	461
		2				7	32	92	0796	25	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1171182				1317		44		1.2	
		17	C	G	10	8332	0.0177	81	0.0078	9e-	461
		17				8	11	86	8004	08	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1175727				1318	0.3038	26	0.0021	e-1	461
		8	C	T	6	0454	79	9	4834	2	460
Body mass	Sex	rs1177				8776	0.1631	0.0	0.0026	4.2	461
	hormone-binding	177	G	A	8	2607	23	15	874	000	460

index	inding	821						79		1e-	
(BMI)	globulin	9						6		09	
	levels										
	Sex							-0.			
Body	hormone-b	rs1						01		1.4	
mass	inding	191						27		000	
index	globulin	966				4808	0.6797	85	0.0021	1e-	461
(BMI)	levels	5	T	A	3	5349	75	4	1292	09	460
	Sex										
Body	hormone-b	rs1						0.0		2.8	
mass	inding	200						12		000	
index	globulin	143				3407	0.3676	18	0.0020	1e-	461
(BMI)	levels	7	C	T	9	4476	78	36	5069	09	460
	Sex										
Body	hormone-b	rs1						0.0		3.2	
mass	inding	207						15		998	
index	globulin	273				9831	0.2244	70	0.0023	9e-	461
(BMI)	levels	9	G	A	1	5893	78	08	6691	11	460
	Sex										
Body	hormone-b	rs1						0.0		8.9	
mass	inding	208						13		002	
index	globulin	828				8079	0.3008	93	0.0021	e-1	461
(BMI)	levels	4	T	C	1	8635	38	17	4854	1	460
	Sex							-0.			
Body	hormone-b	rs1						01		5.6	
mass	inding	208						23		999	
index	globulin	981				9118	0.5486	12	0.0019	4e-	461
(BMI)	levels	5	A	G	1	9933	1	1	8606	10	460
	Sex										
Body	hormone-b	rs1						-0.		1.2	
mass	inding	214						03		000	
index	globulin	015				6257	0.0942	30	0.0034	5e-	461
(BMI)	levels	3	T	G	1	9891	52	75	589	21	460
	Sex							-0.			
Body	hormone-b	rs1						02		2.9	
mass	inding	214						27		998	
index	globulin	966				7030	0.1149	33	0.0031	5e-	461
(BMI)	levels	0	A	G	16	9237	56	8	1586	13	460
	Sex										
Body	hormone-b	rs1						0.0		4.4	
mass	inding	225						13		998	
index	globulin	946				5368	0.4844	08	0.0019	7e-	461
(BMI)	levels	4	A	G	10	0099	7	95	8686	11	460
Body	Sex	rs1	T	C	11	1169	0.0565	0.0	0.0042	6.8	461

mass	hormone-b	227				1101	05	24	8551	000	460
index	inding	354				2		83		2e-	
(BMI)	globulin	5						93		09	
	levels										
	Sex										
Body	hormone-b							0.0		4.6	
mass	inding	rs1				1002		37		000	
index	globulin	229				3931	0.9727	35	0.0059	2e-	461
(BMI)	levels	984	C	T	4	9	75	7	9385	10	460
	Sex										
Body	hormone-b	rs1						0.0		4.9	
mass	inding	236				1346		19		000	
index	globulin	447				0101	0.1645	27	0.0026	4e-	461
(BMI)	levels	0	G	T	11	2	56	05	658	13	460
	Sex										
Body	hormone-b	rs1						0.0		3.4	
mass	inding	244						13		001	
index	globulin	060				4658	0.4336	92	0.0020	7e-	461
(BMI)	levels	3	T	C	15	5722	93	85	011	12	460
	Sex							-0.			
Body	hormone-b	rs1						01		2.4	
mass	inding	245						70		997	
index	globulin	936				1845	0.2682	14	0.0022	7e-	461
(BMI)	levels	8	G	A	19	9377	03	1	3235	14	460
	Sex										
Body	hormone-b	rs1						0.0		2.6	
mass	inding	246						19		001	
index	globulin	297				3027	0.3296	58	0.0021	6e-	461
(BMI)	levels	5	A	G	19	2202	92	22	2071	20	460
	Sex							-0.			
Body	hormone-b	rs1						01		1.5	
mass	inding	254						43		999	
index	globulin	140				9558	0.3174	26	0.0021	3e-	461
(BMI)	levels	8	C	T	8	5807	2	1	2723	11	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs1						14			
index	globulin	266				5177	0.3496	09	0.0020	1e-	461
(BMI)	levels	874	G	A	6	9638	19	66	712	11	460
	Sex										
Body	hormone-b	rs1						0.0		3.5	
mass	inding	268						14		000	
index	globulin	179				6205		86	0.0025	2e-	461
(BMI)	levels	2	A	C	8	4463	0.1926	93	1693	09	460

	Sex										
Body	hormone-b	rs1						0.0		1.2	
mass	inding	269				1612		13		999	
index	globulin	259				6591	0.3718	08	0.0020	9e-	461
(BMI)	levels	6	T	C	2	0	5	72	3738	10	460
	Sex							-0.			
Body	hormone-b	rs1						01		3.5	
mass	inding	269				1563		52		000	
index	globulin	603				0475	0.1494	80	0.0027	2e-	461
(BMI)	levels	9	G	A	3	0	05	2	705	08	460
	Sex										
Body	hormone-b							0.0		6.2	
mass	inding	rs1						14		001	
index	globulin	286				9145	0.7037	91	0.0021	2e-	461
(BMI)	levels	058	A	T	14	8523	47	26	6922	12	460
	Sex										
Body	hormone-b	rs1						0.0		7.6	
mass	inding	288				1011		22		999	
index	globulin	162				4641	0.0826	07	0.0035	9e-	461
(BMI)	levels	9	G	A	14	3	5	48	8929	10	460
	Sex										
Body	hormone-b	rs1						0.0		3.7	
mass	inding	292						20		999	
index	globulin	198				7231	0.0779	33	0.0036	7e-	461
(BMI)	levels	6	G	A	16	2727	84	27	983	08	460
	Sex										
Body	hormone-b							-0.		3.9	
mass	inding	rs1				1370		01		003	
index	globulin	296				8319	0.5590	88	0.0019	2e-	461
(BMI)	levels	328	C	A	4	3	32	62	99	21	460
	Sex										
Body	hormone-b	rs1						0.0		2.2	
mass	inding	297						15		998	
index	globulin	445				1866	0.5431	24	0.0019	5e-	461
(BMI)	levels	8	T	C	19	115	75	66	9717	14	460
	Sex							-0.			
Body	hormone-b	rs1						01			
mass	inding	301						36			
index	globulin	207				3544	0.2283	50	0.0023	6.1e	461
(BMI)	levels	0	A	G	2	7243	88	1	4795	-09	460
Body	Sex	rs1						0.0		3.2	
mass	hormone-b	303				1335		12		999	
index	inding	331				2360	0.2527	61	0.0022	7e-	461
(BMI)	globulin	0	A	G	2	5	6	1	826	08	460

	levels											
	Sex											
Body	hormone-b	rs1						0.0				
mass	inding	309						14				
index	globulin	791				3567	0.2123	55	0.0024	1.7e	461	
(BMI)	levels	8	A	T	3	6330	15	61	161	-09	460	
	Sex											
Body	hormone-b	rs1						0.0		8.4		
mass	inding	310				1031		47		996		
index	globulin	732				8870	0.0749	57	0.0037	3e-	461	
(BMI)	levels	5	T	C	4	9	2	99	5479	37	460	
	Sex											
Body	hormone-b	rs1						0.0		3.1		
mass	inding	317						14		002		
index	globulin	642				4315	0.6876	15	0.0021	7e-	461	
(BMI)	levels	9	C	T	5	2216	09	55	3122	11	460	
	Sex							-0.				
Body	hormone-b							01		1.5		
mass	inding	rs1						80		000		
index	globulin	320				2126	0.4547	32	0.0019	3e-	461	
(BMI)	levels	251	T	C	17	4396	91	1	9407	19	460	
	Sex							-0.				
Body	hormone-b	rs1						01		5.7		
mass	inding	321				1201		44		996		
index	globulin	838				7350	0.3351	02	0.0020	3e-	461	
(BMI)	levels	3	G	C	6	1	32	5	9236	12	460	
	Sex							-0.				
Body	hormone-b							01		1.0		
mass	inding	rs1						31		999		
index	globulin	322				2048	0.6092	29	0.0020	9e-	461	
(BMI)	levels	842	G	A	6	8897	74	2	3539	10	460	
	Sex							-0.				
Body	hormone-b	rs1						0.0		1.9		
mass	inding	324						15		998		
index	globulin	818				1433	0.2685	76	0.0022	6e-	461	
(BMI)	levels	7	C	T	8	6834	57	4	4155	12	460	
	Sex							-0.				
Body	hormone-b							01		2.8		
mass	inding	rs1						48		002		
index	globulin	327				5117	0.3877	53	0.0020	7e-	461	
(BMI)	levels	259	G	A	6	7811	22	2	3363	13	460	
Body	Sex	rs1						0.0		3.4		
mass	hormone-b	329				8051	0.5706	11	0.0019	000	461	
index	inding	172	A	G	9	0077	83	03	9876	1e-	460	

(BMI)	globulin levels	3						18		08	
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1330				2776	0.4831	50	0.0019	7e-	461
		199	T	G	9	0946	37	9	8642	09	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1342						01		4.6	
		004				5075	0.3650	81	0.0020	5e-	461
		8	A	C	2	1414	37	7	5272	14	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1342				2134		81		5.6	
		782				1426	0.2711	51	0.0022	5e-	461
		2	G	A	2	5	98	5	4142	16	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1346				6565	0.4050	30	0.0020	3e-	461
		841	A	G	4	1730	41	56	172	11	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1360				7379	0.4815	00	0.0019	4e-	461
		201	T	C	9	6450	46	75	7747	11	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1364				3043	0.3606	36	0.0020	1e-	461
		2	T	A	11	2220	54	3	5695	15	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1401						02		2.8	
		597				7376	0.0822	88	0.0037	7e-	461
		17	T	C	15	5586	92	2	0967	11	460
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs1438				1525		33		1.0	
		945	A	T	5	7	19	4	9791	09	460
Body mass	Sex	rs1				7958	0.5936	0.0	0.0020	3.4	461
	hormone-binding globulin levels	441	A	G	13	0919	81	17	5854	001	460

index	inding	264						90		7e-	
(BMI)	globulin							33		18	
	levels										
	Sex										
Body	hormone-b							0.0		7.3	
mass	inding	rs1						22		999	
index	globulin	451				4135	0.0822	20	0.0036	7e-	461
(BMI)	levels	963	T	G	14	0367	66	1	0585	10	460
	Sex										
Body	hormone-b							0.0		1.2	
mass	inding	rs1						14		000	
index	globulin	458				4188	0.4884	07	0.0019	5e-	461
(BMI)	levels	156	T	C	12	7940	31	5	7951	12	460
	Sex										
Body	hormone-b	rs1						0.0			
mass	inding	459						22			
index	globulin	811				7471	0.0637	71	0.0040	2e-	461
(BMI)	levels	04	G	A	8	4869	11	1	4552	08	460
	Sex										
Body	hormone-b	rs1						0.0			
mass	inding	465						13			
index	globulin	694				2199	0.2007	95	0.0024	2e-	461
(BMI)	levels	28	A	G	11	686	49	33	8571	08	460
	Sex										
Body	hormone-b							0.0		4.1	
mass	inding	rs1				1080		13		001	
index	globulin	471				3109	0.6166	46	0.0020	5e-	461
(BMI)	levels	093	A	G	3	4	63	19	3996	11	460
	Sex							-0.			
Body	hormone-b	rs1						01		1.0	
mass	inding	475						33		999	
index	globulin	686				9306	0.2380	32	0.0023	9e-	461
(BMI)	levels	78	C	T	10	1851	7	7	3034	08	460
	Sex										
Body	hormone-b							0.0		2.1	
mass	inding	rs1						33		998	
index	globulin	477				8798	0.1369	77	0.0028	9e-	461
(BMI)	levels	290	C	T	5	8934	47	72	9815	31	460
	Sex							-0.			
Body	hormone-b	rs1						03		1.2	
mass	inding	477				1230		50		998	
index	globulin	302				2447	0.0872	79	0.0035	7e-	461
(BMI)	levels	68	T	G	12	6	43	9	8357	22	460
Body	Sex	rs1	C	T	5	6302	0.4800	0.0	0.0019	5.9	461

mass	hormone-b	503				0706	77	15	7681	006	460
index	inding	526						43		5e-	
(BMI)	globulin							08		15	
	levels										
	Sex										
Body	hormone-b							0.0		8.3	
mass	inding	rs1				1048		13		000	
index	globulin	562				4744	0.7534	18	0.0022	4e-	461
(BMI)	levels	01	C	G	6	1	55	99	8932	09	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs1						11			
index	globulin	569				1684	0.4917	15	0.0019	1.6e	461
(BMI)	levels	14	A	G	1	8652	86	52	7308	-08	460
	Sex							-0.			
Body	hormone-b							01		2.2	
mass	inding	rs1				1226		33		998	
index	globulin	582				5719	0.4732	41	0.0019	5e-	461
(BMI)	levels	931	A	G	5	9	42	9	956	11	460
	Sex							-0.			
Body	hormone-b							01		9.2	
mass	inding	rs1				1578		17		999	
index	globulin	608				1521	0.3649	76	0.0020	4e-	461
(BMI)	levels	113	T	A	3	7	98	6	5086	09	460
	Sex										
Body	hormone-b							0.0		7.8	
mass	inding	rs1						20		995	
index	globulin	609				7722	0.5657	97	0.0019	1e-	461
(BMI)	levels	010	G	A	8	7464	28	73	963	26	460
	Sex							-0.			
Body	hormone-b	rs1						01		4.2	
mass	inding	691						92		000	
index	globulin	630				3082	0.1197	36	0.0030	1e-	461
(BMI)	levels	3	G	A	9	3761	36	9	7931	10	460
	Sex										
Body	hormone-b	rs1						0.0		2.1	
mass	inding	705				1582		13		999	
index	globulin	630				7168	0.2564	58	0.0022	9e-	461
(BMI)	levels	1	C	T	5	0	25	31	697	09	460
	Sex							-0.			
Body	hormone-b	rs1						01		7.5	
mass	inding	713						78		006	
index	globulin	213				2108	0.2214	41	0.0023	7e-	461
(BMI)	levels	0	C	G	7	036	67	8	8564	14	460

	Sex								-0.			
Body	hormone-b	rs1							02		7.0	
mass	inding	714							13		000	
index	globulin	925				7663	0.8048	50	0.0025	3e-	461	
(BMI)	levels	4	C	T	7	4463	54	7	5804	17	460	
	Sex								-0.			
Body	hormone-b	rs1							01			
mass	inding	728				1407			34			
index	globulin	901				7468	0.3278	66	0.0021	1.6e	461	
(BMI)	levels	0	G	A	4	4	7	1	0438	-10	460	
	Sex											
Body	hormone-b	rs1							0.0		4.4	
mass	inding	739							27		004	
index	globulin	973				8749	0.0688	07	0.0039	8e-	461	
(BMI)	levels	9	G	A	10	0850	93	13	1006	12	460	
	Sex											
Body	hormone-b	rs1							0.0			
mass	inding	744							15			
index	globulin	629				4076	0.1655	32	0.0026	8.9e	461	
(BMI)	levels	9	G	C	13	2556	44	35	6515	-09	460	
	Sex											
Body	hormone-b	rs1							0.0		5.3	
mass	inding	754				1152			14		000	
index	globulin	438				9516	0.2108	09	0.0024	5e-	461	
(BMI)	levels	4	C	T	1	0	64	31	1434	09	460	
	Sex								-0.			
Body	hormone-b	rs1							02		1.5	
mass	inding	766							30		000	
index	globulin	835				6120	0.1460	54	0.0027	3e-	461	
(BMI)	levels	6	G	C	3	8619	29	3	9318	16	460	
	Sex											
Body	hormone-b	rs1							0.0		1.2	
mass	inding	777							24		998	
index	globulin	033				2841	0.3224	29	0.0021	7e-	461	
(BMI)	levels	6	T	C	9	4625	37	31	1161	30	460	
	Sex											
Body	hormone-b								0.0		7.5	
mass	inding	rs1				1564			14		006	
index	globulin	778				8997	0.3621	07	0.0020	7e-	461	
(BMI)	levels	830	A	G	1	4	65	75	5596	12	460	
Body	Sex								-0.		7.7	
mass	hormone-b	rs1							02		001	
index	inding	788				2109	0.4947	04	0.0019	6e-	461	
(BMI)	globulin	808	G	A	18	0023	8	04	8255	25	460	

	levels										
	Sex							-0.			
Body	hormone-b							01		4.7	
mass	inding	rs1				1319		33		000	
index	globulin	793				3492	0.3091	34	0.0021	2e-	461
(BMI)	levels	636	C	G	11	6	44	3	408	10	460
	Sex							-0.			
Body	hormone-b							01		2.9	
mass	inding	rs1				1506		67		998	
index	globulin	805				4553	0.2453	56	0.0022	5e-	461
(BMI)	levels	123	G	T	7	4	01	9	9711	13	460
	Sex							-0.			
Body	hormone-b							01		8.6	
mass	inding	rs1						40		000	
index	globulin	834				4074	0.3731	11	0.0020	3e-	461
(BMI)	levels	144	A	C	18	4790	92	2	5213	12	460
	Sex							-0.			
Body	hormone-b							02		1.2	
mass	inding	rs1						12		000	
index	globulin	861				5893	0.5554	55	0.0019	5e-	461
(BMI)	levels	410	T	C	2	3591	23	8	8918	26	460
	Sex							-0.			
Body	hormone-b							0.0		2.2	
mass	inding	rs1						20		998	
index	globulin	884				6612	0.6273	00	0.0020	5e-	461
(BMI)	levels	897	G	A	20	832	78	1	5634	22	460
	Sex							-0.			
Body	hormone-b							0.0		5.4	
mass	inding	rs1						11		999	
index	globulin	919				8877	0.4874	67	0.0020	7e-	461
(BMI)	levels	243	C	T	5	8861	06	59	0175	09	460
	Sex							-0.			
Body	hormone-b							01			
mass	inding	rs1						70			
index	globulin	967				2803	0.2851	43	0.0022	1e-	461
(BMI)	levels	772	A	G	13	6062	17	4	0377	14	460
	Sex							-0.			
Body	hormone-b							0.0		1.6	
mass	inding	rs2				1412		37		998	
index	globulin	035				9812	0.0558	08	0.0043	1e-	461
(BMI)	levels	936	T	G	3	4	92	63	5778	17	460
Body	Sex	rs2						0.0		2.8	
mass	hormone-b	075				4872	0.2671	13	0.0022	000	461
index	inding	466	C	G	16	970	82	29	3627	1e-	460

(BMI)	globulin							03		09	
	levels										
	Sex										
Body	hormone-b							0.0			
mass	inding	rs2						11			
index	globulin	102				5281	0.3224	85	0.0021	2e-	461
(BMI)	levels	278	G	A	4	8664	86	83	139	08	460
	Sex										
Body	hormone-b							-0.		5.7	
mass	inding	rs2				1390		01		996	
index	globulin	133				8665	0.6110	40	0.0020	3e-	461
(BMI)	levels	561	T	A	5	1	84	97	4744	12	460
	Sex										
Body	hormone-b							0.0		1.7	
mass	inding	rs2						15		999	
index	globulin	135				2694	0.1456	78	0.0028	9e-	461
(BMI)	levels	18	C	T	7	1065	08	94	0491	08	460
	Sex							-0.			
Body	hormone-b							01			
mass	inding	rs2						12			
index	globulin	153				2126	0.4799	55	0.0019	1.6e	461
(BMI)	levels	740	G	A	20	089	14	1	9313	-08	460
	Sex							-0.			
Body	hormone-b							01		2.3	
mass	inding	rs2						55		999	
index	globulin	156				3236	0.6118	22	0.0020	4e-	461
(BMI)	levels	34	G	A	7	9148	79	3	3492	14	460
	Sex							-0.			
Body	hormone-b							01		8.9	
mass	inding	rs2				1339		49		991	
index	globulin	172				7896	0.5787	38	0.0020	2e-	461
(BMI)	levels	131	C	T	10	2	23	2	0386	14	460
	Sex										
Body	hormone-b							0.0		2.3	
mass	inding	rs2						17		999	
index	globulin	176				6236	0.2717	01	0.0022	4e-	461
(BMI)	levels	72	C	A	14	1021	41	55	3046	14	460
	Sex										
Body	hormone-b							-0.		3.6	
mass	inding	rs2						01		999	
index	globulin	192				5550	0.5533	50	0.0019	9e-	461
(BMI)	levels	158	G	A	4	5360	08	12	8302	14	460
Body	Sex	rs2				1815	0.6619	0.0	0.0020	5.1	461
mass	hormone-b	216	A	C	2	9907	66	16	8587	999	460

index	inding	931				0		91		6e-	
(BMI)	globulin							09		16	
	levels										
	Sex							-0.			
Body	hormone-b							02		3.5	
mass	inding	rs2						03		999	
index	globulin	234				6563	0.6395	84	0.0020	8e-	461
(BMI)	levels	458	T	C	11	9374	19	1	5579	23	460
	Sex										
Body	hormone-b							0.0		3.7	
mass	inding	rs2				1319		14		999	
index	globulin	248				2468	0.1645	65	0.0026	7e-	461
(BMI)	levels	551	A	G	6	9	22	23	6497	08	460
	Sex										
Body	hormone-b							0.0		2.0	
mass	inding	rs2				1088		17		999	
index	globulin	253				8859	0.6260	32	0.0020	1e-	461
(BMI)	levels	310	G	C	6	3	99	13	4115	17	460
	Sex							-0.			
Body	hormone-b							01		6.4	
mass	inding	rs2						63		998	
index	globulin	271				5649	0.4027	08	0.0020	e-1	461
(BMI)	levels	189	A	G	12	4991	2	6	1869	6	460
	Sex							-0.			
Body	hormone-b							01		5.1	
mass	inding	rs2						52		999	
index	globulin	289				4480	0.3956	76	0.0020	6e-	461
(BMI)	levels	379	T	C	7	4225	48	5	2952	14	460
	Sex							-0.			
Body	hormone-b							02		1.2	
mass	inding	rs2						80		998	
index	globulin	307				7500	0.3950	04	0.0020	7e-	461
(BMI)	levels	111	C	T	5	3678	25	2	2203	43	460
	Sex							-0.			
Body	hormone-b							01		1.2	
mass	inding	rs2						26		999	
index	globulin	342				2454	0.5162	97	0.0019	9e-	461
(BMI)	levels	892	G	T	16	0806	12	2	7715	10	460
	Sex										
Body	hormone-b							0.0		1.2	
mass	inding	rs2				1440		13		999	
index	globulin	381				3544	0.2438	96	0.0022	9e-	461
(BMI)	levels	404	C	T	2	2	37	64	9974	09	460
Body	Sex	rs2	A	G	14	3325	0.1306	0.0	0.0029	3.8	461

mass	hormone-b	383				7914	87	16	3564	999	460
index	inding	377						12		6e-	
(BMI)	globulin							87		08	
	levels										
	Sex										
Body	hormone-b							0.0		2.0	
mass	inding	rs2						17		999	
index	globulin	398				9643	0.2591	99	0.0022	1e-	461
(BMI)	levels	861	G	A	9	0747	69	32	6733	15	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs2						12			
index	globulin	425				4489	0.4151	22	0.0020	1.2e	461
(BMI)	levels	816	A	G	20	5075	11	84	1106	-09	460
	Sex							-0.			
Body	hormone-b							01		3.8	
mass	inding	rs2				2308		71		001	
index	globulin	433				1670	0.6776	80	0.0021	4e-	461
(BMI)	levels	733	A	G	2	3	59	5	0907	16	460
	Sex										
Body	hormone-b							0.0		5.3	
mass	inding	rs2						19		002	
index	globulin	439				9977	0.5456	19	0.0019	9e-	461
(BMI)	levels	823	G	A	10	8226	12	98	9108	22	460
	Sex							-0.			
Body	hormone-b							01		1.2	
mass	inding	rs2						13		999	
index	globulin	482				9417	0.4290	51	0.0019	9e-	461
(BMI)	levels	356	C	T	9	8371	18	1	9506	08	460
	Sex										
Body	hormone-b							0.0		9.2	
mass	inding	rs2				1314		12		002	
index	globulin	512				5186	0.5660	94	0.0019	6e-	461
(BMI)	levels	892	C	T	11	2	85	68	9819	11	460
	Sex							-0.			
Body	hormone-b							01			
mass	inding	rs2						15			
index	globulin	527				7738	0.5879	04	0.0020	1.2e	461
(BMI)	levels	61	T	G	5	0723	66	6	1769	-08	460
	Sex										
Body	hormone-b							0.0		1.5	
mass	inding	rs2						22		999	
index	globulin	568				7276	0.6036	29	0.0020	3e-	461
(BMI)	levels	958	A	G	1	5116	56	28	1204	28	460

	Sex											
Body	hormone-b										2.3	
mass	inding	rs2						0.0			999	
index	globulin	569				1292	0.3203	12	0.0021	9e-	461	
(BMI)	levels	993	C	T	3	6096	27	67	2202	09	460	
	Sex							-0.				
Body	hormone-b							01			2.7	
mass	inding	rs2				1835		38			002	
index	globulin	606				3775	0.6463	79	0.0020	3e-	461	
(BMI)	levels	228	C	A	3	9	68	1	8379	11	460	
	Sex							-0.				
Body	hormone-b							01			6.7	
mass	inding	rs2						38			003	
index	globulin	616				2063	0.3198	73	0.0021	9e-	461	
(BMI)	levels	143	A	G	8	2022	62	8	2547	11	460	
	Sex											
Body	hormone-b							0.0			1.3	
mass	inding	rs2				1123		14			999	
index	globulin	618				2411	0.3814	39	0.0020	1e-	461	
(BMI)	levels	039	T	A	1	1	81	63	317	12	460	
	Sex											
Body	hormone-b							0.0			3.8	
mass	inding	rs2				2018		24			001	
index	globulin	678				0051	0.3401	16	0.0020	4e-	461	
(BMI)	levels	204	G	T	1	1	62	1	8158	31	460	
	Sex							-0.				
Body	hormone-b							01			1.1	
mass	inding	rs2						60			000	
index	globulin	725				3085	0.6961	30	0.0021	2e-	461	
(BMI)	levels	371	G	A	8	4033	15	1	5845	13	460	
	Sex							-0.				
Body	hormone-b							01			2.9	
mass	inding	rs2						80			000	
index	globulin	835				4241	0.8206	33	0.0025	1e-	461	
(BMI)	levels	0	G	A	3	8446	84	5	8234	12	460	
	Sex							-0.				
Body	hormone-b	rs2						02			1.5	
mass	inding	836						64			999	
index	globulin	615				3167	0.1305	82	0.0029	3e-	461	
(BMI)	levels	6	C	T	6	1498	95	6	2978	19	460	
Body	Sex							0.0			1.0	
mass	hormone-b	rs2						12			999	
index	inding	837				4262	0.6514	66	0.0020	9e-	461	
(BMI)	globulin	996	C	T	21	6706	08	47	7859	09	460	

	levels											
	Sex							-0.				
Body	hormone-b	rs2						01				
mass	inding	840						17				
index	globulin	463				8087	0.3660	12	0.0020	1.2e	461	
(BMI)	levels	9	T	C	5	4229	41	9	5533	-08	460	
	Sex							-0.				
Body	hormone-b	rs2						01				
mass	inding	856						82				
index	globulin	841				5346	0.1076	82	0.0032	1.2e	461	
(BMI)	levels	8	A	G	15	2969	36	5	0812	-08	460	
	Sex							-0.				
Body	hormone-b							01				
mass	inding	rs2						71				
index	globulin	861				6783	0.4119	27	0.0019	1e-	461	
(BMI)	levels	685	C	T	2	7553	84	4	9763	17	460	
	Sex							-0.				
Body	hormone-b	rs2						01				
mass	inding	867				1403		24		3.6		
index	globulin	067				6304	0.2860	63	0.0022	9e-	461	
(BMI)	levels	1	C	T	9	5	24	8	6426	08	460	
	Sex							-0.				
Body	hormone-b							01		7.1		
mass	inding	rs2						57		006		
index	globulin	870				7940	0.4120	15	0.0020	8e-	461	
(BMI)	levels	111	T	C	15	3585	66	1	1912	15	460	
	Sex											
Body	hormone-b							0.0		2.3		
mass	inding	rs2						14		000		
index	globulin	899				5947	0.2299	96	0.0023	1e-	461	
(BMI)	levels	644	T	C	15	0366	95	59	609	10	460	
	Sex											
Body	hormone-b							0.0		7.7		
mass	inding	rs2						43		999		
index	globulin	962				8687	0.0200	25	0.0070	2e-	461	
(BMI)	levels	334	T	G	5	9056	65	52	3547	10	460	
	Sex							-0.				
Body	hormone-b							01		6.0		
mass	inding	rs3						44		995		
index	globulin	176				6968	0.7244	76	0.0022	8e-	461	
(BMI)	levels	56	A	T	12	1101	52	3	1303	11	460	
Body	Sex	rs3				1673		0.0		2.5		
mass	hormone-b	242				6241	0.2243	13	0.0023	999	461	
index	inding	1	T	A	5	6	15	23	7757	8e-	460	

(BMI)	globulin							15		08	
	levels										
	Sex										
Body	hormone-b	rs3						0.0		3.2	
mass	inding	1337						15		999	
index	globulin	296				6762	0.8039	72	0.0025	7e-	461
(BMI)	levels	51	T	G	11	2	77	18	0202	10	460
	Sex										
Body	hormone-b	rs3						0.0		3.5	
mass	inding	404						23		002	
index	globulin	528				4036	0.3344	47	0.0020	6e-	461
(BMI)	levels	8	T	C	6	9081	35	84	9371	29	460
	Sex							-0.			
Body	hormone-b	rs3						03		9.5	
mass	inding	415						89		999	
index	globulin	302				4133	0.0221	15	0.0067	7e-	461
(BMI)	levels	5	C	T	15	9697	58	1	8155	09	460
	Sex										
Body	hormone-b	rs3						-0.		2.3	
mass	inding	423				1751		01		999	
index	globulin	429				6663	0.3924	49	0.0020	4e-	461
(BMI)	levels	6	A	G	2	6	37	47	4032	13	460
	Sex							-0.			
Body	hormone-b	rs3						01		7.8	
mass	inding	448						85		001	
index	globulin	175				4750	0.1653	02	0.0027	e-1	461
(BMI)	levels	1	A	C	20	1038	29	9	0404	2	460
	Sex										
Body	hormone-b	rs3						0.0		3.5	
mass	inding	451						38		999	
index	globulin	743				7845	0.1217	84	0.0030	8e-	461
(BMI)	levels	9	A	C	1	0517	87	8	4983	37	460
	Sex										
Body	hormone-b	rs3						0.0		8.1	
mass	inding	469						11		000	
index	globulin	618				9309	0.4760	43	0.0019	9e-	461
(BMI)	levels	1	C	T	7	6635	84	45	8283	09	460
	Sex							-0.			
Body	hormone-b	rs3						02		4.1	
mass	inding	481						85		001	
index	globulin	147				2540	0.2307	29	0.0023	5e-	461
(BMI)	levels	4	A	G	4	8838	56	3	4269	34	460
Body	Sex	rs3				8477	0.5003	-0.	0.0019	1.9	461
mass	hormone-b	490	A	G	11	6849	88	01	8231	002	460

index	inding	71						33		e-1	
(BMI)	globulin							06		1	
	levels							2			
	Sex							-0.			
Body	hormone-b	rs3						01		5.3	
mass	inding	515						30		000	
index	globulin	432				2486	0.2740	42	0.0022	5e-	461
(BMI)	levels	6	G	A	16	2414	44	7	3442	09	460
	Sex										
Body	hormone-b	rs3						0.0		9.2	
mass	inding	536						21		002	
index	globulin	444				7427	0.1097	70	0.0031	6e-	461
(BMI)	levels	9	T	C	15	8126	39	69	8335	12	460
	Sex										
Body	hormone-b							0.0		3.2	
mass	inding	rs3				1540		15		998	
index	globulin	557				3495	0.4075	27	0.0020	9e-	461
(BMI)	levels	77	C	G	3	0	37	15	1314	14	460
	Sex							-0.			
Body	hormone-b	rs3						01		9.2	
mass	inding	569						64		002	
index	globulin	758				4729	0.5081	67	0.0019	6e-	461
(BMI)	levels	7	A	G	14	8505	21	7	8067	17	460
	Sex										
Body	hormone-b	rs3						0.0		6.2	
mass	inding	569						23		001	
index	globulin	769				5235	0.0893	03	0.0035	2e-	461
(BMI)	levels	1	G	C	15	3498	46	05	2223	11	460
	Sex							-0.			
Body	hormone-b	rs3						01		9.0	
mass	inding	580						71		991	
index	globulin	900				4701	0.3632	00	0.0020	3e-	461
(BMI)	levels	7	A	G	2	9521	05	9	5627	17	460
	Sex							-0.			
Body	hormone-b	rs3						01		1.1	
mass	inding	595						96		000	
index	globulin	754				7344	0.5743	42	0.0020	2e-	461
(BMI)	levels	4	T	G	8	0371	16	9	0438	22	460
	Sex										
Body	hormone-b	rs3						-0.		2.1	
mass	inding	600				1630		02		998	
index	globulin	763				0933	0.1376	10	0.0028	9e-	461
(BMI)	levels	5	A	G	6	5	98	45	6788	13	460
Body	Sex	rs3	T	C	8	3832	0.3987	0.0	0.0020	2e-	461

mass	hormone-b	606				9650	47	12	1928	10	460
index	inding	195						84			
(BMI)	globulin	4						45			
	levels										
	Sex							-0.			
Body	hormone-b							01		5.1	
mass	inding	rs3						17		999	
index	globulin	764				4964	0.5875	71	0.0020	6e-	461
(BMI)	levels	625	G	T	19	9051	94	4	1523	09	460
	Sex							-0.			
Body	hormone-b							02		2.4	
mass	inding	rs3						97		997	
index	globulin	784				6807	0.2266	06	0.0023	7e-	461
(BMI)	levels	710	C	T	15	2458	02	7	6042	36	460
	Sex							-0.			
Body	hormone-b							01		6.4	
mass	inding	rs3				1032		86		003	
index	globulin	803				4647	0.6668	41	0.0020	e-1	461
(BMI)	levels	286	G	A	14	0	15	7	9828	9	460
	Sex							-0.			
Body	hormone-b							01			
mass	inding	rs3						20			
index	globulin	807				5056	0.4383	72	0.0019	1.5e	461
(BMI)	levels	566	T	G	7	4204	2	7	9583	-09	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs3						24			
index	globulin	814				2999	0.4824	01	0.0019	1e-	461
(BMI)	levels	883	T	C	16	4922	02	07	8424	33	460
	Sex										
Body	hormone-b							0.0		5.4	
mass	inding	rs3						16		000	
index	globulin	845				7500	0.3911	36	0.0020	8e-	461
(BMI)	levels	344	T	C	1	1480	15	09	1927	16	460
	Sex							-0.			
Body	hormone-b							01			
mass	inding	rs3				1318		36			
index	globulin	851				7660	0.7430	07	0.0022	2e-	461
(BMI)	levels	998	G	C	3	5	64	1	6874	09	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs3						11			
index	globulin	866				6657	0.3556	78	0.0020	1.2e	461
(BMI)	levels	805	A	C	1	424	83	35	6546	-08	460

	Sex											
Body	hormone-b							0.0				
mass	inding	rs3				1234		12				
index	globulin	897				9211	0.4111	08	0.0020	2.5e	461	
(BMI)	levels	102	T	C	12	2	57	38	2716	-09	460	
	Sex							-0.				
Body	hormone-b							02		2.7		
mass	inding	rs3						25		002		
index	globulin	901				9910	0.1524	55	0.0027	3e-	461	
(BMI)	levels	286	A	C	7	7727	4	3	5602	16	460	
	Sex											
Body	hormone-b							0.0				
mass	inding	rs3						14				
index	globulin	902				6978	0.2371	10	0.0023	2e-	461	
(BMI)	levels	951	G	T	14	9755	51	19	5267	09	460	
	Sex							-0.				
Body	hormone-b							01		4.0		
mass	inding	rs3						44		003		
index	globulin	935				7908	0.5367	86	0.0019	7e-	461	
(BMI)	levels	190	A	G	17	4367	84	4	9701	13	460	
	Sex											
Body	hormone-b							0.0		9.4		
mass	inding	rs3						18		994		
index	globulin	946				4658	0.5376	63	0.0019	8e-	461	
(BMI)	levels	08	C	T	21	1798	97	53	9484	21	460	
	Sex							-0.				
Body	hormone-b							02		3.8		
mass	inding	rs4				1074		61		001		
index	globulin	007				9610	0.1795	66	0.0025	4e-	461	
(BMI)	levels	1	C	T	5	2	36	6	8163	24	460	
	Sex							-0.				
Body	hormone-b							01				
mass	inding	rs4						25				
index	globulin	017				4402	0.4702	81	0.0019	2.1e	461	
(BMI)	levels	425	T	C	3	8764	08	7	8035	-10	460	
	Sex							-0.				
Body	hormone-b							01		7.3		
mass	inding	rs4						78		994		
index	globulin	055				5926	0.4168	08	0.0020	6e-	461	
(BMI)	levels	791	T	C	13	6053	04	2	0801	19	460	
Body	Sex							0.0		8.3		
mass	hormone-b	rs4						15		000		
index	inding	063				1822	0.1772	97	0.0026	4e-	461	
(BMI)	globulin	88	G	C	22	6997	66	3	0181	10	460	

	levels										
	Sex										
Body	hormone-b	rs4						0.0		4.0	
mass	inding	127				1100		68		003	
index	globulin	973				8255	0.0259	42	0.0062	7e-	461
(BMI)	levels	8	G	T	1	1	88	63	225	28	460
	Sex							-0.			
Body	hormone-b							02		1.3	
mass	inding	rs4						29		999	
index	globulin	148				8905	0.1132	68	0.0031	1e-	461
(BMI)	levels	155	G	A	4	4667	68	1	0659	13	460
	Sex										
Body	hormone-b							0.0		1.5	
mass	inding	rs4						13		999	
index	globulin	261				3100	0.3649	85	0.0020	3e-	461
(BMI)	levels	944	G	T	4	3636	35	53	5652	11	460
	Sex										
Body	hormone-b							0.0		1.4	
mass	inding	rs4						15		000	
index	globulin	267				6096	0.1863	39	0.0025	1e-	461
(BMI)	levels	103	C	T	12	6740	47	16	4312	09	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs4						11			
index	globulin	284				3184	0.4671	96	0.0019	2e-	461
(BMI)	levels	600	C	T	15	3528	22	73	9506	09	460
	Sex							-0.			
Body	hormone-b							01		3.2	
mass	inding	rs4				1479		73		998	
index	globulin	293				0338	0.5765	79	0.0019	9e-	461
(BMI)	levels	43	G	A	2	2	73	5	9729	18	460
	Sex							-0.			
Body	hormone-b							02		2.3	
mass	inding	rs4						66		999	
index	globulin	293				4541	0.1541	72	0.0027	4e-	461
(BMI)	levels	58	C	T	19	1941	66	3	4373	22	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs4						12			
index	globulin	307				2435	0.4589	14	0.0019	1e-	461
(BMI)	levels	239	G	A	7	4300	41	13	8816	09	460
Body	Sex	rs4						0.0		1.0	
mass	hormone-b	419				9615	0.4073	11	0.0020	999	461
index	inding	475	T	A	4	0044	27	48	106	9e-	460

(BMI)	globulin							7		08	
	levels										
	Sex							-0.			
Body	hormone-b							01		2.4	
mass	inding	rs4						61		997	
index	globulin	444				9257	0.2161	60	0.0024	7e-	461
(BMI)	levels	317	G	A	15	3234	41	4	2104	11	460
	Sex										
Body	hormone-b							0.0		3.5	
mass	inding	rs4						14		999	
index	globulin	456				2519	0.3334	61	0.0021	8e-	461
(BMI)	levels	769	T	C	20	0777	44	11	0138	12	460
	Sex										
Body	hormone-b							0.0		2.9	
mass	inding	rs4						29		000	
index	globulin	477				5410	0.1286	61	0.0029	1e-	461
(BMI)	levels	562	T	C	13	4968	44	18	8011	23	460
	Sex							-0.			
Body	hormone-b							03		2.9	
mass	inding	rs4				2053		13		998	
index	globulin	482				7590	0.9230	17	0.0037	5e-	461
(BMI)	levels	463	A	C	2	9	02	5	0692	17	460
	Sex										
Body	hormone-b	rs4						0.0			
mass	inding	548						25			
index	globulin	619				2244	0.0656	76	0.0040	1.7e	461
(BMI)	levels	7	A	G	19	849	85	6	3737	-10	460
	Sex										
Body	hormone-b							0.0		3.2	
mass	inding	rs4				2290		16		998	
index	globulin	605				1096	0.3415	36	0.0020	9e-	461
(BMI)	levels	363	C	A	2	0	95	38	7733	15	460
	Sex										
Body	hormone-b							-0.		8.4	
mass	inding	rs4						01		004	
index	globulin	648				2723	0.4668	48	0.0019	e-1	461
(BMI)	levels	450	A	C	1	214	24	37	8775	4	460
	Sex							-0.			
Body	hormone-b							01			
mass	inding	rs4				2438		88			
index	globulin	658				3256	0.8336	87	0.0026	1e-	461
(BMI)	levels	403	T	C	1	0	59	7	4997	12	460
Body	Sex	rs4				6021	0.3362	0.0	0.0020	8.0	461
mass	hormone-b	672	T	C	2	7457	28	13	8669	001	460

index	inding	338						56		8e-	
(BMI)	globulin							46		11	
	levels										
	Sex										
Body	hormone-b							0.0		7.8	
mass	inding	rs4						18		995	
index	globulin	722				3125	0.1361	69	0.0028	1e-	461
(BMI)	levels	398	T	C	7	220	37	93	7545	11	460
	Sex							-0.			
Body	hormone-b							02		2.6	
mass	inding	rs4						54		001	
index	globulin	790				1824	0.1536	50	0.0027	6e-	461
(BMI)	levels	292	A	C	17	305	93	9	5603	20	460
	Sex							-0.			
Body	hormone-b							01		1.6	
mass	inding	rs4						77		998	
index	globulin	820				4069	0.3453	45	0.0020	1e-	461
(BMI)	levels	410	G	A	22	0385	17	7	8527	17	460
	Sex										
Body	hormone-b							-0.		5.4	
mass	inding	rs4						01		000	
index	globulin	832				8676	0.6861	59	0.0021	8e-	461
(BMI)	levels	298	T	C	2	4004	42	65	2268	14	460
	Sex										
Body	hormone-b							0.0		3.2	
mass	inding	rs4				1166		19		998	
index	globulin	876				7184	0.7202	75	0.0022	9e-	461
(BMI)	levels	611	G	A	8	8	43	49	0502	19	460
	Sex										
Body	hormone-b							0.0		4.4	
mass	inding	rs4						18		998	
index	globulin	929				8639	0.6452	94	0.0020	7e-	461
(BMI)	levels	923	C	T	11	200	04	24	6436	20	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs5						14			
index	globulin	011				6918	0.7151	02	0.0021	1.6e	461
(BMI)	levels	579	G	C	16	7318	52	68	9322	-10	460
	Sex							-0.			
Body	hormone-b							01		2.5	
mass	inding	rs5						59		999	
index	globulin	121				7548	0.1920	35	0.0025	8e-	461
(BMI)	levels	21	C	T	18	501	54	9	2176	10	460
Body	Sex	rs5	G	A	3	1731	0.5278	0.0	0.0019	1.2	461

mass index (BMI)	hormone-binding globulin levels	29200				14305	29	1689	785	9987e-17	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs5572668								1.3999	461
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs5588	A	G	12	991306	0.209709	2483	0.00242628	1e-24	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs5588	G	A	11	28712741	0.307507	976	0.00214881	1.5e-09	461
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs5592	T	G	18	39644247	0.393053	4907	0.00203562	7e-11	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs5603832	A	G	3	69925128	0.31062	9276	0.00214833	2e-11	461
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs5609464	G	A	16	53806453	0.404564	4967	0.00201412	1e-200	461
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs5614323	T	C	3	15702044	0.256388	6667	0.00226533	1e-08	461
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs5620362	C	T	9	13104087	0.145529	1797	0.00280183	1e-10	461
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs5635233	C	T	19	19352155	0.154894	6327	0.00275021	1e-09	461

	Sex							-0.			
Body	hormone-b	rs5						01		6.4	
mass	inding	639						61		003	
index	globulin	973				3338	0.4491	32	0.0019	e-1	461
(BMI)	levels	7	T	C	13	1721	24	5	9646	6	460
	Sex										
Body	hormone-b	rs5						0.0		2.3	
mass	inding	685						15		999	
index	globulin	876				8651	0.2968	91	0.0021	4e-	461
(BMI)	levels	8	A	G	13	1730	61	88	7378	13	460
	Sex										
Body	hormone-b	rs5						0.0		6.1	
mass	inding	689						12		999	
index	globulin	306				2566	0.3033	51	0.0021	8e-	461
(BMI)	levels	2	G	T	8	2655	42	41	5383	09	460
	Sex										
Body	hormone-b	rs5						0.0		3.6	
mass	inding	693						15		999	
index	globulin	010				1098	0.1392	75	0.0028	9e-	461
(BMI)	levels	5	T	C	2	2487	95	57	6187	08	460
	Sex										
Body	hormone-b	rs5						04		1.1	
mass	inding	763						12		000	
index	globulin	638				5804	0.0838	55	0.0035	2e-	461
(BMI)	levels	6	C	T	18	8295	3	3	8326	30	460
	Sex										
Body	hormone-b	rs5						02		2.3	
mass	inding	886						29		999	
index	globulin	209				7508	0.4192	87	0.0020	4e-	461
(BMI)	levels	5	T	C	7	1418	66	7	0786	30	460
	Sex										
Body	hormone-b	rs5						0.0		3.7	
mass	inding	906				1132		11		999	
index	globulin	808				5673	0.4102	05	0.0020	7e-	461
(BMI)	levels	4	T	G	4	7	32	52	1048	08	460
	Sex										
Body	hormone-b	rs5						0.0		1.5	
mass	inding	922						22		000	
index	globulin	784				4369	0.3114	96	0.0021	3e-	461
(BMI)	levels	2	G	A	11	2423	9	75	5313	26	460
Body	Sex							-0.		1.6	
mass	hormone-b	rs5						01		998	
index	inding	940				6944	0.5541	46	0.0019	1e-	461
(BMI)	globulin	24	C	T	11	3822	62	77	9081	13	460

	levels							1			
	Sex							-0.			
Body	hormone-b	rs6						01		3.5	
mass	inding							47		999	
index	globulin	023				5347	0.7657	34	0.0023	8e-	461
(BMI)	levels	655	G	A	20	9658	41	6	4997	10	460
	Sex										
Body	hormone-b	rs6								1.1	
mass	inding	076						0.0		000	
index	globulin	461				1839	0.1448	20	0.0028	2e-	461
(BMI)	levels	3	T	G	18	911	83	99	2688	13	460
	Sex							-0.			
Body	hormone-b	rs6						01		5.6	
mass	inding	174						35		000	
index	globulin	046				1993	0.2372	15	0.0023	3e-	461
(BMI)	levels	6	A	G	1	4900	03	3	1885	09	460
	Sex										
Body	hormone-b	rs6						0.0		2.8	
mass	inding	181				1560		29		002	
index	globulin	332				4987	0.1357	02	0.0029	7e-	461
(BMI)	levels	4	T	C	1	7	28	59	2038	23	460
	Sex										
Body	hormone-b	rs6						0.0		1.2	
mass	inding	182				1743		22		000	
index	globulin	864				2199	0.1092	45	0.0031	5e-	461
(BMI)	levels	1	A	G	1	7	5	85	5913	12	460
	Sex							-0.			
Body	hormone-b	rs6						02			
mass	inding	187				1024		67			
index	globulin	161				8714	0.0915	15	0.0035	1e-	461
(BMI)	levels	5	T	C	10	0	51	9	9269	13	460
	Sex										
Body	hormone-b	rs6						0.0		2.4	
mass	inding	190						16		997	
index	globulin	369				8992	0.2549	62	0.0022	7e-	461
(BMI)	levels	5	G	A	11	2417	64	35	7115	13	460
	Sex							-0.			
Body	hormone-b	rs6						01		5.1	
mass	inding	199				1015		61		003	
index	globulin	267				3185	0.4919	92	0.0020	5e-	461
(BMI)	levels	1	G	A	14	4	5	5	6924	15	460
Body	Sex	rs6						-0.		9.3	
mass	hormone-b	200				7802	0.2650	01	0.0022	994	461
index	inding	778	A	G	15	9797	91	67	4215	e-1	460

(BMI)	globulin levels	2						007		4	
	Sex							-0.			
Body mass index (BMI)	hormone-binding globulin levels	rs6202077						016566		7.19996e-	461
			A	T	15	89960286	0.14168		0.00285	6e-09	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs6207200						0.01564		2.9999e-	461
			C	A	17	52938468	0.144541		0.002892	9e-08	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs6210726						0.091155		4.60045e-	461
			C	T	2	422144	0.048327		0.00469	5e-08	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs6217624						0.014969		6.09958e-	461
			T	A	2	16619088	0.244987		0.00229	8e-11	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs6219004						0.011669		5.30004e-	461
			C	G	2	18256699	0.390446		0.00208	4e-08	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs6224184						0.012426		1.79995e-	461
			G	A	3	20466465	0.314443		0.00213	5e-09	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs6224631						0.02075		1.79995e-	461
			A	G	3	9498143	0.102364		0.003239	9e-10	460
	Sex										
Body mass index (BMI)	hormone-binding globulin levels	rs6237927						0.01172		1.79995e-	461
			G	T	5	10587003	0.578511		0.002037	5e-09	460
Body mass	Sex	rs6				3353	0.2685	0.0	0.0022	8.4	461
	hormone-binding globulin levels	240	A	T	6	0346	84	14	2463	996	460

index	inding	756						43		3e-	
(BMI)	globulin	2						93		11	
	levels										
	Sex							-0.			
Body	hormone-b							03		3.2	
mass	inding							99		998	
index	globulin	rs6				2767	0.1884	18	0.0025	9e-	461
(BMI)	levels	265	T	C	11	9916	72	5	2719	56	460
	Sex										
Body	hormone-b							0.0		5.3	
mass	inding	rs6				1456		18		000	
index	globulin	430				2792	0.1085	60	0.0031	5e-	461
(BMI)	levels	068	A	G	2	7	59	66	882	09	460
	Sex										
Body	hormone-b							0.0		8.3	
mass	inding	rs6				1706		15		004	
index	globulin	444				0207	0.2374	85	0.0023	2e-	461
(BMI)	levels	950	A	G	3	3	74	25	2007	12	460
	Sex							-0.			
Body	hormone-b							02		2.3	
mass	inding	rs6						05		999	
index	globulin	545				5930	0.6014	21	0.0020	4e-	461
(BMI)	levels	714	A	G	2	7725	48	9	1573	24	460
	Sex										
Body	hormone-b							-0.			
mass	inding	rs6				1334		01			
index	globulin	560				1405	0.6918	21	0.0021	1.2e	461
(BMI)	levels	906	C	T	12	4	74	98	4136	-08	460
	Sex										
Body	hormone-b							-0.		4.6	
mass	inding	rs6						01		004	
index	globulin	561				5825	0.7535	59	0.0023	5e-	461
(BMI)	levels	937	A	T	13	7667	87	34	0346	12	460
	Sex										
Body	hormone-b							0.0		8.6	
mass	inding	rs6						20		996	
index	globulin	575				9402	0.6360	73	0.0020	1e-	461
(BMI)	levels	340	A	G	14	3972	38	33	6189	24	460
	Sex										
Body	hormone-b	rs6						0.0		6.8	
mass	inding	667						14		992	
index	globulin	925				1835	0.4458	88	0.0019	2e-	461
(BMI)	levels	6	T	C	4	1898	26	64	8759	14	460
Body	Sex	rs6	G	A	1	4767	0.5826	-0.	0.0019	1.5	461

mass	hormone-b	669				8458	79	01	986	999	460
index	inding	341						70		3e-	
(BMI)	globulin							28		17	
	levels							7			
	Sex										
Body	hormone-b							0.0		3.6	
mass	inding	rs6						13		999	
index	globulin	682				3378	0.6730	15	0.0021	9e-	461
(BMI)	levels	438	C	T	1	4146	81	86	0047	10	460
	Sex							-0.			
Body	hormone-b							01		9.7	
mass	inding	rs6						46		994	
index	globulin	705				5532	0.3759	16	0.0020	1e-	461
(BMI)	levels	567	C	T	2	0173	6	8	4919	13	460
	Sex										
Body	hormone-b							0.0		3.8	
mass	inding	rs6				1001		11		999	
index	globulin	707				2303	0.7036	94	0.0021	6e-	461
(BMI)	levels	827	G	A	2	0	27	37	7332	08	460
	Sex							-0.			
Body	hormone-b							01			
mass	inding	rs6						16			
index	globulin	710				2395	0.3481	83	0.0020	1.6e	461
(BMI)	levels	091	G	C	2	97	74	5	6707	-08	460
	Sex							-0.			
Body	hormone-b							01		2.1	
mass	inding	rs6						35		998	
index	globulin	713				4029	0.4018	73	0.0020	9e-	461
(BMI)	levels	781	C	G	2	1940	82	6	2799	11	460
	Sex										
Body	hormone-b							0.0		3.2	
mass	inding	rs6				2202		19		998	
index	globulin	725				0514	0.8476	10	0.0027	9e-	461
(BMI)	levels	931	T	C	2	6	58	46	4403	12	460
	Sex										
Body	hormone-b							0.0		4.4	
mass	inding	rs6						55		998	
index	globulin	744				6285	0.8282	46	0.0026	7e-	461
(BMI)	levels	646	G	A	2	04	99	84	1213	100	460
	Sex										
Body	hormone-b							0.0		3.2	
mass	inding	rs6						12		999	
index	globulin	752				8174	0.3168	52	0.0021	7e-	461
(BMI)	levels	979	A	G	2	1750	8	35	1721	09	460

	Sex											
Body	hormone-b	rs6						0.0		8.6		
mass	inding	760				1266		17		000		
index	globulin	900				4093	0.2836	08	0.0022	3e-	461	
(BMI)	levels	8	C	T	10	6	14	63	021	15	460	
	Sex							-0.				
Body	hormone-b							01		8.1		
mass	inding	rs6						35		002		
index	globulin	769				6268	0.6638	75	0.0020	8e-	461	
(BMI)	levels	617	T	A	3	7746	6	4	8902	11	460	
	Sex											
Body	hormone-b							0.0		9.7		
mass	inding	rs6				1961		13		006		
index	globulin	774				1639	0.3581	30	0.0020	3e-	461	
(BMI)	levels	894	A	T	3	3	48	88	5674	11	460	
	Sex											
Body	hormone-b							0.0				
mass	inding	rs6						11				
index	globulin	777				6237	0.6167	61	0.0020	1e-	461	
(BMI)	levels	784	T	G	3	6645	8	25	2753	08	460	
	Sex							-0.				
Body	hormone-b							01		2.1		
mass	inding	rs6						15		999		
index	globulin	831				2025	0.6401	22	0.0020	9e-	461	
(BMI)	levels	088	A	G	4	7769	39	2	591	08	460	
	Sex											
Body	hormone-b							0.0		3.5		
mass	inding	rs6				1621		13		002		
index	globulin	843				3275	0.5078	08	0.0019	6e-	461	
(BMI)	levels	852	T	C	4	8	61	97	7607	11	460	
	Sex											
Body	hormone-b							-0.		4.7		
mass	inding	rs6						01		000		
index	globulin	909				9775	0.3268	46	0.0021	2e-	461	
(BMI)	levels	685	T	C	6	3952	09	12	1352	12	460	
	Sex											
Body	hormone-b							0.0				
mass	inding	rs6				1427		14				
index	globulin	922				0348	0.1898	88	0.0025	3.2e	461	
(BMI)	levels	607	G	A	6	3	47	48	1479	-09	460	
Body	Sex							0.0		1.8		
mass	hormone-b	rs6						18		001		
index	inding	938				9842	0.6014	22	0.0020	1e-	461	
(BMI)	globulin	973	C	T	6	1721	56	23	1872	19	460	

	levels										
	Sex										
Body	hormone-b							0.0		2.3	
mass	inding	rs6						15		000	
index	globulin	950				1270	0.7950	52	0.0024	1e-	461
(BMI)	levels	388	A	G	7	699	86	19	4806	10	460
	Sex							-0.			
Body	hormone-b							01			
mass	inding	rs6				1134		59			
index	globulin	962				5218	0.5560	56	0.0019	1e-	461
(BMI)	levels	980	C	A	7	3	19	8	8814	15	460
	Sex							-0.			
Body	hormone-b							01		9.6	
mass	inding	rs6						28		006	
index	globulin	981				3513	0.5435	51	0.0019	4e-	461
(BMI)	levels	47	G	A	5	485	96	2	8514	11	460
	Sex							-0.			
Body	hormone-b							01		6.6	
mass	inding	rs7				1090		38		999	
index	globulin	024				7207	0.7791	17	0.0023	3e-	461
(BMI)	levels	334	G	T	9	5	4	7	8338	09	460
	Sex							-0.			
Body	hormone-b							0.0		3.1	
mass	inding	rs7				1294		14		002	
index	globulin	027				0829	0.6526	54	0.0020	7e-	461
(BMI)	levels	304	T	C	9	0	61	92	8703	12	460
	Sex							-0.			
Body	hormone-b							01			
mass	inding	rs7						29			
index	globulin	034				3708	0.3738	82	0.0020	2.1e	461
(BMI)	levels	554	G	A	9	1301	25	6	4252	-10	460
	Sex							-0.			
Body	hormone-b							0.0		1.6	
mass	inding	rs7						14		998	
index	globulin	040				8977	0.4550	63	0.0019	1e-	461
(BMI)	levels	61	C	T	12	1903	5	74	8552	13	460
	Sex							-0.			
Body	hormone-b							01		5.9	
mass	inding	rs7						23		999	
index	globulin	070				6184	0.3279	27	0.0021	8e-	461
(BMI)	levels	670	T	C	10	2645	23	4	1928	09	460
Body	Sex	rs7				1329		-0.		6.1	
mass	hormone-b	081				5569	0.2057	01	0.0024	999	461
index	inding	254	C	T	10	6	39	42	5216	8e-	460

(BMI)	globulin							51		09	
	levels							6			
	Sex										
Body	hormone-b							0.0		1.5	
mass	inding	rs7						25		000	
index	globulin	124				4752	0.4083	69	0.0020	3e-	461
(BMI)	levels	681	A	C	11	9947	53	77	063	37	460
	Sex										
Body	hormone-b							0.0		1.3	
mass	inding	rs7						29		999	
index	globulin	132				5026	0.3844	79	0.0020	1e-	461
(BMI)	levels	908	A	G	12	3148	58	04	3363	48	460
	Sex										
Body	hormone-b	rs7						0.0		6.7	
mass	inding	149						27		003	
index	globulin	503				3397	0.0769	79	0.0037	9e-	461
(BMI)	levels	8	A	G	10	1383	36	98	0969	14	460
	Sex							-0.			
Body	hormone-b							01		6.0	
mass	inding	rs7						49		006	
index	globulin	201				4077	0.3542	78	0.0020	7e-	461
(BMI)	levels	895	A	G	16	23	91	1	7999	13	460
	Sex										
Body	hormone-b							0.0		1.7	
mass	inding	rs7						13		999	
index	globulin	206				8287	0.3216	51	0.0021	9e-	461
(BMI)	levels	608	G	C	16	2628	2	22	1797	10	460
	Sex										
Body	hormone-b							0.0		2.9	
mass	inding	rs7						18		000	
index	globulin	218				6583	0.1973	95	0.0024	1e-	461
(BMI)	levels	014	C	T	17	2016	05	24	9216	14	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs7						12			
index	globulin	232				3125	0.5826	34	0.0020	8e-	461
(BMI)	levels	171	T	G	18	1221	3	04	0821	10	460
	Sex										
Body	hormone-b							0.0		2.9	
mass	inding	rs7						11		999	
index	globulin	236				2161	0.4315	12	0.0020	9e-	461
(BMI)	levels	72	T	C	12	561	1	73	0698	08	460
Body	Sex	rs7				4756	0.5960	0.0	0.0020	6.5	461
mass	hormone-b	259	C	T	19	2509	62	21	3628	993	460

index	inding	070						86		3e-	
(BMI)	globulin							9		27	
	levels										
	Sex										
Body	hormone-b	rs7						-0.			
mass	inding	263						02			
index	globulin	482				1601	0.2598	12	0.0022	1e-	461
(BMI)	levels	6	A	G	1	052	58	77	8001	20	460
	Sex										
Body	hormone-b	rs7						0.0			
mass	inding	264						17			
index	globulin	937				8060	0.1431	80	0.0028	6.1e	461
(BMI)	levels	3	C	T	4	9966	88	62	7805	-10	460
	Sex										
Body	hormone-b	rs7						0.0		9.8	
mass	inding	267				1188		21		992	
index	globulin	394				8437	0.1070	88	0.0032	e-1	461
(BMI)	levels	7	G	A	8	9	31	64	1496	2	460
	Sex										
Body	hormone-b	rs7						0.0		1.5	
mass	inding	289						38		000	
index	globulin	291				5081	0.1722	77	0.0026	3e-	461
(BMI)	levels	0	T	G	6	6887	32	98	2053	49	460
	Sex							-0.			
Body	hormone-b	rs7						02		7.5	
mass	inding	297						32		997	
index	globulin	698				4050	0.1901	25	0.0025	6e-	461
(BMI)	levels	6	A	G	19	424	23	7	4712	20	460
	Sex										
Body	hormone-b	rs7						-0.		4.9	
mass	inding	302						02		000	
index	globulin	672				3101	0.1535	23	0.0027	4e-	461
(BMI)	levels	5	A	C	19	7686	34	18	5052	16	460
	Sex							-0.			
Body	hormone-b	rs7						03		7.7	
mass	inding	305				1858		03		001	
index	globulin	203				2846	0.1849	92	0.0025	6e-	461
(BMI)	levels	3	C	T	3	5	3	9	4634	33	460
	Sex							-0.			
Body	hormone-b							01		4.0	
mass	inding	rs7						12		999	
index	globulin	306				6810	0.6217	75	0.0020	6e-	461
(BMI)	levels	534	A	G	12	7914	12	4	5437	08	460
Body	Sex	rs7	C	T	7	7157	0.2051	-0.	0.0024	3.0	461

mass	hormone-b	312				9606	44	01	548	999	460
index	inding	439						54		9e-	
(BMI)	globulin	6						47		10	
	levels							2			
	Sex							-0.			
Body	hormone-b	rs7						02		3.5	
mass	inding	314						66		999	
index	globulin	287				5119	0.1922	93	0.0025	8e-	461
(BMI)	levels	9	T	C	20	5932	97	6	2257	26	460
	Sex							-0.			
Body	hormone-b	rs7						01		2.1	
mass	inding	319				1082		77		998	
index	globulin	373				9438	0.2439	16	0.0023	9e-	461
(BMI)	levels	6	G	A	12	1	34	5	2002	14	460
	Sex							-0.			
Body	hormone-b	rs7						02		1.6	
mass	inding	321						25		998	
index	globulin	348				2848	0.1412	76	0.0028	1e-	461
(BMI)	levels	4	T	A	4	9339	36	6	364	15	460
	Sex							-0.			
Body	hormone-b							01		6.5	
mass	inding	rs7						43		993	
index	globulin	331				9923	0.2852	70	0.0022	3e-	461
(BMI)	levels	420	A	G	13	6471	76	2	0081	11	460
	Sex										
Body	hormone-b							0.0		1.1	
mass	inding	rs7						14		000	
index	globulin	357				9220	0.5001	11	0.0019	2e-	461
(BMI)	levels	754	G	A	9	7308	39	46	8362	12	460
	Sex										
Body	hormone-b	rs7						0.0		1.2	
mass	inding	360						17		999	
index	globulin	154				1854	0.1145	73	0.0031	9e-	461
(BMI)	levels	8	T	C	10	9889	27	54	1639	08	460
	Sex										
Body	hormone-b	rs7						0.0			
mass	inding	398				2122		13			
index	globulin	543				9924	0.3072	66	0.0021	1.7e	461
(BMI)	levels	9	C	A	2	9	99	16	4059	-10	460
	Sex							-0.			
Body	hormone-b							02		3.1	
mass	inding	rs7						28		996	
index	globulin	442				8768	0.2140	16	0.0024	3e-	461
(BMI)	levels	885	G	C	5	2877	49	3	1251	21	460

	Sex											
Body	hormone-b	rs7						0.0		1.1		
mass	inding	1054						17		000		
index	globulin	452				6033	0.2819	61	0.0021	2e-	461	
(BMI)	levels	49	T	C	2	3	45	18	9724	15	460	
	Sex							-0.				
Body	hormone-b	rs7						01				
mass	inding	475				1147		96				
index	globulin	028				4446	0.0866	38	0.0035	2.5e	461	
(BMI)	levels	2	C	T	7	3	23	2	2561	-08	460	
	Sex											
Body	hormone-b	rs7						0.0		2.2		
mass	inding	498				2888	0.3996	26		998		
index	globulin	498				2888	0.3996	86	0.0020	5e-	461	
(BMI)	levels	665	G	A	16	3241	59	46	1997	40	460	
	Sex											
Body	hormone-b	rs7						0.0		2.5		
mass	inding	516				2103		12		999		
index	globulin	516				0133	0.3999	00	0.0020	8e-	461	
(BMI)	levels	554	T	C	1	1	41	66	1565	09	460	
	Sex											
Body	hormone-b	rs7						0.0		1.6		
mass	inding	519				6643	0.5283	14		998		
index	globulin	519				6643	0.5283	00	0.0019	1e-	461	
(BMI)	levels	259	A	G	1	4743	6	28	8381	12	460	
	Sex											
Body	hormone-b	rs7						0.0		1.5		
mass	inding	546				4230	0.8865	21		000		
index	globulin	546				4230	0.8865	99	0.0031	3e-	461	
(BMI)	levels	35	G	C	3	5131	82	25	093	12	460	
	Sex							-0.				
Body	hormone-b	rs7						01		8.9		
mass	inding	549						80		002		
index	globulin	950				2614	0.2201	33	0.0024	e-1	461	
(BMI)	levels	3	T	C	6	5217	01	1	1845	4	460	
	Sex							-0.				
Body	hormone-b	rs7						01		1.8		
mass	inding	571				6169	0.2605	58		001		
index	globulin	571				6169	0.2605	91	0.0022	1e-	461	
(BMI)	levels	496	G	A	2	351	45	6	5454	12	460	
Body	Sex	rs7						-0.				
mass	hormone-b	618				1143		02				
index	inding	389				7193	0.0807	19	0.0036	1.7e	461	
(BMI)	globulin	4	C	T	3	9	47	58	4437	-09	460	

	levels							4			
	Sex										
Body	hormone-b							0.0		2.1	
mass	inding	rs7						13		998	
index	globulin	619				2511	0.5886	45	0.0020	9e-	461
(BMI)	levels	139	A	T	3	0415	16	37	1061	11	460
	Sex							-0.			
Body	hormone-b	rs7						01		1.2	
mass	inding	670				1951		64		000	
index	globulin	251				4829	0.2106	86	0.0024	5e-	461
(BMI)	levels	4	G	C	1	6	23	2	3278	11	460
	Sex							-0.			
Body	hormone-b							01		8.1	
mass	inding	rs7				1801		22		999	
index	globulin	683				6790	0.5572	46	0.0019	3e-	461
(BMI)	levels	836	A	G	4	6	15	9	9427	10	460
	Sex							-0.			
Body	hormone-b							01		1.3	
mass	inding	rs7				1535		59		999	
index	globulin	708				4346	0.5723	32	0.0019	1e-	461
(BMI)	levels	584	G	A	5	6	44	1	949	15	460
	Sex							-0.			
Body	hormone-b							01		1.2	
mass	inding	rs7						35		999	
index	globulin	761				7035	0.2198	91	0.0023	9e-	461
(BMI)	levels	673	A	T	6	7368	8	5	901	08	460
	Sex										
Body	hormone-b							0.0		9.0	
mass	inding	rs7				1533		14		991	
index	globulin	762				8022	0.2854	90	0.0021	3e-	461
(BMI)	levels	794	G	A	6	8	08	77	8606	12	460
	Sex										
Body	hormone-b							0.0		1.4	
mass	inding	rs7						12		000	
index	globulin	776				7374	0.2875	37	0.0021	1e-	461
(BMI)	levels	021	A	G	6	2152	99	01	8251	08	460
	Sex										
Body	hormone-b							0.0		1.7	
mass	inding	rs7				1374		12		999	
index	globulin	802				3592	0.2885	27	0.0021	9e-	461
(BMI)	levels	342	G	T	7	5	66	48	8145	08	460
Body	Sex	rs7						0.0		1.8	
mass	hormone-b	805				7812	0.5022	13	0.0019	001	461
index	inding	441	T	C	7	1458	61	37	8884	1e-	460

(BMI)	globulin							47		11	
	levels										
	Sex										
Body	hormone-b							0.0		1.9	
mass	inding	rs7						17		998	
index	globulin	842				5339	0.8125	93	0.0025	6e-	461
(BMI)	levels	57	C	T	18	7199	41	15	4968	12	460
	Sex										
Body	hormone-b	rs7						-0.		1.8	
mass	inding	860						03		001	
index	globulin	581				8363	0.0540	27	0.0044	1e-	461
(BMI)	levels	1	C	A	3	1491	5	37	4673	13	460
	Sex										
Body	hormone-b							0.0		2.2	
mass	inding	rs7						14		998	
index	globulin	893				1675	0.6658	05	0.0021	5e-	461
(BMI)	levels	571	T	G	10	0129	97	53	0152	11	460
	Sex										
Body	hormone-b							0.0		3.2	
mass	inding	rs7				1189		14		998	
index	globulin	925				4159	0.3961	72	0.0020	9e-	461
(BMI)	levels	100	A	G	11	6	17	5	221	13	460
	Sex										
Body	hormone-b							0.0		2.1	
mass	inding	rs7				1307		15		998	
index	globulin	944				9569	0.5097	76	0.0019	9e-	461
(BMI)	levels	782	G	T	11	8	84	06	8748	15	460
	Sex							-0.			
Body	hormone-b							01		8.3	
mass	inding	rs7						82		004	
index	globulin	947				6409	0.1634	78	0.0026	2e-	461
(BMI)	levels	143	A	G	11	0422	83	2	7522	12	460
	Sex										
Body	hormone-b	rs7						0.0			
mass	inding	978				1049		23			
index	globulin	096				5249	0.0774	68	0.0036	1.5e	461
(BMI)	levels	3	T	C	10	9	28	03	9591	-10	460
	Sex										
Body	hormone-b							0.0		3.5	
mass	inding	rs7						14		999	
index	globulin	996				9701	0.4493	55	0.0020	8e-	461
(BMI)	levels	639	A	G	13	9090	54	59	0245	13	460
Body	Sex	rs8				5286	0.0703	0.0	0.0038	3.7	461
mass	hormone-b	013	T	A	17	277	24	21	8113	999	460

index	inding	527						33		7e-	
(BMI)	globulin	4						9		08	
	levels										
	Sex										
Body	hormone-b							0.0			
mass	inding	rs8						25			
index	globulin	020				7993	0.2204	10	0.0023	1e-	461
(BMI)	levels	365	A	T	14	7216	64	68	9517	25	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs8						15			
index	globulin	024				3583	0.8482	63	0.0027	1.6e	461
(BMI)	levels	137	T	A	15	7297	07	29	6778	-08	460
	Sex							-0.			
Body	hormone-b							01		1.6	
mass	inding	rs8						46		998	
index	globulin	025				9527	0.6459	55	0.0020	1e-	461
(BMI)	levels	516	G	T	15	1872	28	8	7578	12	460
	Sex										
Body	hormone-b							0.0		3.8	
mass	inding	rs8						12		999	
index	globulin	089				6922	0.3686	98	0.0020	6e-	461
(BMI)	levels	514	A	T	18	4478	8	8	7588	10	460
	Sex										
Body	hormone-b							-0.		1.8	
mass	inding	rs8						02		001	
index	globulin	112				1881	0.4003	06	0.0020	1e-	461
(BMI)	levels	818	G	A	19	2785	29	96	2712	24	460
	Sex										
Body	hormone-b							-0.		2.3	
mass	inding	rs8						01		999	
index	globulin	132				4028	0.3130	53	0.0021	4e-	461
(BMI)	levels	491	A	G	21	8577	23	75	9317	12	460
	Sex										
Body	hormone-b							-0.			
mass	inding	rs8				1902		01			
index	globulin	151				9472	0.5631	64	0.0019	1e-	461
(BMI)	levels	63	C	T	1	6	48	85	8582	16	460
	Sex							-0.			
Body	hormone-b							01		1.4	
mass	inding	rs8						31		000	
index	globulin	520				1709	0.7585	20	0.0023	1e-	461
(BMI)	levels	42	G	A	20	1233	75	7	1309	08	460
Body	Sex	rs8	T	C	16	6965	0.4096	-0.	0.0020	1.2	461

mass	hormone-b	623				1866	5	02	1345	000	460
index	inding	20						31		5e-	
(BMI)	globulin							70		30	
	levels							3			
	Sex							-0.			
Body	hormone-b							01		2.5	
mass	inding	rs9						84		999	
index	globulin	098				4198	0.1348	10	0.0029	8e-	461
(BMI)	levels	92	A	G	20	2698	17	5	1255	10	460
	Sex							-0.			
Body	hormone-b							01		1.2	
mass	inding	rs9						45		999	
index	globulin	239				6780	0.7831	76	0.0024	9e-	461
(BMI)	levels	94	G	A	4	2992	95	1	0219	09	460
	Sex										
Body	hormone-b							0.0		2.5	
mass	inding	rs9						26		999	
index	globulin	267				3188	0.0607	14	0.0041	8e-	461
(BMI)	levels	671	A	G	6	0480	33	9	3587	10	460
	Sex										
Body	hormone-b							-0.		8.6	
mass	inding	rs9						01		000	
index	globulin	291				6407	0.5148	42	0.0019	3e-	461
(BMI)	levels	822	T	C	5	6515	68	63	9464	13	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs9						14			
index	globulin	294				8343	0.4765	78	0.0019	1e-	461
(BMI)	levels	260	A	G	6	3228	59	2	8818	13	460
	Sex										
Body	hormone-b							0.0		2.5	
mass	inding	rs9						11		999	
index	globulin	349				4251	0.4106	18	0.0020	8e-	461
(BMI)	levels	235	T	C	6	6718	35	09	0924	08	460
	Sex							-0.			
Body	hormone-b							01		3.1	
mass	inding	rs9						61		996	
index	globulin	351				2694	0.5068	06	0.0019	3e-	461
(BMI)	levels	66	A	G	2	9366	05	6	7292	16	460
	Sex										
Body	hormone-b									4.3	
mass	inding	rs9						-0.		999	
index	globulin	463				9510	0.3389	01	0.0021	7e-	461
(BMI)	levels	175	T	C	6	030	58	15	0115	08	460

	Sex										
Body	hormone-b							0.0		1.1	
mass	inding	rs9				1543		18		000	
index	globulin	478				3318	0.1642	18	0.0026	2e-	461
(BMI)	levels	496	C	T	6	3	25	36	7493	11	460
	Sex										
Body	hormone-b							0.0		3.1	
mass	inding	rs9				1122		15		996	
index	globulin	515				1710	0.4477	10	0.0019	3e-	461
(BMI)	levels	446	G	A	13	8	09	51	9052	14	460
	Sex							-0.			
Body	hormone-b							01		1.5	
mass	inding	rs9				1119		41		000	
index	globulin	522				7021	0.5533	09	0.0019	3e-	461
(BMI)	levels	180	T	C	13	2	92	5	9325	12	460
	Sex							-0.			
Body	hormone-b							01		1.4	
mass	inding	rs9						35		000	
index	globulin	571				6747	0.3293	38	0.0021	1e-	461
(BMI)	levels	687	A	C	13	2713	63	8	094	10	460
	Sex							-0.			
Body	hormone-b							03			
mass	inding	rs9						61			
index	globulin	638				1464	0.9747	73	0.0063	1.2e	461
(BMI)	levels	713	G	A	7	5949	7	5	5399	-08	460
	Sex										
Body	hormone-b							0.0		5.5	
mass	inding	rs9						13		004	
index	globulin	673				7689	0.4909	03	0.0019	7e-	461
(BMI)	levels	839	G	A	16	5693	67	37	8783	11	460
	Sex										
Body	hormone-b							0.1		3.0	
mass	inding	rs9						58		999	
index	globulin	674				8019	0.0013	44	0.0286	9e-	461
(BMI)	levels	487	G	C	17	1995	38	5	171	08	460
	Sex										
Body	hormone-b							0.0			
mass	inding	rs9				1046		15			
index	globulin	830				3160	0.5824	48	0.0020	1e-	461
(BMI)	levels	592	A	C	3	3	21	49	0164	14	460
Body	Sex							-0.		4.6	
mass	hormone-b	rs9				1230		01		000	
index	inding	839				5123	0.3252	17	0.0021	2e-	461
(BMI)	globulin	081	A	G	3	0	32	01	4045	08	460

	levels											
	Sex											
Body	hormone-b							0.0		2.9		
mass	inding	rs9						29		000		
index	globulin	843				4992	0.5116	45	0.0019	1e-	461	
(BMI)	levels	653	C	T	3	0571	52	09	7538	50	460	
	Sex							-0.				
Body	hormone-b							01		9.6		
mass	inding	rs9						80		006		
index	globulin	876				8580	0.3753	47	0.0020	4e-	461	
(BMI)	levels	664	T	G	3	6313	89	8	4174	19	460	
	Sex											
Body	hormone-b							0.0		2.6		
mass	inding	rs9				1078		12		999		
index	globulin	888				5461	0.5380	00	0.0020	8e-	461	
(BMI)	levels	533	T	C	13	2	79	38	182	09	460	
	Sex											
Body	hormone-b							-0.		8.6		
mass	inding	rs9						02		000		
index	globulin	926				1994	0.1845	38	0.0025	3e-	461	
(BMI)	levels	784	C	T	16	1968	76	18	4677	21	460	
	Sex											
Body	hormone-b							0.0		9.4		
mass	inding	rs9						14		999		
index	globulin	951				5688	0.7673	42	0.0023	2e-	461	
(BMI)	levels	619	G	T	18	2326	69	31	5777	10	460	

Supplementary Table S4. Instruments for causal estimation from BioT level to BMI.

Exposure	Outcome	SNP	Effect allele	Other allele	Chromosome	Genetic position	Effect allele frequency	Beta	Standard error of beta	P-value	Sample size
Bioavailable testosterone levels	Body mass index (BMI)	rs10279715	G	A	7	40870935	0.46218	-0.021738	0.00306173	3.1e-13	178782
	Body mass index (BMI)	rs10738700	G	A	9	24973797	0.430636	-0.020481	0.0030877	5.6e-11	178782
	Body mass index (BMI)	rs10867084	C	T	9	174721	0.489079	0.0002263	0.00304395	6.7e-14	178782
	Body mass index (BMI)	rs10982156	A	T	9	11708806	0.069545	0.0004770	0.00622867	7e-14	178782
Bioavailable testosterone levels	Body mass index (BMI)	rs1112195	G	A	3	24085166	0.495419	-0.021875	0.00306001	2e-10	178782
	Body mass index (BMI)	rs1122176	C	G	4	10464106	0.05773	-0.02945	0.006598	5e-14	178782
	Body mass index (BMI)	rs1144929	C	T	4	70572301	0.11256	-0.02499	0.00483022	9e-08	178782
	Body mass index (BMI)	rs1145488	A	T	4	10470557	0.03578	-0.022806	0.00829446	3e-10	178782
Bioavailable testosterone levels	Body mass index (BMI)	rs105	G	A	4	1047	0.0119	-0.05	0.0146	2.8	178

ble	mass	152				7469	39	22	193	002	782
testostero	index	602				8		71		7e-	
ne levels	(BMI)	27						47		56	
Bioavaila	Body	rs1						0.0		5.9	
ble	mass	170						39		006	
testostero	index	337				4967	0.2696	65	0.0034	5e-	178
ne levels	(BMI)	6	T	C	22	8713	62	26	4869	32	782
Bioavaila	Body							0.0		2.2	
ble	mass	rs1						37		998	
testostero	index	264				3084	0.3523	94	0.0031	5e-	178
ne levels	(BMI)	332	C	G	6	5563	23	17	8829	25	782
Bioavaila	Body							0.0		1.3	
ble	mass	rs1						26		999	
testostero	index	272				6088	0.3866	76	0.0031	1e-	178
ne levels	(BMI)	131	C	T	14	6150	95	42	5783	17	782
								-0.			
Bioavaila	Body	rs1						05		6.8	
ble	mass	279						60		992	
testostero	index	648				9413	0.1768	93	0.0039	2e-	178
ne levels	(BMI)	8	A	C	11	1557	83	6	8259	46	782
Bioavaila	Body	rs1						0.0		1.9	
ble	mass	294						40		998	
testostero	index	464				7492	0.1987	87	0.0038	6e-	178
ne levels	(BMI)	9	G	A	17	228	32	54	2485	27	782
								-0.			
Bioavaila	Body	rs1						03		2.7	
ble	mass	302						08		002	
testostero	index	847				1171	0.5535	99	0.0030	3e-	178
ne levels	(BMI)	9	T	G	2	2075	1	4	7167	24	782
								-0.			
Bioavaila	Body	rs1						03		8.8	
ble	mass	306						20		003	
testostero	index	546				6166	0.1308	51	0.0045	5e-	178
ne levels	(BMI)	3	A	G	3	2996	52	9	199	13	782
Bioavaila	Body							0.0		4.9	
ble	mass	rs1						18		000	
testostero	index	383				8905	0.4242	98	0.0030	4e-	178
ne levels	(BMI)	5	A	C	15	6040	08	02	8562	10	782
Bioavaila	Body	rs1						-0.		8.6	
ble	mass	453						07		996	
testostero	index	599				7850	0.0241	76	0.0106	1e-	178
ne levels	(BMI)	38	C	G	7	4431	11	46	751	15	782
Bioavaila	Body	rs1				2937	0.0185	-0.	0.0113	1e-	178
ble	mass	461	T	C	11	8978	66	08	221	15	782

testostero	index	154							78			
ne levels	(BMI)	16							74			
									2			
Bioavaila	Body	rs1							0.0		7.5	
ble	mass	770							44		006	
testostero	index	388				5153	0.2552	27	0.0035	7e-	178	
ne levels	(BMI)	3	C	T	15	0097	65	84	0043	40	782	
									-0.			
Bioavaila	Body								05		6.4	
ble	mass	rs2				2346		02			003	
testostero	index	011				2760	0.0796	52	0.0056	e-2	178	
ne levels	(BMI)	425	G	T	2	8	15	4	5644	0	782	
									-0.			
Bioavaila	Body								02		2.6	
ble	mass	rs2				1005		27			001	
testostero	index	038				5912	0.5503	85	0.0030	6e-	178	
ne levels	(BMI)	695	A	C	13	3	27	4	8986	15	782	
									-0.			
Bioavaila	Body								03		1.6	
ble	mass	rs2				1089		09			998	
testostero	index	090				6708	0.3159	32	0.0032	1e-	178	
ne levels	(BMI)	409	A	C	9	8	43	1	844	21	782	
Bioavaila	Body								0.0		9.0	
ble	mass	rs2				1267		20			991	
testostero	index	184				6099		24	0.0030	3e-	178	
ne levels	(BMI)	968	C	T	6	4	0.451	31	5595	11	782	
Bioavaila	Body								0.0		8.3	
ble	mass	rs2							33		004	
testostero	index	631				2111	0.1036	10	0.0050	2e-	178	
ne levels	(BMI)	864	G	A	8	2084	25	54	1603	12	782	
Bioavaila	Body								0.0		5.4	
ble	mass	rs2							37		000	
testostero	index	764				2006	0.3340	04	0.0032	8e-	178	
ne levels	(BMI)	772	A	T	16	0653	5	36	33	33	782	
Bioavaila	Body								0.0			
ble	mass	rs2				1659		19			3.2	
testostero	index	961				3204	0.4686	11	0.0030	e-1	178	
ne levels	(BMI)	853	C	T	5	8	71	52	5362	0	782	
									-0.			
Bioavaila	Body								01			
ble	mass	rs3				1523		85				
testostero	index	020				4812	0.3271	09	0.0032	1e-	178	
ne levels	(BMI)	421	A	G	6	2	94	9	529	08	782	
Bioavaila	Body	rs3	C	T	3	1072	0.0756	-0.	0.0059	2.1	178	

ble	mass	404				3510	71	03	1069	999	782
testostero	index	077				9		48		9e-	
ne levels	(BMI)	9						25		09	
								2			
								-0.			
Bioavaila	Body	rs3						01		4.2	
ble	mass	419						98		000	
testostero	index	278				1741	0.3096	15	0.0033	1e-	178
ne levels	(BMI)	8	A	T	6	6258	74	5	2811	09	782
Bioavaila	Body	rs3						0.0		4.7	
ble	mass	573				2041		40		000	
testostero	index	731				6153	0.2456	23	0.0035	2e-	178
ne levels	(BMI)	6	T	C	1	4	9	93	4903	32	782
								-0.			
Bioavaila	Body							04			
ble	mass	rs3				1127		33			
testostero	index	742				2519	0.0966	21	0.0052	1e-	178
ne levels	(BMI)	223	C	T	13	6	04	7	1873	16	782
Bioavaila	Body							0.0		3.5	
ble	mass	rs4						32		999	
testostero	index	562				6170	0.7569	35	0.0035	8e-	178
ne levels	(BMI)	360	G	A	8	4817	47	26	5024	20	782
								-0.			
Bioavaila	Body							02		3.9	
ble	mass	rs4				1045		34		003	
testostero	index	919				9224	0.2896	10	0.0033	2e-	178
ne levels	(BMI)	686	C	A	10	9	88	7	5461	13	782
Bioavaila	Body							0.0		5.8	
ble	mass	rs5				1185		18		000	
testostero	index	035				9074	0.4503	30	0.0030	3e-	178
ne levels	(BMI)	42	G	A	11	3	11	01	761	10	782
Bioavaila	Body	rs5						0.0			
ble	mass	579				1461		17		1.5	
testostero	index	585				2350	0.3294	99	0.0032	e-0	178
ne levels	(BMI)	8	C	T	7	0	14	44	98	8	782
Bioavaila	Body	rs5						0.0			
ble	mass	760						53		2.1	
testostero	index	648				3579	0.0266	29	0.0095	e-0	178
ne levels	(BMI)	6	A	G	14	6645	98	39	1357	8	782
Bioavaila	Body	rs5						0.0		2.3	
ble	mass	887						22		999	
testostero	index	955				4409	0.2298	57	0.0036	9e-	178
ne levels	(BMI)	8	C	T	17	5467	92	98	1103	09	782
Bioavaila	Body	rs6	G	T	16	7392	0.2126	0.0	0.0037	1.6	178

ble	mass	204					2719	19	23	2844	e-1	782
testostero	index	153							33		0	
ne levels	(BMI)	2							61			
									-0.			
Bioavaila	Body	rs6							02			
ble	mass	246							32		1.6	
testostero	index	514					7288	0.1975	16	0.0038	e-0	178
ne levels	(BMI)	4	C	T	7		3106	82	7	2645	9	782
									-0.			
Bioavaila	Body								02		2.9	
ble	mass	rs6					1309		61		000	
testostero	index	486					5220	0.4294	14	0.0030	1e-	178
ne levels	(BMI)	542	T	C	12		9	29	9	9397	18	782
									-0.			
Bioavaila	Body								01			
ble	mass	rs6							74		3.2	
testostero	index	600					6998	0.4579	48	0.0030	e-0	178
ne levels	(BMI)	895	C	T	4		3412	94	8	472	9	782
Bioavaila	Body								0.0		1.2	
ble	mass	rs6					1804		32		000	
testostero	index	718					9792	0.2747	24	0.0034	5e-	178
ne levels	(BMI)	154	T	C	2		3	55	55	0933	22	782
									-0.			
Bioavaila	Body								01			
ble	mass	rs7					1016		74		3.2	
testostero	index	089					9315	0.3934	18	0.0031	e-0	178
ne levels	(BMI)	031	G	T	10		5	77	8	234	8	782
									-0.			
Bioavaila	Body								02		3.6	
ble	mass	rs7							13		999	
testostero	index	147					5378	0.3732	18	0.0031	9e-	178
ne levels	(BMI)	86	A	G	3		9022	37	2	4574	13	782
Bioavaila	Body	rs7							0.0			
ble	mass	151					1632		24		1.5	
testostero	index	925					5183	0.1668	03	0.0041	e-0	178
ne levels	(BMI)	1	A	G	1		3	65	97	4069	9	782
									-0.			
Bioavaila	Body								03		4.0	
ble	mass	rs7							17		003	
testostero	index	265					3352	0.1788	21	0.0040	7e-	178
ne levels	(BMI)	992	A	G	20		5407	41	7	2147	16	782
Bioavaila	Body	rs7							-0.		1.2	
ble	mass	454					1124	0.2813	02	0.0033	e-1	178
testostero	index	86	T	C	9		2155	97	13	8763	0	782

ne levels	(BMI)							05			
								4			
								-0.			
Bioavaila	Body							01		1.7	
ble	mass	rs7						71		999	
testostero	index	454				5272	0.5715	98	0.0030	9e-	178
ne levels	(BMI)	964	C	T	6	8059	86	3	8619	08	782
Bioavaila	Body							0.0		3.8	
ble	mass	rs7						50		001	
testostero	index	679				2202	0.0949	16	0.0053	4e-	178
ne levels	(BMI)	843	G	C	4	8079	82	14	3198	22	782
Bioavaila	Body							0.0		5.8	
ble	mass	rs7						17		000	
testostero	index	857				1957	0.4753	31	0.0030	3e-	178
ne levels	(BMI)	865	A	G	9	974	48	8	6171	09	782
Bioavaila	Body							0.0		6.2	
ble	mass	rs7						61		001	
testostero	index	912				6726	0.4155	19	0.0030	2e-	178
ne levels	(BMI)	521	C	T	10	2089	88	9	8282	94	782
								-0.			
Bioavaila	Body							02		1.1	
ble	mass	rs7				1250		40		000	
testostero	index	928				9522	0.7217	24	0.0033	2e-	178
ne levels	(BMI)	369	T	C	11	1	98	8	9392	13	782
								-0.			
Bioavaila	Body							02			
ble	mass	rs8						38			
testostero	index	076				7561	0.7041	70	0.0033	1e-	178
ne levels	(BMI)	703	T	C	17	2643	35	9	3901	12	782
Bioavaila	Body							0.0		2.4	
ble	mass	rs9						40		997	
testostero	index	122				7722	0.3433	19	0.0032	7e-	178
ne levels	(BMI)	02	C	G	9	5603	28	86	0718	38	782
								-0.			
Bioavaila	Body							04		2.0	
ble	mass	rs9				1053		87		999	
testostero	index	322				6959		09	0.0032	1e-	178
ne levels	(BMI)	822	T	C	6	8	0.3215	2	5272	52	782
								-0.			
Bioavaila	Body							03		3.1	
ble	mass	rs9				1356		36		002	
testostero	index	507				8054	0.1373	83	0.0044	7e-	178
ne levels	(BMI)	16	G	A	5	0	81	3	2472	14	782
Bioavaila	Body	rs9	T	G	3	2880	0.7208	0.0	0.0033	4.1	178

ble	mass	824				7441	96	25	9312	001	782
testostero	index	196						98		5e-	
ne levels	(BMI)							6		16	
Bioavaila	Body							0.0		2.8	
ble	mass	rs9						55		002	
testostero	index	986				1501	0.5068	60	0.0030	7e-	178
ne levels	(BMI)	829	A	G	7	9259	65	73	5395	76	782

Supplementary Table S5. Instruments for causal estimation from estradiol level to BMI.

Exp osur e	Outco me	SN P	Eff ect alle le	Oth er alle le	Chr omo somes	Gene tic positi on	Effect allele freque ncy	Bet a	Standa rd error of beta	Pva lue	Sa mpl e size
Estra diol level s	Body mass index (BMI)	rs10 006 452	C	T	4	6997 7808	0.48021	-0.0 072 809 8	0.00084 4823	5.3 002 9e- 18	206 927
Estra diol level s	Body mass index (BMI)	rs10 491 431	A	C	5	3596 8000	0.141	0.00 774 443	0.00121 717	1.7 999 9e- 10	206 927
Estra diol level s	Body mass index (BMI)	rs11 288 119 6	G	C	2	3198 2811	0.03921 2	0.02 495 18	0.00219 839	5.6 001 5e- 30	206 927
Estra diol level s	Body mass index (BMI)	rs11 782 655 8	T	C	22	4677 0756	0.03397 1	0.01 363 75	0.00243 043	2.6 999 8e- 08	206 927
Estra diol level s	Body mass index (BMI)	rs25 472 34	C	T	19	4838 3906	0.83478 1	-0.0 076 012 2	0.00113 891	2.7 002 3e- 11	206 927
Estra diol level s	Body mass index (BMI)	rs34 019 140	A	G	14	1065 2750 0	0.43574 8	-0.0 116 61	0.00086 2566	6.8 992 2e- 42	206 927
Estra diol level s	Body mass index (BMI)	rs37 515 91	G	A	15	5160 6710	0.16693 1	0.00 777 66	0.00113 687	6.5 993 3e- 12	206 927
Estra diol level s	Body mass index (BMI)	rs56 196 860	A	C	12	2908 330	0.03149 2	0.02 090 11	0.00241 92	2.6 001 6e- 18	206 927
Estra diol level s	Body mass index (BMI)	rs65 715 2	A	C	9	1361 3926 5	0.33886 6	-0.0 083 530 2	0.00089 229	5.5 004 7e- 21	206 927
Estra diol	Body mass	rs71 735	T	C	15	5153 3736	0.64871	0.01 585	0.00088 6215	3.5 999	206 927

level	index	95						26		8e-	
s	(BMI)									72	
Estra	Body									1.8	
diol	mass	rs72						0.00		001	
level	index	742				7537	0.55722	566	0.00085	1e-	206
s	(BMI)	8	C	T	17	792	1	325	2078	11	927

Supplementary Table S6. Instruments for causal estimation from SHBG level to BMI.

Exposure	Outcome	SNP	Effect allele	Other allele	Chromosome	Genetic position	Effect allele frequency	Beta	Standard error of beta	P-value	Sample size
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1002727	C	G	4	14898149	0.74126	-0.012553	0.00141198	1e-21	180726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1004166	C	T	5	12265022	0.50476	0.007527	0.00124541	3e-10	180726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1010718	T	C	8	59392737	0.663202	0.00124	0.00130257	7e-22	180726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1073768	A	G	1	19689482	0.23679	-0.010124	0.00144072	1e-12	180726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1086808	A	T	9	86626769	0.744477	-0.021327	0.00140815	3e-57	180726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1088158	A	G	9	13725607	0.238037	0.00133	0.00145058	7e-21	180726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1089527	G	A	11	10208494	0.340806	-0.009615	0.00130251	8.9e-5	180726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1107107	A	C	16	15148646	0.296081	0.00092	0.00135476	8.0e-001	180726

inding	index	525						234		8e-	
globulin	(BMI)	3						5		12	
levels											
Sex											
hormone-b	Body	rs1						-0.		4.6	
inding	mass	111				1028		007		000	
globulin	index	127				3812	0.7372	310	0.0013	2e-	180
levels	(BMI)	4	A	G	12	8	79	72	8631	08	726
Sex											
hormone-b	Body	rs1								2.8	
inding	mass	117				1709		0.0		002	
globulin	index	521				9489	0.0964	127	0.0020	7e-	180
levels	(BMI)	58	T	C	4	4	96	725	799	11	726
Sex											
hormone-b	Body	rs1								8.1	
inding	mass	119						0.0		997	
globulin	index	812				5001	0.0789	261	0.0022	4e-	180
levels	(BMI)	33	G	T	19	6479	84	638	7727	33	726
Sex											
hormone-b	Body	rs1								2.3	
inding	mass	120				1150		-0.		000	
globulin	index	359				4746	0.2318	008	0.0014	1e-	180
levels	(BMI)	22	T	C	13	4	57	812	6895	10	726
Sex											
hormone-b	Body	rs1						-0.		2.9	
inding	mass	132						014		000	
globulin	index	484				6610	0.0482	367	0.0029	1e-	180
levels	(BMI)	43	G	A	10	2542	94	4	4711	08	726
Sex											
hormone-b	Body	rs1						-0.		3.4	
inding	mass	141						087		994	
globulin	index	653				2702	0.0231	113	0.0040	5e-	180
levels	(BMI)	49	C	G	1	1913	58	6	8954	111	726
Sex											
hormone-b	Body	rs1						0.0		1.2	
inding	mass	156						095		000	
globulin	index	472				2178	0.2387	530	0.0014	5e-	180
levels	(BMI)	2	T	C	11	330	4	7	6515	13	726
Sex											
hormone-b	Body	rs1						0.0			
inding	mass	161				1117		086			
globulin	index	025				3412	0.2166	783	0.0014	2.1e	180
levels	(BMI)	6	T	C	12	1	65	8	9523	-09	726
Sex	Body	rs1	T	C	14	2487	0.4536	-0.	0.0012	1.3	180

hormone-b	mass	162					1926	47	012	4244	999	726
inding	index	179							749		1e-	
globulin	(BMI)	2									25	
levels												
Sex												
hormone-b	Body	rs1							0.0		1.2	
inding	mass	163					1147		098		999	
globulin	index	384					6704	0.1707	567	0.0017	9e-	180
levels	(BMI)	29	T	C	13	0	52		8	2794	09	726
Sex												
hormone-b	Body	rs1							-0.		2.1	
inding	mass	166							016		999	
globulin	index	624					3822	0.0473	332	0.0029	9e-	180
levels	(BMI)	5	A	G	19	9926	06		5	014	09	726
Sex												
hormone-b	Body	rs1							0.0		3.2	
inding	mass	173							076		999	
globulin	index	440					2388	0.2932	769	0.0013	7e-	180
levels	(BMI)	8	G	A	4	2519	56		7	4935	10	726
Sex												
hormone-b	Body	rs1							0.0		2.0	
inding	mass	173							082		999	
globulin	index	915					7292	0.4278	937	0.0012	1e-	180
levels	(BMI)	8	T	C	5	7292	11		9	4625	12	726
Sex												
hormone-b	Body	rs1							0.0		1.9	
inding	mass	174					1378		089		998	
globulin	index	381					0240	0.5600	364	0.0012	6e-	180
levels	(BMI)	0	T	C	5	4	69		6	4066	12	726
Sex												
hormone-b	Body	rs1									3.6	
inding	mass	176					1010		-0.		999	
globulin	index	641					3656	0.0121	051	0.0057	9e-	180
levels	(BMI)	77	T	C	12	2	1		561	3803	22	726
Sex												
hormone-b	Body	rs1							-0.			
inding	mass	177							013			
globulin	index	344					8106	0.0610	340	0.0026	1.2e	180
levels	(BMI)	86	T	C	8	1523	81		1	1459	-08	726
Sex												
hormone-b	Body	rs1									4.7	
inding	mass	179							0.0		000	
globulin	index	218					8147	0.0665	210	0.0025	2e-	180
levels	(BMI)	73	G	A	8	3835	15		22	0814	18	726

Sex												
hormone-b	Body	rs1										3.6
inding	mass	180						0.0				999
globulin	index	370				2120	0.0404	222	0.0031	9e-	180	
levels	(BMI)	27	T	A	12	3424	59	618	3784	13	726	
Sex												
hormone-b	Body	rs1										1.9
inding	mass	185						-0.				002
globulin	index	692				9622	0.4488	011	0.0012	e-2	180	
levels	(BMI)	6	A	G	15	3649	29	587	4664	2	726	
Sex												
hormone-b	Body	rs1										
inding	mass	187						0.0				
globulin	index	030				7617	0.7805	526	0.0014	1e-	180	
levels	(BMI)	7	G	A	17	787	06	994	5305	200	726	
Sex												
hormone-b	Body	rs1										6.2
inding	mass	213				1498		0.0				994
globulin	index	813				4430	0.0865	152	0.0022	1e-	180	
levels	(BMI)	6	A	T	1	5	96	389	0676	14	726	
Sex												
hormone-b	Body							-0.				6.2
inding	mass	rs1						011				994
globulin	index	229				8156	0.7315	466	0.0013	1e-	180	
levels	(BMI)	492	C	T	7	4122	18	9	9655	18	726	
Sex												
hormone-b	Body	rs1						-0.				
inding	mass	260						007				
globulin	index	552				2207	0.2875	647	0.0013	1.2e	180	
levels	(BMI)	4	G	A	18	3551	2	97	7562	-08	726	
Sex												
hormone-b	Body	rs1										7.0
inding	mass	261						-0.				000
globulin	index	104				1429	0.1506	009	0.0017	3e-	180	
levels	(BMI)	6	A	G	19	1704	36	68	7915	09	726	
Sex												
hormone-b	Body	rs1						-0.				3.7
inding	mass	269				2200		007				999
globulin	index	445				1963	0.6752	064	0.0013	7e-	180	
levels	(BMI)	0	C	T	2	8	26	09	572	08	726	
Sex	Body	rs1						0.0				
hormone-b	mass	269				1694		081				
inding	index	630				8127	0.2656	310	0.0013	1.7e	180	
globulin	(BMI)	4	G	C	3	1	45	9	9236	-09	726	

levels											
Sex											
hormone-b	Body	rs1								6.0	
inding	mass	279						0.0		995	
globulin	index	770				6556	0.2345	120	0.0014	8e-	180
levels	(BMI)	6	A	G	11	1369	88	832	6721	17	726
Sex											
hormone-b	Body	rs1						0.0		7.4	
inding	mass	295						082		999	
globulin	index	308				5926	0.7950	792	0.0014	8e-	180
levels	(BMI)	7	T	C	17	5201	92	4	8126	09	726
Sex											
hormone-b	Body	rs1						0.0		9.5	
inding	mass	298				1485		079		999	
globulin	index	959				9123	0.2916	174	0.0013	7e-	180
levels	(BMI)	6	T	G	2	2	51	7	5721	10	726
Sex											
hormone-b	Body	rs1						-0.		1.2	
inding	mass	310						022		000	
globulin	index	821				3443	0.6172	994	0.0012	5e-	180
levels	(BMI)	8	G	A	4	931	54	3	7338	79	726
Sex											
hormone-b	Body	rs1						-0.		7.5	
inding	mass	315						020		997	
globulin	index	006				8820	0.4376	732	0.0012	6e-	180
levels	(BMI)	8	G	A	4	3828	37	9	3764	67	726
Sex											
hormone-b	Body	rs1						0.0		2.1	
inding	mass	337						082		999	
globulin	index	904				7425	0.2800	885	0.0013	9e-	180
levels	(BMI)	3	C	T	14	0126	09	2	9928	10	726
Sex											
hormone-b	Body	rs1								5.9	
inding	mass							0.0		006	
globulin	index	349				6953	0.4754	203	0.0012	5e-	180
levels	(BMI)	852	C	A	4	3217	8	7	3789	67	726
Sex											
hormone-b	Body	rs1								2.4	
inding	mass	385						0.0		997	
globulin	index	298				3247	0.0378	252	0.0032	7e-	180
levels	(BMI)	90	A	G	2	8354	48	972	7843	14	726
Sex	Body	rs1						-0.		3.5	
hormone-b	mass	386				5622	0.0768	014	0.0023	002	180
inding	index	115	C	T	5	8040	23	847	084	6e-	726

globulin levels	(BMI)	41						1		12	
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1 446 479 26	A	G	1	2354 6760 7	0.0873 56	0.0 123 175	0.0021 7179	1.4 000 1e-09	180 726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1 538 648	G	A	10	9482 0860	0.5031 97	-0.007 574 85	0.0012 2235	8.4 004 e-1 3	180 726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1 736 180	A	G	19	2796 021	0.2872 61	0.0 173 849	0.0013 6123	2.2 998 5e-41	180 726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1 745 29	C	T	11	6154 3961	0.3758 89	-0.007 748 39	0.0012 7239	4.2 000 1e-10	180 726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1 782 652	A	T	10	8107 4125	0.3806 25	-0.012 741 4	0.0012 7529	5.7 996 3e-27	180 726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1 801 689	C	A	17	6421 0580	0.0298 71	-0.033 033 43	0.0035 0564	1.8 001 1e-21	180 726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1 860 018	A	G	17	1384 6723	0.4432 51	-0.008 484 68	0.0011 9697	2.4 997 7e-13	180 726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1 792 66	A	G	17	7438 801	0.0139 34	-0.072 072 588	0.0051 5995	7.7 001 6e-47	180 726
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs1 871	G	A	12	2135 2315	0.1517 89	-0.032 032 1209	0.0017 004	4.6 180 726	

inding	index	395						502		5e-	
globulin	(BMI)							6		88	
levels											
Sex											
hormone-b	Body							-0.		9.6	
inding	mass	rs1				1164		008		006	
globulin	index	874				4509	0.4530	269	0.0012	4e-	180
levels	(BMI)	37	A	G	7	1	37	66	3975	14	726
Sex											
hormone-b	Body							-0.			
inding	mass	rs2						011			
globulin	index	045				2681	0.1946	850	0.0015	1e-	180
levels	(BMI)	345	G	A	1	8894	45	3	8288	13	726
Sex											
hormone-b	Body							0.0			
inding	mass	rs2						068			
globulin	index	073				3536	0.3105	332	0.0013	2.1e	180
levels	(BMI)	503	G	C	4	176	31	4	2685	-08	726
Sex											
hormone-b	Body							-0.		1.8	
inding	mass	rs2						008		001	
globulin	index	123				3522	0.6058	861	0.0012	1e-	180
levels	(BMI)	050	T	A	15	4247	2	87	6102	13	726
Sex											
hormone-b	Body							-0.		1.3	
inding	mass	rs2				2270		013		999	
globulin	index	138				9515	0.6481	068	0.0012	1e-	180
levels	(BMI)	161	C	T	2	9	5	5	8154	24	726
Sex											
hormone-b	Body									5.5	
inding	mass	rs2						0.0		004	
globulin	index	239				7301	0.3496	110	0.0013	7e-	180
levels	(BMI)	222	G	A	14	1885	19	595	0116	17	726
Sex											
hormone-b	Body							-0.		6.2	
inding	mass	rs2						014		994	
globulin	index	256				6571	0.8535	008	0.0017	1e-	180
levels	(BMI)	657	G	A	10	2613	07	8	3169	18	726
Sex											
hormone-b	Body							-0.		2.9	
inding	mass	rs2						011		000	
globulin	index	259				9361	0.4769	886	0.0012	1e-	180
levels	(BMI)	305	A	G	10	5903	95	3	2291	22	726
Sex	Body	rs2	A	G	1	1710	0.4166	-0.	0.0012	4.0	180

hormone-b	mass	266				7696	47	007	4201	999	726
inding	index	782				6		834		6e-	
globulin	(BMI)							93		10	
levels											
Sex											
hormone-b	Body									2.0	
inding	mass	rs2						0.0		999	
globulin	index	298				9524	0.3062	111	0.0013	1e-	180
levels	(BMI)	058	T	C	13	8566	44	891	408	18	726
Sex											
hormone-b	Body							-0.		4.3	
inding	mass	rs2				1054		006		000	
globulin	index	301				0150	0.2750	789	0.0013	2e-	180
levels	(BMI)	050	T	C	3	7	57	06	7554	08	726
Sex											
hormone-b	Body							-0.		4.0	
inding	mass	rs2						010		003	
globulin	index	330				2429	0.5660	038	0.0012	7e-	180
levels	(BMI)	649	A	G	22	5053	63	1	6705	17	726
Sex											
hormone-b	Body							-0.		1.2	
inding	mass	rs2						010		998	
globulin	index	351				1624	0.3875	194	0.0012	7e-	180
levels	(BMI)	958	A	C	11	8020	23	8	6369	17	726
Sex											
hormone-b	Body							-0.		3.0	
inding	mass	rs2						012		999	
globulin	index	575				1817	0.9197	000	0.0022	9e-	180
levels	(BMI)	368	G	T	16	397	07	2	7266	08	726
Sex											
hormone-b	Body							-0.		8.1	
inding	mass	rs2						012		000	
globulin	index	612				6621	0.0960	006	0.0020	9e-	180
levels	(BMI)	069	G	C	12	5292	31	6	917	09	726
Sex											
hormone-b	Body									3.4	
inding	mass	rs2				2209		0.0		001	
globulin	index	642				7002	0.7018	150	0.0013	7e-	180
levels	(BMI)	438	G	A	1	8	28	028	3645	31	726
Sex											
hormone-b	Body							0.0		7.8	
inding	mass	rs2				1019		090		995	
globulin	index	694				0780	0.6206	202	0.0012	1e-	180
levels	(BMI)	157	C	T	7	8	54	4	6663	14	726

Sex												
hormone-b	Body							-0.		5.3		
inding	mass	rs2				1456		011		002		
globulin	index	721				7701	0.5251	287	0.0012	9e-	180	
levels	(BMI)	195	C	T	8	1	3	5	38	21	726	
Sex												
hormone-b	Body	rs2								1.8		
inding	mass	877						0.0		999		
globulin	index	302				8807	0.1014	119	0.0020	8e-	180	
levels	(BMI)	7	A	G	4	6227	46	206	5087	10	726	
Sex												
hormone-b	Body							-0.		1.0		
inding	mass	rs2						009		999		
globulin	index	896				4647	0.1935	707	0.0015	9e-	180	
levels	(BMI)	906	C	T	16	417	87	72	6221	10	726	
Sex												
hormone-b	Body									3.8		
inding	mass	rs2						0.0		001		
globulin	index	905				2952	0.7051	140	0.0013	4e-	180	
levels	(BMI)	801	T	C	17	4974	21	121	0719	28	726	
Sex												
hormone-b	Body							-0.				
inding	mass	rs2						006				
globulin	index	924				6888	0.4290	645	0.0012	5e-	180	
levels	(BMI)	545	A	G	11	3281	92	64	4894	09	726	
Sex												
hormone-b	Body							0.0		7.9		
inding	mass	rs3						076		000		
globulin	index	006				3117	0.3799	724	0.0012	5e-	180	
levels	(BMI)	593	C	G	10	1626	29	9	5767	10	726	
Sex												
hormone-b	Body							0.0		6.8		
inding	mass	rs3				1504		076		000		
globulin	index	173				9108	0.5733	835	0.0012	2e-	180	
levels	(BMI)	833	G	T	7	4	79	6	443	09	726	
Sex												
hormone-b	Body	rs3								4.0		
inding	mass	425						0.0		003		
globulin	index	597				4638	0.1194	272	0.0019	7e-	180	
levels	(BMI)	9	T	C	19	4830	63	468	0546	51	726	
Sex												
hormone-b	Body	rs3						-0.		1.1		
inding	mass	458						012		000		
globulin	index	783				3230	0.1555	566	0.0017	2e-	180	
levels	(BMI)	9	A	G	20	0671	51	9	0732	14	726	

levels												
Sex												
hormone-b	Body	rs3						-0.		3.5		
inding	mass	486						008		999		
globulin	index	925				1009	0.4287	099	0.0012	8e-	180	
levels	(BMI)	3	C	T	4	420	35	33	5064	12	726	
Sex												
hormone-b	Body	rs3						-0.		7.2		
inding	mass	513						007		996		
globulin	index	529				2036	0.5190	373	0.0012	2e-	180	
levels	(BMI)	3	T	C	2	3666	66	32	2906	12	726	
Sex												
hormone-b	Body	rs3						-0.		2.3		
inding	mass	523						007		000		
globulin	index	433				3566	0.2574	607	0.0014	1e-	180	
levels	(BMI)	7	T	C	9	1243	71	59	1397	08	726	
Sex												
hormone-b	Body	rs3						-0.		8.0		
inding	mass	534						010		001		
globulin	index	608				2578	0.4438	456	0.0012	8e-	180	
levels	(BMI)	3	A	C	1	8425	54	2	3226	19	726	
Sex												
hormone-b	Body	rs3						-0.				
inding	mass	730						018				
globulin	index	730				6722	0.0403	867	0.0031	2.1e	180	
levels	(BMI)	393	A	G	16	6405	98	8	6246	-10	726	
Sex												
hormone-b	Body	rs3						0.0		1.5		
inding	mass	795						097		000		
globulin	index	795				3977	0.4836	741	0.0012	3e-	180	
levels	(BMI)	128	C	T	20	4163	32	7	3946	17	726	
Sex												
hormone-b	Body	rs3						-0.		1.9		
inding	mass	890						011		998		
globulin	index	890				7220	0.4422	181	0.0012	6e-	180	
levels	(BMI)	483	T	G	19	596	64	9	4431	21	726	
Sex												
hormone-b	Body	rs3						0.0		3.5		
inding	mass	891						081		999		
globulin	index	891				6584	0.2571	592	0.0014	8e-	180	
levels	(BMI)	167	G	A	18	23	63	3	729	08	726	
Sex												
hormone-b	Body	rs4						-0.		1.2		
inding	mass	027				5580	0.7721	014	0.0014	998	180	
globulin	index	0	C	A	5	4552	21	166	6708	7e-	726	

globulin	(BMI)							5		22	
levels											
Sex											
hormone-b	Body							0.0		3.5	
inding	mass	rs4						085		999	
globulin	index	092				5508	0.6470	715	0.0013	8e-	180
levels	(BMI)	465	G	A	18	0437	16	4	0236	13	726
Sex											
hormone-b	Body							-0.		3.1	
inding	mass	rs4						008		996	
globulin	index	294				5854	0.5115	812	0.0012	3e-	180
levels	(BMI)	5	G	A	16	5426	8	96	4194	13	726
Sex											
hormone-b	Body							-0.		1.9	
inding	mass	rs4						013		002	
globulin	index	297				7944	0.3895	822	0.0012	e-2	180
levels	(BMI)	769	A	G	17	048	63	2	432	8	726
Sex											
hormone-b	Body									3.7	
inding	mass	rs4				1576		0.0		999	
globulin	index	327				2787	0.3198	070	0.0013	7e-	180
levels	(BMI)	534	A	C	4	9	89	071	1672	08	726
Sex											
hormone-b	Body							-0.		2.9	
inding	mass	rs4						015		000	
globulin	index	671				6490	0.7376	686	0.0014	1e-	180
levels	(BMI)	607	C	T	2	5898	05	3	0192	33	726
Sex											
hormone-b	Body							-0.		3.1	
inding	mass	rs4				2084		008		002	
globulin	index	675				0275	0.4601	948	0.0012	7e-	180
levels	(BMI)	682	C	T	2	0	9	96	3031	15	726
Sex											
hormone-b	Body									1.9	
inding	mass	rs4						0.0		998	
globulin	index	715				5262	0.6444	086	0.0012	6e-	180
levels	(BMI)	316	T	C	6	8998	72	613	9252	13	726
Sex											
hormone-b	Body							-0.		2.1	
inding	mass	rs4						008		998	
globulin	index	719				1977	0.3970	013	0.0012	9e-	180
levels	(BMI)	366	A	G	7	906	59	22	634	11	726
Sex	Body	rs4				2013	0.2972	0.0	0.0013	5e-	180
hormone-b	mass	819	A	C	22	6379	11	068	5593	09	726

inding	index	867						897				
globulin	(BMI)							5				
levels												
Sex												
hormone-b	Body										1.3	
inding	mass	rs4						0.0			999	
globulin	index	841				9183	0.9086	221	0.0021	1e-	180	
levels	(BMI)	133	G	A	8	664	81	33	4218	28	726	
Sex												
hormone-b	Body							-0.			5.1	
inding	mass	rs4				1139		009			003	
globulin	index	918				4704	0.7274	513	0.0013	5e-	180	
levels	(BMI)	722	T	C	10	0	46	18	7242	14	726	
Sex												
hormone-b	Body							-0.			4.9	
inding	mass	rs5						017			000	
globulin	index	407				5780	0.7544	723	0.0014	4e-	180	
levels	(BMI)	30	C	T	12	7114	18	5	2693	39	726	
Sex												
hormone-b	Body	rs5						0.0				
inding	mass	577				1190		074				
globulin	index	116				7094	0.2711	577	0.0013	1.2e	180	
levels	(BMI)	8	C	T	11	9	08	5	8631	-08	726	
Sex												
hormone-b	Body	rs5						-0.			3.2	
inding	mass	586				1008		011			998	
globulin	index	950				2567		310	0.0012	9e-	180	
levels	(BMI)	2	T	C	14	0	0.4951	8	3479	22	726	
Sex												
hormone-b	Body	rs5									1.2	
inding	mass	598						0.0			999	
globulin	index	740				4956	0.0725	141	0.0023	9e-	180	
levels	(BMI)	9	T	C	20	9025	38	619	8657	09	726	
Sex												
hormone-b	Body	rs5									6.5	
inding	mass	619						0.0			993	
globulin	index	686				2908	0.0315	219	0.0035	3e-	180	
levels	(BMI)	0	A	C	12	330	12	327	1758	11	726	
Sex												
hormone-b	Body	rs5									4.1	
inding	mass	633						0.0			975	
globulin	index	287				9671	0.2720	298	0.0013	9e-	180	
levels	(BMI)	1	A	C	15	4816	43	253	9111	111	726	
Sex	Body	rs5	T	A	8	8142	0.1581	0.0	0.0016	8.6	180	

hormone-b	mass	920					4720	08	175	9193	996	726
inding	index	358							04		1e-	
globulin	(BMI)	2									30	
levels												
Sex												
hormone-b	Body										7.5	
inding	mass	rs6							0.0		006	
globulin	index	130					4305	0.4695	174	0.0012	7e-	180
levels	(BMI)	613	T	C	20	4441	85		18	5777	45	726
Sex												
hormone-b	Body	rs6									9.5	
inding	mass	247					1431		0.0		999	
globulin	index	272					0556	0.0608	170	0.0026	7e-	180
levels	(BMI)	8	T	C	7	6	94		313	0051	10	726
Sex												
hormone-b	Body	rs6									5.1	
inding	mass	261							0.0		999	
globulin	index	869					3295	0.0455	187	0.0029	6e-	180
levels	(BMI)	3	T	C	11	6492	36		921	4867	11	726
Sex												
hormone-b	Body								-0.		8.6	
inding	mass	rs6							016		996	
globulin	index	316					6928	0.5823	825	0.0012	1e-	180
levels	(BMI)	95	G	T	11	3303	62		6	4634	47	726
Sex												
hormone-b	Body								-0.		3.8	
inding	mass	rs6							010		001	
globulin	index	480					6963	0.6696	931	0.0013	4e-	180
levels	(BMI)	299	G	C	10	1393	46		5	0057	17	726
Sex												
hormone-b	Body								-0.		4.7	
inding	mass	rs6					1000		020		000	
globulin	index	532					4224	0.7064	099	0.0013	2e-	180
levels	(BMI)	796	G	A	4	2	04		3	4644	51	726
Sex												
hormone-b	Body								-0.		1.7	
inding	mass	rs6					1213		007		999	
globulin	index	541					3803	0.3796	737	0.0012	9e-	180
levels	(BMI)	725	A	C	2	2	09		37	627	09	726
Sex												
hormone-b	Body								-0.		2.9	
inding	mass	rs6							032		998	
globulin	index	736					4251	0.9787	912	0.0042	5e-	180
levels	(BMI)	913	G	A	2	0018	16		1	3623	15	726

Sex												
hormone-b	Body										3.5	
inding	mass	rs6						-0.			002	
globulin	index	758				7053	0.0667	016	0.0024	6e-	180	
levels	(BMI)	199	T	C	2	7173	65	905	6789	12	726	
Sex												
hormone-b	Body							-0.			1.1	
inding	mass	rs6						011			000	
globulin	index	939				4170	0.2618	280	0.0014	2e-	180	
levels	(BMI)	861	A	G	6	3041	47	6	2004	15	726	
Sex												
hormone-b	Body										9.8	
inding	mass	rs6						0.0			992	
globulin	index	950				9791		316	0.0015	e-9	180	
levels	(BMI)	023	G	T	7	5635	0.8144	741	7952	6	726	
Sex												
hormone-b	Body							-0.			6.7	
inding	mass	rs7						010			998	
globulin	index	092				6442	0.8506	801	0.0017	6e-	180	
levels	(BMI)	853	T	C	10	9307	78	4	1373	11	726	
Sex												
hormone-b	Body							-0.			7.7	
inding	mass	rs7						006			999	
globulin	index	201				1113	0.4044	592	0.0012	2e-	180	
levels	(BMI)	30	T	G	16	2633	37	78	5987	09	726	
Sex												
hormone-b	Body							-0.			5.1	
inding	mass	rs7						013			999	
globulin	index	225				7324	0.8325	343	0.0016	6e-	180	
levels	(BMI)	349	A	G	17	0009	22	7	0389	17	726	
Sex												
hormone-b	Body	rs7									7.1	
inding	mass	278						0.0			000	
globulin	index	758				3301	0.0233	246	0.0040	3e-	180	
levels	(BMI)	1	A	G	2	2808	97	186	9905	10	726	
Sex												
hormone-b	Body	rs7						-0.			3.4	
inding	mass	284						065			001	
globulin	index	281				7296	0.0333	357	0.0035	7e-	180	
levels	(BMI)	1	T	C	17	899	89	8	7483	77	726	
Sex	Body	rs7									6.2	
hormone-b	mass	292						0.0			001	
inding	index	984				6168	0.0765	196	0.0023	2e-	180	
globulin	(BMI)	7	A	G	1	4630	46	337	0744	18	726	

levels												
Sex												
hormone-b	Body	rs7									1.5	
inding	mass					1115		0.0		000		
globulin	index	314				2202	0.0684	301	0.0024	3e-	180	
levels	(BMI)	285	G	T	12	6	74	165	3544	41	726	
Sex												
hormone-b	Body	rs7										
inding	mass	455				1171		-0.				
globulin	index	159				7756	0.2439	368	0.0014	1e-	180	
levels	(BMI)	8	C	A	9	6	84	83	3759	09	726	
Sex												
hormone-b	Body	rs7										
inding	mass	513						-0.		3.1		
globulin	index	074				2541	0.0715	602	0.0023	7e-	180	
levels	(BMI)	4	C	G	12	0741	54	8	8856	39	726	
Sex												
hormone-b	Body	rs7										
inding	mass					2002		0.0		1.0		
globulin	index	540				6561	0.8187	657	0.0015	9e-	180	
levels	(BMI)	115	C	A	1	8	22	9	874	09	726	
Sex												
hormone-b	Body	rs7										
inding	mass	748				1110		0.0		3.6		
globulin	index	356				9688	0.0169	303	0.0048	9e-	180	
levels	(BMI)	4	T	C	4	3	78	068	5249	10	726	
Sex												
hormone-b	Body	rs7										
inding	mass											
globulin	index	767				9927	0.0673	152	0.0024	8e-	180	
levels	(BMI)	46	T	C	7	0539	12	833	5492	11	726	
Sex												
hormone-b	Body	rs7										
inding	mass					1163		0.0				
globulin	index	773				6314	0.4011	937	0.0012	2.1e	180	
levels	(BMI)	423	G	A	6	9	4	3	5965	-09	726	
Sex												
hormone-b	Body	rs7										
inding	mass					1390		0.0		6.0		
globulin	index	860				8967	0.5738	123	0.0012	8e-	180	
levels	(BMI)	634	A	G	9	9	24	675	4597	25	726	
Sex	Body	rs7				1130		0.0		2.3		
hormone-b	mass	867				3390	0.1871	089	0.0015	999	180	
inding	index	931	G	T	9	7	87	348	856	9e-	726	

globulin levels	(BMI)	8						4		09	
Sex											
hormone-binding globulin levels	Body mass index (BMI)	rs7 889 074 5								8.9 002 e-1 2	180 726
Sex			A	G	4	4	78	529	8065		
hormone-binding globulin levels	Body mass index (BMI)	rs7 920 217						0.0 077 388		1.0 999 9e-09	
Sex			T	C	10	2	13	2	2079		
hormone-binding globulin levels	Body mass index (BMI)	rs7 971 779 3						-0.024 610 5		2.6 001 6e-55	180 726
Sex			A	G	10	5262 267	0.1550 45		0.0016 8938		
hormone-binding globulin levels	Body mass index (BMI)	rs7 976 070 5						-0.017 595 9		1.9 998 6e-21	180 726
Sex			T	G	5	5329 8716	0.1130 23		0.0019 4631		
hormone-binding globulin levels	Body mass index (BMI)	rs8 205 03						-0.011 208 8		3.6 999 9e-11	180 726
Sex			A	C	9	6667 928	0.1374 37		0.0017 888		
hormone-binding globulin levels	Body mass index (BMI)	rs8 764 35						-0.007 567 35		2.9 998 5e-11	180 726
Sex			A	G	8	2287 3533	0.5903 37		0.0012 6472		
hormone-binding globulin levels	Body mass index (BMI)	rs9 288 177						-0.008 989 49		5.0 003 5e-13	180 726
Sex			A	G	2	8525 2	0.3742 99		0.0012 7263		
hormone-binding globulin levels	Body mass index (BMI)	rs9 379 084						-0.015 326 4			
Sex			A	G	6	7231 843	0.1153 46		0.0019 8813	1e-15	180 726
hormone-binding globulin levels	Body mass index (BMI)	rs9 492						-0.009 6134		3.7 999	180 726
Sex			C	A	6	3261 0976	0.1829 92		0.0017 6134		

inding	index							475		7e-	
globulin	(BMI)							56		09	
levels											
Sex											
hormone-b	Body							-0.		1.1	
inding	mass	rs9				1314		018		000	
globulin	index	697				6874	0.1452	744	0.0017	2e-	180
levels	(BMI)	210	A	G	9	0	55	1	5123	29	726
Sex											
hormone-b	Body							-0.		1.2	
inding	mass	rs9						009		999	
globulin	index	739				5378	0.1679	481	0.0016	9e-	180
levels	(BMI)	640	G	A	12	3174	95	38	6929	08	726

Supplementary Table S7. Instruments for causal estimation from SHBG to BioT level.

Exposure	Outcome	SNP	Effect allele	Other allele	Chromosome	Genetic position	Effect allele frequency	Beta	Standard error of beta	P-value	Sample size
Sex hormone-binding globulin levels	Bioavailable testosterone levels	rs1002727	C	G	4	14898149	0.74126	-0.012553	0.00141198	1e-21	180726
Sex hormone-binding globulin levels	Bioavailable testosterone levels	rs1004166	C	T	5	12265022	0.50474	0.07527	0.00124541	3e-10	180726
Sex hormone-binding globulin levels	Bioavailable testosterone levels	rs1010718	T	C	8	59392737	0.663202	0.124022	0.00130257	7e-22	180726
Sex hormone-binding globulin levels	Bioavailable testosterone levels	rs1037169	C	T	11	13361005	0.687205	-0.011529	0.00133154	9e-20	180726
Sex hormone-binding globulin levels	Bioavailable testosterone levels	rs1073378	C	T	10	64948684	0.313039	0.0492531	0.00131963	1e-200	180726
Sex hormone-binding globulin levels	Bioavailable testosterone levels	rs1073768	A	G	1	19689482	0.23679	-0.010124	0.00144072	1e-12	180726
Sex hormone-binding globulin levels	Bioavailable testosterone levels	rs1086808	A	T	9	86626769	0.744477	-0.021327	0.00140815	3e-57	180726
Sex hormone-binding globulin levels	Bioavailable testosterone levels	rs1087087	G	A	18	57851763	0.236131	-0.009009	0.00145802	5.0003	1807

inding	testoster	177							840		5e-	26
globulin	one	7							77		11	
levels	levels											
Sex	Bioavail											
hormone-b	able	rs1									9.3	
inding	testoster	088					1372		0.0		003	18
globulin	one	158					5607	0.2380	133	0.0014	7e-	07
levels	levels	2	A	G	9	8	37		501	5058	21	26
Sex	Bioavail											
hormone-b	able	rs1							-0.		8.9	
inding	testoster	089					1020		009		002	18
globulin	one	527					8494	0.3408	615	0.0013	e-1	07
levels	levels	7	G	A	11	0	06		47	0251	5	26
Sex	Bioavail											
hormone-b	able	rs1							0.0		8.0	
inding	testoster	107							092		001	18
globulin	one	525					1514	0.2960	234	0.0013	8e-	07
levels	levels	3	A	C	16	8646	81		5	5476	12	26
Sex	Bioavail											
hormone-b	able	rs1							-0.		4.6	
inding	testoster	111					1028		007		000	18
globulin	one	127					3812	0.7372	310	0.0013	2e-	07
levels	levels	4	A	G	12	8	79		72	8631	08	26
Sex	Bioavail											
hormone-b	able	rs1							0.0		2.1	
inding	testoster	115							078		999	18
globulin	one	897					7323	0.2877	724	0.0013	9e-	07
levels	levels	6	T	C	14	0278	21		2	6551	08	26
Sex	Bioavail											
hormone-b	able	rs1									3.1	
inding	testoster	115							-0.		002	18
globulin	one	934					2594	0.6808	010	0.0013	7e-	07
levels	levels	7	T	C	14	7436	71		709	2486	17	26
Sex	Bioavail											
hormone-b	able	rs1									2.8	
inding	testoster	117					1709		0.0		002	18
globulin	one	521					9489	0.0964	127	0.0020	7e-	07
levels	levels	58	T	C	4	4	96		725	799	11	26
Sex	Bioavail											
hormone-b	able	rs1									8.1	
inding	testoster	119							0.0		997	18
globulin	one	812					5001	0.0789	261	0.0022	4e-	07
levels	levels	33	G	T	19	6479	84		638	7727	33	26
Sex	Bioavail	rs1	T	C	13	1150	0.2318		-0.	0.0014	2.3	18

hormone-b	able	120				4746	57	008	6895	000	07
inding	testoster	359				4		812		1e-	26
globulin	one	22								10	
levels	levels										
Sex	Bioavail										
hormone-b	able	rs1						-0.		2.9	
inding	testoster	132						014		000	18
globulin	one	484				6610	0.0482	367	0.0029	1e-	07
levels	levels	43	G	A	10	2542	94	4	4711	08	26
Sex	Bioavail										
hormone-b	able	rs1						-0.		3.4	
inding	testoster	141						087		994	18
globulin	one	653				2702	0.0231	113	0.0040	5e-	07
levels	levels	49	C	G	1	1913	58	6	8954	111	26
Sex	Bioavail										
hormone-b	able	rs1								4.1	
inding	testoster	149				1504		0.0		995	18
globulin	one	492				9824	0.1113	187	0.0019	2e-	07
levels	levels	63	C	T	7	5	88	991	6067	25	26
Sex	Bioavail										
hormone-b	able	rs1						-0.		3.6	
inding	testoster	152				1848		028		999	18
globulin	one	766				6513	0.0166	539	0.0049	9e-	07
levels	levels	19	A	T	1	2	26	9	3428	11	26
Sex	Bioavail										
hormone-b	able	rs1						-0.		4.2	
inding	testoster	154				1359		027		004	18
globulin	one	154				2519	0.7730	658	0.0014	9e-	07
levels	levels	988	A	T	3	1	31	7	6575	88	26
Sex	Bioavail										
hormone-b	able	rs1						0.0		1.2	
inding	testoster	156						095		000	18
globulin	one	472				2178	0.2387	530	0.0014	5e-	07
levels	levels	2	T	C	11	330	4	7	6515	13	26
Sex	Bioavail										
hormone-b	able	rs1						0.0			
inding	testoster	161				1117		086		2.1	18
globulin	one	025				3412	0.2166	783	0.0014	e-0	07
levels	levels	6	T	C	12	1	65	8	9523	9	26
Sex	Bioavail										
hormone-b	able	rs1								1.3	
inding	testoster	162						-0.		999	18
globulin	one	179				2487	0.4536	012	0.0012	1e-	07
levels	levels	2	T	C	14	1926	47	749	4244	25	26

Sex	Bioavail											
hormone-b	able	rs1						0.0		1.2		
inding	testoster	163				1147		098		999	18	
globulin	one	384				6704	0.1707	567	0.0017	9e-	07	
levels	levels	29	T	C	13	0	52	8	2794	09	26	
Sex	Bioavail											
hormone-b	able	rs1						-0.		2.1		
inding	testoster	166						016		999	18	
globulin	one	624				3822	0.0473	332	0.0029	9e-	07	
levels	levels	5	A	G	19	9926	06	5	014	09	26	
Sex	Bioavail											
hormone-b	able	rs1						0.0		3.2		
inding	testoster	173						076		999	18	
globulin	one	440				2388	0.2932	769	0.0013	7e-	07	
levels	levels	8	G	A	4	2519	56	7	4935	10	26	
Sex	Bioavail											
hormone-b	able	rs1						0.0		2.0		
inding	testoster	173						082		999	18	
globulin	one	915				7292	0.4278	937	0.0012	1e-	07	
levels	levels	8	T	C	5	7292	11	9	4625	12	26	
Sex	Bioavail											
hormone-b	able	rs1						0.0		1.9		
inding	testoster	174				1378		089		998	18	
globulin	one	381				0240	0.5600	364	0.0012	6e-	07	
levels	levels	0	T	C	5	4	69	6	4066	12	26	
Sex	Bioavail											
hormone-b	able	rs1						0.0		3.6		
inding	testoster	176				1010		-0.		999	18	
globulin	one	641				3656	0.0121	051	0.0057	9e-	07	
levels	levels	77	T	C	12	2	1	561	3803	22	26	
Sex	Bioavail											
hormone-b	able	rs1						-0.				
inding	testoster	177						013		1.2	18	
globulin	one	344				8106	0.0610	340	0.0026	e-0	07	
levels	levels	86	T	C	8	1523	81	1	1459	8	26	
Sex	Bioavail											
hormone-b	able	rs1								4.7		
inding	testoster	179						0.0		000	18	
globulin	one	218				8147	0.0665	210	0.0025	2e-	07	
levels	levels	73	G	A	8	3835	15	22	0814	18	26	
Sex	Bioavail	rs1								3.6		
hormone-b	able	180						0.0		999	18	
inding	testoster	370				2120	0.0404	222	0.0031	9e-	07	
globulin	one	27	T	A	12	3424	59	618	3784	13	26	

levels	levels												
Sex	Bioavail												
hormone-b	able	rs1										1.9	
inding	testoster	185							-0.			002	18
globulin	one	692				9622	0.4488	011	0.0012	e-2		07	
levels	levels	6	A	G	15	3649	29	587	4664	2		26	
Sex	Bioavail												
hormone-b	able	rs1											
inding	testoster	187							0.0				18
globulin	one	030				7617	0.7805	526	0.0014	1e-		07	
levels	levels	7	G	A	17	787	06	994	5305	200		26	
Sex	Bioavail												
hormone-b	able	rs1										6.2	
inding	testoster	213				1498		0.0			994	18	
globulin	one	813				4430	0.0865	152	0.0022	1e-		07	
levels	levels	6	A	T	1	5	96	389	0676	14		26	
Sex	Bioavail												
hormone-b	able								-0.			6.2	
inding	testoster	rs1							011			994	18
globulin	one	229				8156	0.7315	466	0.0013	1e-		07	
levels	levels	492	C	T	7	4122	18	9	9655	18		26	
Sex	Bioavail												
hormone-b	able	rs1										1.9	
inding	testoster	254							0.0			002	18
globulin	one	328				4233	0.3708	106	0.0012	e-1		07	
levels	levels	7	C	G	8	4511	44	061	8263	8		26	
Sex	Bioavail												
hormone-b	able												
inding	testoster	rs1							0.0				18
globulin	one	260				2773	0.6056	380	0.0012	1e-		07	
levels	levels	326	C	T	2	0940	79	831	5216	200		26	
Sex	Bioavail												
hormone-b	able	rs1							-0.				
inding	testoster	260							007			1.2	18
globulin	one	552				2207	0.2875	647	0.0013	e-0		07	
levels	levels	4	G	A	18	3551	2	97	7562	8		26	
Sex	Bioavail												
hormone-b	able	rs1										7.0	
inding	testoster	261							-0.			000	18
globulin	one	104				1429	0.1506	009	0.0017	3e-		07	
levels	levels	6	A	G	19	1704	36	68	7915	09		26	
Sex	Bioavail	rs1				2200			-0.			3.7	18
hormone-b	able	269				1963	0.6752	007	0.0013	999		07	
inding	testoster	445	C	T	2	8	26	064	572	7e-		26	

globulin	one	0							09		08	
levels	levels											
Sex	Bioavail											
hormone-b	able	rs1							0.0			
inding	testoster	269					1694		081		1.7	18
globulin	one	630					8127	0.2656	310	0.0013	e-0	07
levels	levels	4	G	C	3	1	45	9	9236	9	26	
Sex	Bioavail											
hormone-b	able	rs1									6.0	
inding	testoster	279							0.0		995	18
globulin	one	770					6556	0.2345	120	0.0014	8e-	07
levels	levels	6	A	G	11	1369	88	832	6721	17	26	
Sex	Bioavail											
hormone-b	able	rs1									7.3	
inding	testoster	295							0.0		994	18
globulin	one	056					1799	0.6139	110	0.0012	6e-	07
levels	levels	2	T	C	17	5166	66	236	2815	21	26	
Sex	Bioavail											
hormone-b	able	rs1							0.0		7.4	
inding	testoster	295							082		999	18
globulin	one	308					5926	0.7950	792	0.0014	8e-	07
levels	levels	7	T	C	17	5201	92	4	8126	09	26	
Sex	Bioavail											
hormone-b	able	rs1							0.0		9.5	
inding	testoster	298					1485		079		999	18
globulin	one	959					9123	0.2916	174	0.0013	7e-	07
levels	levels	6	T	G	2	2	51	7	5721	10	26	
Sex	Bioavail											
hormone-b	able	rs1							-0.		1.2	
inding	testoster	310							022		000	18
globulin	one	821					3443	0.6172	994	0.0012	5e-	07
levels	levels	8	G	A	4	931	54	3	7338	79	26	
Sex	Bioavail											
hormone-b	able	rs1							-0.		7.5	
inding	testoster	315							020		997	18
globulin	one	006					8820	0.4376	732	0.0012	6e-	07
levels	levels	8	G	A	4	3828	37	9	3764	67	26	
Sex	Bioavail											
hormone-b	able	rs1							0.0		2.1	
inding	testoster	337							082		999	18
globulin	one	904					7425	0.2800	885	0.0013	9e-	07
levels	levels	3	C	T	14	0126	09	2	9928	10	26	
Sex	Bioavail	rs1					5622	0.0768	-0.	0.0023	3.5	18
hormone-b	able	386	C	T	5	8040	23	014	084	002	07	

inding	testoster	115							847	6e-	26
globulin	one	41							1	12	
levels	levels										
Sex	Bioavail										
hormone-b	able								-0.		
inding	testoster	rs1							008		18
globulin	one	388				5016	0.2152	036	0.0015	2e-	07
levels	levels	20	C	T	22	4078	84	76	0694	08	26
Sex	Bioavail										
hormone-b	able								0.0	2.6	
inding	testoster	rs1				2197		074		999	18
globulin	one	415				3000	0.3182	343	0.0013	8e-	07
levels	levels	293	T	A	1	6	82	1	1195	09	26
Sex	Bioavail										
hormone-b	able	rs1								1.4	
inding	testoster	446				2354		0.0		000	18
globulin	one	479				6760	0.0873	123	0.0021	1e-	07
levels	levels	26	A	G	1	7	56	175	7179	09	26
Sex	Bioavail										
hormone-b	able	rs1								9.2	
inding	testoster	491						0.0		002	18
globulin	one	316				3554	0.1743	205	0.0016	6e-	07
levels	levels	00	T	C	19	9122	8	782	2554	42	26
Sex	Bioavail										
hormone-b	able	rs1							-0.	9.3	
inding	testoster	508						074		994	18
globulin	one	443				4372	0.0249	512	0.0039	e-8	07
levels	levels	04	C	A	15	6625	05	7	585	5	26
Sex	Bioavail										
hormone-b	able								-0.	8.4	
inding	testoster	rs1						007		004	18
globulin	one	538				9482	0.5031	574	0.0012	e-1	07
levels	levels	648	G	A	10	0860	97	85	2235	3	26
Sex	Bioavail										
hormone-b	able									1.5	
inding	testoster	rs1				1305		0.0		000	18
globulin	one	579				8555	0.3036	121	0.0013	3e-	07
levels	levels	35	G	T	7	3	01	026	4199	22	26
Sex	Bioavail										
hormone-b	able								-0.	4.6	
inding	testoster	rs1				1076		026		004	18
globulin	one	730				0561	0.6547	047	0.0012	5e-	07
levels	levels	865	T	G	1	1	68	5	9437	98	26
Sex	Bioavail	rs1	A	G	19	2796	0.2872	0.0	0.0013	2.2	18

hormone-b	able	736				021	61	173	6123	998	07
inding	testoster	180						849		5e-	26
globulin	one									41	
levels	levels										
Sex	Bioavail										
hormone-b	able							-0.		4.2	
inding	testoster	rs1						007		000	18
globulin	one	745				6154	0.3758	748	0.0012	1e-	07
levels	levels	29	C	T	11	3961	89	39	7239	10	26
Sex	Bioavail										
hormone-b	able									4.1	
inding	testoster	rs1						0.0		995	18
globulin	one	758				9484	0.0484	304	0.0028	2e-	07
levels	levels	0	A	T	14	7262	63	227	6953	29	26
Sex	Bioavail										
hormone-b	able							-0.		5.6	
inding	testoster	rs1						022		999	18
globulin	one	776				3419	0.9693	694	0.0035	4e-	07
levels	levels	899	A	G	6	3230	25	8	717	10	26
Sex	Bioavail										
hormone-b	able							-0.		5.7	
inding	testoster	rs1						012		996	18
globulin	one	782				8107	0.3806	741	0.0012	3e-	07
levels	levels	652	A	T	10	4125	25	4	7529	27	26
Sex	Bioavail										
hormone-b	able									1.8	
inding	testoster	rs1						-0.		001	18
globulin	one	801				6421	0.0298	033	0.0035	1e-	07
levels	levels	689	C	A	17	0580	71	43	0564	21	26
Sex	Bioavail										
hormone-b	able							-0.		2.4	
inding	testoster	rs1						008		997	18
globulin	one	860				1384	0.4432	484	0.0011	7e-	07
levels	levels	018	A	G	17	6723	51	68	9697	13	26
Sex	Bioavail										
hormone-b	able	rs1								7.7	
inding	testoster	870						-0.		001	18
globulin	one	792				7438	0.0139	072	0.0051	6e-	07
levels	levels	66	A	G	17	801	34	588	5995	47	26
Sex	Bioavail										
hormone-b	able							-0.		4.6	
inding	testoster	rs1						032		004	18
globulin	one	871				2135	0.1517	502	0.0017	5e-	07
levels	levels	395	G	A	12	2315	89	6	1209	88	26

Sex	Bioavail											
hormone-b	able							-0.		9.6		
inding	testoster	rs1				1164		008		006	18	
globulin	one	874				4509	0.4530	269	0.0012	4e-	07	
levels	levels	37	A	G	7	1	37	66	3975	14	26	
Sex	Bioavail											
hormone-b	able	rs2								3.6		
inding	testoster	022						0.0		999	18	
globulin	one	007				1734	0.0385	711	0.0034	9e-	07	
levels	levels	60	C	G	19	6854	92	034	8775	98	26	
Sex	Bioavail											
hormone-b	able							-0.				
inding	testoster	rs2						011			18	
globulin	one	045				2681	0.1946	850	0.0015	1e-	07	
levels	levels	345	G	A	1	8894	45	3	8288	13	26	
Sex	Bioavail											
hormone-b	able							0.0				
inding	testoster	rs2						068		2.1	18	
globulin	one	073				3536	0.3105	332	0.0013	e-0	07	
levels	levels	503	G	C	4	176	31	4	2685	8	26	
Sex	Bioavail											
hormone-b	able									5.5		
inding	testoster	rs2						0.0		004	18	
globulin	one	239				7301	0.3496	110	0.0013	7e-	07	
levels	levels	222	G	A	14	1885	19	595	0116	17	26	
Sex	Bioavail											
hormone-b	able							-0.		6.2		
inding	testoster	rs2						014		994	18	
globulin	one	256				6571	0.8535	008	0.0017	1e-	07	
levels	levels	657	G	A	10	2613	07	8	3169	18	26	
Sex	Bioavail											
hormone-b	able							-0.		2.9		
inding	testoster	rs2						011		000	18	
globulin	one	259				9361	0.4769	886	0.0012	1e-	07	
levels	levels	305	A	G	10	5903	95	3	2291	22	26	
Sex	Bioavail											
hormone-b	able							-0.		4.0		
inding	testoster	rs2				1710		007		999	18	
globulin	one	266				7696	0.4166	834	0.0012	6e-	07	
levels	levels	782	A	G	1	6	47	93	4201	10	26	
Sex	Bioavail									2.0		
hormone-b	able	rs2						0.0		999	18	
inding	testoster	298				9524	0.3062	111	0.0013	1e-	07	
globulin	one	058	T	C	13	8566	44	891	408	18	26	

levels	levels											
Sex	Bioavail											
hormone-b	able							-0.		4.3		
inding	testoster	rs2				1054		006		000	18	
globulin	one	301				0150	0.2750	789	0.0013	2e-	07	
levels	levels	050	T	C	3	7	57	06	7554	08	26	
Sex	Bioavail											
hormone-b	able							-0.		4.0		
inding	testoster	rs2						010		003	18	
globulin	one	330				2429	0.5660	038	0.0012	7e-	07	
levels	levels	649	A	G	22	5053	63	1	6705	17	26	
Sex	Bioavail											
hormone-b	able							-0.		1.2		
inding	testoster	rs2						010		998	18	
globulin	one	351				1624	0.3875	194	0.0012	7e-	07	
levels	levels	958	A	C	11	8020	23	8	6369	17	26	
Sex	Bioavail											
hormone-b	able							-0.		3.0		
inding	testoster	rs2						012		999	18	
globulin	one	575				1817	0.9197	000	0.0022	9e-	07	
levels	levels	368	G	T	16	397	07	2	7266	08	26	
Sex	Bioavail											
hormone-b	able							-0.		8.1		
inding	testoster	rs2						012		000	18	
globulin	one	612				6621	0.0960	006	0.0020	9e-	07	
levels	levels	069	G	C	12	5292	31	6	917	09	26	
Sex	Bioavail											
hormone-b	able									3.4		
inding	testoster	rs2				2209		0.0		001	18	
globulin	one	642				7002	0.7018	150	0.0013	7e-	07	
levels	levels	438	G	A	1	8	28	028	3645	31	26	
Sex	Bioavail											
hormone-b	able							0.0		7.8		
inding	testoster	rs2				1019		090		995	18	
globulin	one	694				0780	0.6206	202	0.0012	1e-	07	
levels	levels	157	C	T	7	8	54	4	6663	14	26	
Sex	Bioavail											
hormone-b	able							-0.		5.3		
inding	testoster	rs2				1456		011		002	18	
globulin	one	721				7701	0.5251	287	0.0012	9e-	07	
levels	levels	195	C	T	8	1	3	5	38	21	26	
Sex	Bioavail	rs2						-0.		2.3	18	
hormone-b	able	839				4745	0.4603	029	0.0012	988	07	
inding	testoster	486	A	G	17	0775	08	518	0382	3e-	26	

globulin	one	4										138
levels	levels											
Sex	Bioavail											
hormone-b	able	rs2										5.7
inding	testoster	850						0.0		003	18	
globulin	one	749				7719	0.3757	139	0.0012	3e-	07	
levels	levels	1	A	G	4	7651	06	975	668	29	26	
Sex	Bioavail											
hormone-b	able	rs2						-0.		4.9		
inding	testoster	854				1102		013		000	18	
globulin	one	928				3013	0.7741	082	0.0015	4e-	07	
levels	levels	7	A	G	1	8	48	1	8912	17	26	
Sex	Bioavail											
hormone-b	able	rs2						-0.				
inding	testoster	860				1265		006		1.5	18	
globulin	one	176				0003	0.4181	441	0.0012	e-0	07	
levels	levels	1	G	C	8	1	25	19	6207	8	26	
Sex	Bioavail											
hormone-b	able									3.4		
inding	testoster	rs2				1019		0.0		001	18	
globulin	one	862				1206	0.5003	108	0.0012	7e-	07	
levels	levels	954	C	T	10	4	43	541	1838	19	26	
Sex	Bioavail											
hormone-b	able							0.0		4.7		
inding	testoster	rs2						092		995	18	
globulin	one	872				6234	0.2456	882	0.0014	4e-	07	
levels	levels	881	A	G	20	2801	62	2	3199	11	26	
Sex	Bioavail											
hormone-b	able	rs2								1.8		
inding	testoster	877						0.0		999	18	
globulin	one	302				8807	0.1014	119	0.0020	8e-	07	
levels	levels	7	A	G	4	6227	46	206	5087	10	26	
Sex	Bioavail											
hormone-b	able	rs2										
inding	testoster	892						0.1			18	
globulin	one	947				9484	0.0198	383	0.0044	1e-	07	
levels	levels	4	T	C	14	4947	23	03	1884	200	26	
Sex	Bioavail											
hormone-b	able							-0.		1.0		
inding	testoster	rs2						009		999	18	
globulin	one	896				4647	0.1935	707	0.0015	9e-	07	
levels	levels	906	C	T	16	417	87	72	6221	10	26	
Sex	Bioavail	rs2				2952	0.7051	0.0	0.0013	3.8	18	
hormone-b	able	905	T	C	17	4974	21	140	0719	001	07	

inding	testoster	801							121		4e-	26
globulin	one										28	
levels	levels											
Sex	Bioavail											
hormone-b	able								-0.		2.3	
inding	testoster	rs2					1580		008		999	18
globulin	one	914					1385	0.2109	561	0.0015	9e-	07
levels	levels	233	C	T	5	6	3		3	1926	09	26
Sex	Bioavail											
hormone-b	able								-0.			
inding	testoster	rs2							006			18
globulin	one	924					6888	0.4290	645	0.0012	5e-	07
levels	levels	545	A	G	11	3281	92		64	4894	09	26
Sex	Bioavail											
hormone-b	able								0.0		6.8	
inding	testoster	rs2							074		000	18
globulin	one	989					4071	0.3402	375	0.0013	2e-	07
levels	levels	330	G	A	21	6209	97		9	1431	09	26
Sex	Bioavail											
hormone-b	able								0.0		7.9	
inding	testoster	rs3							076		000	18
globulin	one	006					3117	0.3799	724	0.0012	5e-	07
levels	levels	593	C	G	10	1626	29		9	5767	10	26
Sex	Bioavail											
hormone-b	able								0.0		6.8	
inding	testoster	rs3					1504		076		000	18
globulin	one	173					9108	0.5733	835	0.0012	2e-	07
levels	levels	833	G	T	7	4	79		6	443	09	26
Sex	Bioavail											
hormone-b	able	rs3									4.0	
inding	testoster	425							0.0		003	18
globulin	one	597					4638	0.1194	272	0.0019	7e-	07
levels	levels	9	T	C	19	4830	63		468	0546	51	26
Sex	Bioavail											
hormone-b	able	rs3							0.0			
inding	testoster	441							087		1.7	18
globulin	one	506					5902	0.1798	676	0.0016	e-0	07
levels	levels	2	A	G	19	3166	75		1	0777	8	26
Sex	Bioavail											
hormone-b	able	rs3							-0.		1.1	
inding	testoster	458							012		000	18
globulin	one	783					3230	0.1555	566	0.0017	2e-	07
levels	levels	9	A	G	20	0671	51		9	0732	14	26
Sex	Bioavail	rs3	G	C	19	1945	0.0786		-0.	0.0022	9.3	18

hormone-b	able	485					7235	55	015	9031	003	07
inding	testoster	858							798		7e-	26
globulin	one	8							7		15	
levels	levels											
Sex	Bioavail											
hormone-b	able	rs3							-0.		3.5	
inding	testoster	486							008		999	18
globulin	one	925					1009	0.4287	099	0.0012	8e-	07
levels	levels	3	C	T	4		420	35	33	5064	12	26
Sex	Bioavail											
hormone-b	able	rs3							-0.		7.2	
inding	testoster	513							007		996	18
globulin	one	529					2036	0.5190	373	0.0012	2e-	07
levels	levels	3	T	C	2		3666	66	32	2906	12	26
Sex	Bioavail											
hormone-b	able	rs3							-0.		2.3	
inding	testoster	523							007		000	18
globulin	one	433					3566	0.2574	607	0.0014	1e-	07
levels	levels	7	T	C	9		1243	71	59	1397	08	26
Sex	Bioavail											
hormone-b	able	rs3							-0.		8.0	
inding	testoster	534							010		001	18
globulin	one	608					2578	0.4438	456	0.0012	8e-	07
levels	levels	3	A	C	1		8425	54	2	3226	19	26
Sex	Bioavail											
hormone-b	able	rs3									4.4	
inding	testoster	608							0.0		998	18
globulin	one	619					1651	0.5789	167	0.0012	7e-	07
levels	levels	5	T	C	1		0894	71	429	3754	44	26
Sex	Bioavail											
hormone-b	able	rs3							-0.			
inding	testoster	730							018		2.1	18
globulin	one	730					6722	0.0403	867	0.0031	e-1	07
levels	levels	393	A	G	16		6405	98	8	6246	0	26
Sex	Bioavail											
hormone-b	able	rs3							-0.		1.2	
inding	testoster	768							015		000	18
globulin	one	768					4003	0.1971	519	0.0015	5e-	07
levels	levels	321	T	G	1		5928	78	9	4112	23	26
Sex	Bioavail											
hormone-b	able	rs3							0.0		1.5	
inding	testoster	795							097		000	18
globulin	one	795					3977	0.4836	741	0.0012	3e-	07
levels	levels	128	C	T	20		4163	32	7	3946	17	26

Sex	Bioavail											
hormone-b	able							-0.		1.9		
inding	testoster	rs3						011		998	18	
globulin	one	890				7220	0.4422	181	0.0012	6e-	07	
levels	levels	483	T	G	19	596	64	9	4431	21	26	
Sex	Bioavail											
hormone-b	able							0.0		3.5		
inding	testoster	rs3						081		999	18	
globulin	one	891				6584	0.2571	592	0.0014	8e-	07	
levels	levels	167	G	A	18	23	63	3	729	08	26	
Sex	Bioavail											
hormone-b	able							-0.		1.2		
inding	testoster	rs4						014		998	18	
globulin	one	027				5580	0.7721	166	0.0014	7e-	07	
levels	levels	0	C	A	5	4552	21	5	6708	22	26	
Sex	Bioavail											
hormone-b	able							0.0		3.5		
inding	testoster	rs4						085		999	18	
globulin	one	092				5508	0.6470	715	0.0013	8e-	07	
levels	levels	465	G	A	18	0437	16	4	0236	13	26	
Sex	Bioavail											
hormone-b	able							-0.		3.1		
inding	testoster	rs4						008		996	18	
globulin	one	294				5854	0.5115	812	0.0012	3e-	07	
levels	levels	5	G	A	16	5426	8	96	4194	13	26	
Sex	Bioavail											
hormone-b	able							-0.		1.9		
inding	testoster	rs4						013		002	18	
globulin	one	297				7944	0.3895	822	0.0012	e-2	07	
levels	levels	769	A	G	17	048	63	2	432	8	26	
Sex	Bioavail											
hormone-b	able									3.7		
inding	testoster	rs4				1576		0.0		999	18	
globulin	one	327				2787	0.3198	070	0.0013	7e-	07	
levels	levels	534	A	C	4	9	89	071	1672	08	26	
Sex	Bioavail											
hormone-b	able							-0.		3.1		
inding	testoster	rs4				2084		008		002	18	
globulin	one	675				0275	0.4601	948	0.0012	7e-	07	
levels	levels	682	C	T	2	0	9	96	3031	15	26	
Sex	Bioavail											
hormone-b	able	rs4						-0.		2.1		
inding	testoster	719						008		998	18	
globulin	one	366	A	G	7	1977	0.3970	013	0.0012	9e-	07	
						906	59	22	634	11	26	

levels	levels											
Sex	Bioavail											
hormone-b	able							0.0				
inding	testoster	rs4						068			18	
globulin	one	819				2013	0.2972	897	0.0013	5e-	07	
levels	levels	867	A	C	22	6379	11	5	5593	09	26	
Sex	Bioavail											
hormone-b	able										1.3	
inding	testoster	rs4						0.0			999	18
globulin	one	841				9183	0.9086	221	0.0021	1e-	07	
levels	levels	133	G	A	8	664	81	33	4218	28	26	
Sex	Bioavail											
hormone-b	able							-0.			5.1	
inding	testoster	rs4				1139		009			003	18
globulin	one	918				4704	0.7274	513	0.0013	5e-	07	
levels	levels	722	T	C	10	0	46	18	7242	14	26	
Sex	Bioavail											
hormone-b	able							-0.			4.9	
inding	testoster	rs5						017			000	18
globulin	one	407				5780	0.7544	723	0.0014	4e-	07	
levels	levels	30	C	T	12	7114	18	5	2693	39	26	
Sex	Bioavail											
hormone-b	able	rs5									3.1	
inding	testoster	572						0.0			996	18
globulin	one	943				8851	0.2652	104	0.0014	3e-	07	
levels	levels	2	G	C	16	1548	78	733	0802	15	26	
Sex	Bioavail											
hormone-b	able	rs5						-0.			3.2	
inding	testoster	586				1008		011			998	18
globulin	one	950				2567		310	0.0012	9e-	07	
levels	levels	2	T	C	14	0	0.4951	8	3479	22	26	
Sex	Bioavail											
hormone-b	able	rs5									1.2	
inding	testoster	598						0.0			999	18
globulin	one	740				4956	0.0725	141	0.0023	9e-	07	
levels	levels	9	T	C	20	9025	38	619	8657	09	26	
Sex	Bioavail											
hormone-b	able	rs5									2.8	
inding	testoster	607						0.0			000	18
globulin	one	734				4480	0.0712	136	0.0024	1e-	07	
levels	levels	5	C	G	7	8650	31	246	0009	09	26	
Sex	Bioavail	rs5						0.0			4.1	18
hormone-b	able	633				9671	0.2720	298	0.0013	975	07	
inding	testoster	287	A	C	15	4816	43	253	9111	9e-	26	

globulin	one	1										111
levels	levels											
Sex	Bioavail											
hormone-b	able	rs5						-0.				8.7
inding	testoster	715					1853		006		000	18
globulin	one	876					7117	0.4363	645	0.0012	1e-	07
levels	levels	1	G	A	3	2	7		62	4159	09	26
Sex	Bioavail											
hormone-b	able	rs5							0.0			2.5
inding	testoster	841							075		999	18
globulin	one	455					3755	0.3057	129	0.0013	8e-	07
levels	levels	5	C	A	20	4152	98		3	4031	08	26
Sex	Bioavail											
hormone-b	able	rs5										8.6
inding	testoster	920							0.0		996	18
globulin	one	358					8142	0.1581	175	0.0016	1e-	07
levels	levels	2	T	A	8	4720	08		04	9193	30	26
Sex	Bioavail											
hormone-b	able	rs6										
inding	testoster	001							0.0			18
globulin	one	814					3375	0.1210	131	0.0019	1e-	07
levels	levels	7	G	A	19	572	31		5	8109	12	26
Sex	Bioavail											
hormone-b	able								-0.			4.0
inding	testoster	rs6							016		003	18
globulin	one	005					2910	0.6727	874	0.0013	7e-	07
levels	levels	840	G	A	22	1357	01		7	1567	39	26
Sex	Bioavail											
hormone-b	able											7.5
inding	testoster	rs6							0.0		006	18
globulin	one	130					4305	0.4695	174	0.0012	7e-	07
levels	levels	613	T	C	20	4441	85		18	5777	45	26
Sex	Bioavail											
hormone-b	able	rs6										5.3
inding	testoster	168							0.0		002	18
globulin	one	664					1508	0.2597	103	0.0014	9e-	07
levels	levels	4	G	A	1	819	71		828	7133	14	26
Sex	Bioavail											
hormone-b	able	rs6							-0.			1.1
inding	testoster	201							012		000	18
globulin	one	128					6379	0.3424	613	0.0012	2e-	07
levels	levels	6	A	G	15	1125	96		6	9832	25	26
Sex	Bioavail	rs6					4938	0.4381	-0.	0.0012	2.0	18
hormone-b	able	225	A	G	3	6047	62		009	3926	999	07

inding	testoster	993							109		1e-	26
globulin	one	9							72		13	
levels	levels											
Sex	Bioavail											
hormone-b	able										5.7	
inding	testoster	rs6							1607	0.0	003	18
globulin	one	243							7290	0.4734	151	07
levels	levels	19	A	G	6	0	85		961	3751	40	26
Sex	Bioavail											
hormone-b	able	rs6									9.5	
inding	testoster	247							1431	0.0	999	18
globulin	one	272							0556	0.0608	170	07
levels	levels	8	T	C	7	6	94		313	0051	10	26
Sex	Bioavail											
hormone-b	able	rs6									5.1	
inding	testoster	261								0.0	999	18
globulin	one	869							3295	0.0455	187	07
levels	levels	3	T	C	11	6492	36		921	4867	11	26
Sex	Bioavail											
hormone-b	able								-0.		8.6	
inding	testoster	rs6							016		996	18
globulin	one	316							6928	0.5823	825	07
levels	levels	95	G	T	11	3303	62		6	4634	47	26
Sex	Bioavail											
hormone-b	able										3.8	
inding	testoster	rs6								0.0	001	18
globulin	one	422							9303	0.7928	129	07
levels	levels	513	A	G	1	2467	96		507	0077	18	26
Sex	Bioavail											
hormone-b	able								-0.		3.8	
inding	testoster	rs6							010		001	18
globulin	one	480							6963	0.6696	931	07
levels	levels	299	G	C	10	1393	46		5	0057	17	26
Sex	Bioavail											
hormone-b	able								-0.		4.7	
inding	testoster	rs6							1000	020	000	18
globulin	one	532							4224	0.7064	099	07
levels	levels	796	G	A	4	2	04		3	4644	51	26
Sex	Bioavail											
hormone-b	able								-0.		1.7	
inding	testoster	rs6							1213	007	999	18
globulin	one	541							3803	0.3796	737	07
levels	levels	725	A	C	2	2	09		37	627	09	26
Sex	Bioavail	rs6	C	T	2	1655	0.4029		0.0	0.0012	6.2	18

hormone-b	able	717				3966	74	113	4935	001	07
inding	testoster	858				1		005		2e-	26
globulin	one									21	
levels	levels										
Sex	Bioavail										
hormone-b	able							-0.		2.9	
inding	testoster	rs6						032		998	18
globulin	one	736				4251	0.9787	912	0.0042	5e-	07
levels	levels	913	G	A	2	0018	16	1	3623	15	26
Sex	Bioavail										
hormone-b	able									3.5	
inding	testoster	rs6						-0.		002	18
globulin	one	758				7053	0.0667	016	0.0024	6e-	07
levels	levels	199	T	C	2	7173	65	905	6789	12	26
Sex	Bioavail										
hormone-b	able									2.0	
inding	testoster	rs6						0.0		999	18
globulin	one	792				2452	0.6940	120	0.0013	1e-	07
levels	levels	725	G	A	3	0283	54	526	744	21	26
Sex	Bioavail										
hormone-b	able							-0.		7.3	
inding	testoster	rs6				1303		008		994	18
globulin	one	900				7581	0.6881	904	0.0013	6e-	07
levels	levels	473	G	A	6	0	61	29	3223	12	26
Sex	Bioavail										
hormone-b	able							-0.		1.1	
inding	testoster	rs6						011		000	18
globulin	one	939				4170	0.2618	280	0.0014	2e-	07
levels	levels	861	A	G	6	3041	47	6	2004	15	26
Sex	Bioavail										
hormone-b	able									9.8	
inding	testoster	rs6						0.0		992	18
globulin	one	950				9791		316	0.0015	e-9	07
levels	levels	023	G	T	7	5635	0.8144	741	7952	6	26
Sex	Bioavail										
hormone-b	able									9.7	
inding	testoster	rs7						0.0		006	18
globulin	one	085				6476	0.1040	305	0.0020	3e-	07
levels	levels	615	A	G	10	8990	62	713	0364	59	26
Sex	Bioavail										
hormone-b	able							-0.		6.7	
inding	testoster	rs7						010		998	18
globulin	one	092				6442	0.8506	801	0.0017	6e-	07
levels	levels	853	T	C	10	9307	78	4	1373	11	26

Sex	Bioavail											
hormone-b	able	rs7								3.6		
inding	testoster	127				6193	0.2149	089	0.0015	999	18	
globulin	one	472	T	C	11	7658	18	718	0774	09	26	
levels	levels											
Sex	Bioavail											
hormone-b	able	rs7								0.0		
inding	testoster	148								068	999	18
globulin	one	054				5996	0.3821	865	0.0013	7e-	07	
levels	levels	2	A	C	15	6306	97	6	0727	08	26	
Sex	Bioavail											
hormone-b	able	rs7								-0.	3.8	
inding	testoster	177				4028	0.3488	280	0.0012	999	18	
globulin	one	179	C	T	15	7982	82	03	9819	08	26	
levels	levels											
Sex	Bioavail											
hormone-b	able	rs7								-0.	7.7	
inding	testoster	201								006	999	18
globulin	one	30	T	G	16	1113	0.4044	592	0.0012	2e-	07	
levels	levels	2633				37		78	5987	09	26	
Sex	Bioavail											
hormone-b	able	rs7								-0.	5.1	
inding	testoster	225				7324	0.8325	343	0.0016	999	18	
globulin	one	349	A	G	17	0009	22	7	0389	6e-	07	
levels	levels									17	26	
Sex	Bioavail											
hormone-b	able	rs7								0.0	2.5	
inding	testoster	266				1041		092		999	18	
globulin	one	681				2914	0.2044	226	0.0015	8e-	07	
levels	levels	7	A	G	4	1	51	8	249	10	26	
Sex	Bioavail											
hormone-b	able	rs7									2.9	
inding	testoster	268								0.0	998	18
globulin	one	392				5073	0.0196	339	0.0044	5e-	07	
levels	levels	3	C	T	14	5947	79	786	3863	16	26	
Sex	Bioavail											
hormone-b	able	rs7									7.1	
inding	testoster	278								0.0	000	18
globulin	one	758				3301	0.0233	246	0.0040	3e-	07	
levels	levels	1	A	G	2	2808	97	186	9905	10	26	
Sex	Bioavail	rs7								-0.	3.4	
hormone-b	able	284								065	001	18
inding	testoster	281				7296	0.0333	357	0.0035	7e-	07	
globulin	one	1	T	C	17	899	89	8	7483	77	26	

levels	levels											
Sex	Bioavail											
hormone-b	able	rs7									6.2	
inding	testoster	292						0.0		001	18	
globulin	one	984				6168	0.0765	196	0.0023	2e-	07	
levels	levels	7	A	G	1	4630	46	337	0744	18	26	
Sex	Bioavail											
hormone-b	able	rs7						-0.		4.7		
inding	testoster	294				1781		012		000	18	
globulin	one	811				6708	0.0948	284	0.0020	2e-	07	
levels	levels	5	T	C	2	6	7	8	9101	09	26	
Sex	Bioavail											
hormone-b	able	rs7									1.5	
inding	testoster	314				1115		0.0		000	18	
globulin	one	314				2202	0.0684	301	0.0024	3e-	07	
levels	levels	285	G	T	12	6	74	165	3544	41	26	
Sex	Bioavail											
hormone-b	able	rs7						0.0		2.1		
inding	testoster	318						068		999	18	
globulin	one	318				3389	0.6650	962	0.0013	9e-	07	
levels	levels	39	A	G	19	9065	34	6	066	08	26	
Sex	Bioavail											
hormone-b	able	rs7									1.8	
inding	testoster	384						0.0		001	18	
globulin	one	384				4432	0.2162	309	0.0014	1e-	07	
levels	levels	09	G	C	22	4727	44	602	9718	96	26	
Sex	Bioavail											
hormone-b	able	rs7						-0.				
inding	testoster	455				1171		008			18	
globulin	one	159				7756	0.2439	368	0.0014	1e-	07	
levels	levels	8	C	A	9	6	84	83	3759	09	26	
Sex	Bioavail											
hormone-b	able	rs7						-0.		3.1		
inding	testoster	513						029		002	18	
globulin	one	074				2541	0.0715	602	0.0023	7e-	07	
levels	levels	4	C	G	12	0741	54	8	8856	39	26	
Sex	Bioavail											
hormone-b	able	rs7						0.0		1.0		
inding	testoster	540				2002		093		999	18	
globulin	one	540				6561	0.8187	657	0.0015	9e-	07	
levels	levels	115	C	A	1	8	22	9	874	09	26	
Sex	Bioavail	rs7						-0.		2.1	18	
hormone-b	able	563				1804	0.2169	008	0.0015	999	07	
inding	testoster	164	C	T	4	9216	19	497	2246	9e-	26	

globulin	one	2							96		08	
levels	levels											
Sex	Bioavail											
hormone-b	able	rs7									3.6	
inding	testoster	748					1110		0.0		999	18
globulin	one	356					9688	0.0169	303	0.0048	9e-	07
levels	levels	4	T	C	4	3	78		068	5249	10	26
Sex	Bioavail											
hormone-b	able										6.0	
inding	testoster	rs7							0.0		995	18
globulin	one	767					9927	0.0673	152	0.0024	8e-	07
levels	levels	46	T	C	7	0539	12		833	5492	11	26
Sex	Bioavail											
hormone-b	able								0.0			
inding	testoster	rs7					1163		074		2.1	18
globulin	one	773					6314	0.4011	937	0.0012	e-0	07
levels	levels	423	G	A	6	9	4		3	5965	9	26
Sex	Bioavail											
hormone-b	able										6.0	
inding	testoster	rs7					1390		0.0		995	18
globulin	one	860					8967	0.5738	123	0.0012	8e-	07
levels	levels	634	A	G	9	9	24		675	4597	25	26
Sex	Bioavail											
hormone-b	able	rs7							0.0		2.3	
inding	testoster	867					1130		089		999	18
globulin	one	931					3390	0.1871	348	0.0015	9e-	07
levels	levels	8	G	T	9	7	87		4	856	09	26
Sex	Bioavail											
hormone-b	able	rs7									8.9	
inding	testoster	889					1598		0.0		002	18
globulin	one	074					3447	0.1088	136	0.0019	e-1	07
levels	levels	5	A	G	4	4	78		529	8065	2	26
Sex	Bioavail											
hormone-b	able								0.0		1.0	
inding	testoster	rs7					1056		077		999	18
globulin	one	920					6817	0.5044	388	0.0012	9e-	07
levels	levels	217	T	C	10	2	13		2	2079	09	26
Sex	Bioavail											
hormone-b	able	rs7							-0.		3.5	
inding	testoster	928					1722		039		999	18
globulin	one	717					9450	0.0317	704	0.0036	8e-	07
levels	levels	8	A	G	3	0	51		7	8077	30	26
Sex	Bioavail	rs7					5373	0.0138	-0.	0.0053	5.0	18
hormone-b	able	939	C	A	15	9426	2		096	6866	003	07

inding	testoster	186							025		5e-	26
globulin	one	2							1		81	
levels	levels											
Sex	Bioavail											
hormone-b	able										5.1	
inding	testoster	rs7					1214		0.0		003	18
globulin	one	970					2337	0.6230	194	0.0012	5e-	07
levels	levels	695	A	G	12	6	1		022	7145	54	26
Sex	Bioavail											
hormone-b	able	rs7							-0.		2.6	
inding	testoster	971							024		001	18
globulin	one	779					5262	0.1550	610	0.0016	6e-	07
levels	levels	3	A	G	10	267	45		5	8938	55	26
Sex	Bioavail											
hormone-b	able	rs7							-0.		1.9	
inding	testoster	976							017		998	18
globulin	one	070					5329	0.1130	595	0.0019	6e-	07
levels	levels	5	T	G	5	8716	23		9	4631	21	26
Sex	Bioavail											
hormone-b	able								0.0		4.3	
inding	testoster	rs8							091		003	18
globulin	one	071					7379	0.3065	897	0.0012	1e-	07
levels	levels	650	A	G	17	7871	66		5	9802	13	26
Sex	Bioavail											
hormone-b	able								-0.		1.2	
inding	testoster	rs8					1534		007		999	18
globulin	one	160					2141	0.6214	737	0.0012	9e-	07
levels	levels	40	T	G	5	2	49		07	6761	09	26
Sex	Bioavail											
hormone-b	able								-0.		3.6	
inding	testoster	rs8							011		999	18
globulin	one	205					6667	0.1374	208	0.0017	9e-	07
levels	levels	03	A	C	9	928	37		8	888	11	26
Sex	Bioavail											
hormone-b	able								-0.		1.0	
inding	testoster	rs8					2342		007		999	18
globulin	one	387					9479	0.6794	318	0.0013	9e-	07
levels	levels	16	C	G	2	1	94		08	1343	09	26
Sex	Bioavail											
hormone-b	able								0.0		2.0	
inding	testoster	rs8							097		999	18
globulin	one	491					2819	0.5014	447	0.0012	1e-	07
levels	levels	35	A	G	7	6413	03		1	2939	17	26
Sex	Bioavail	rs8	A	G	8	2287	0.5903		-0.	0.0012	2.9	18

hormone-b	able	764					3533	37	007	6472	998	07
inding	testoster	35							567		5e-	26
globulin	one								35		11	
levels	levels											
Sex	Bioavail											
hormone-b	able								-0.		5.5	
inding	testoster	rs9							015		004	18
globulin	one	265					3129	0.8357	354	0.0017	7e-	07
levels	levels	285	C	T	6		2157	23	7	2826	19	26
Sex	Bioavail											
hormone-b	able								-0.		5.0	
inding	testoster	rs9					1915		008		003	18
globulin	one	288					8525	0.3742	989	0.0012	5e-	07
levels	levels	177	A	G	2		2	99	49	7263	13	26
Sex	Bioavail											
hormone-b	able								-0.		1.2	
inding	testoster	rs9							007		999	18
globulin	one	304					4760	0.7644	917	0.0014	9e-	07
levels	levels	665	A	T	19		2577	8	5	5512	08	26
Sex	Bioavail											
hormone-b	able								-0.			
inding	testoster	rs9							015			18
globulin	one	379					7231	0.1153	326	0.0019	1e-	07
levels	levels	084	A	G	6		843	46	4	8813	15	26
Sex	Bioavail											
hormone-b	able										1.3	
inding	testoster	rs9							0.0		999	18
globulin	one	461					2593	0.3969	108	0.0012	1e-	07
levels	levels	224	T	G	6		6402	51	95	6004	20	26
Sex	Bioavail											
hormone-b	able								-0.		3.7	
inding	testoster								009		999	18
globulin	one	rs9					3261	0.1829	475	0.0017	7e-	07
levels	levels	492	C	A	6		0976	92	56	6134	09	26
Sex	Bioavail											
hormone-b	able								-0.		1.1	
inding	testoster	rs9					1314		018		000	18
globulin	one	697					6874	0.1452	744	0.0017	2e-	07
levels	levels	210	A	G	9		0	55	1	5123	29	26
Sex	Bioavail											
hormone-b	able								-0.		1.2	
inding	testoster	rs9							009		999	18
globulin	one	739					5378	0.1679	481	0.0016	9e-	07
levels	levels	640	G	A	12		3174	95	38	6929	08	26

Supplementary Table S8. Instruments for causal estimation from SHBG to estradiol level.

Exposure	Outcome	SNP	Effect allele	Other allele	Chromosome	Genetic position	Effect allele frequency	Beta	Standard error of beta	P-value	Sample size
Sex hormone-binding globulin levels	Estradiol level	rs10027275	C	G	4	614898149	0.74126	-0.012534	0.00141198	981e-21	180726
Sex hormone-binding globulin levels	Estradiol level	rs10041660	C	T	5	412265022	0.50476	0.075527	0.00124541	993e-10	180726
Sex hormone-binding globulin levels	Estradiol level	rs10107182	T	C	8	859392737	0.663202	0.0124022	0.00130257	027e-22	180726
Sex hormone-binding globulin levels	Estradiol level	rs1037169	C	T	11	113361005	0.687205	-0.0115299	0.00133154	999e-20	180726
Sex hormone-binding globulin levels	Estradiol level	rs10733789	C	T	10	1064948684	0.313039	0.0492531	0.00131963	1e-200	180726
Sex hormone-binding globulin levels	Estradiol level	rs10737683	A	G	1	119689482	0.236779	-0.010124	0.00144072	031e-12	180726
Sex hormone-binding globulin levels	Estradiol level	rs10868080	A	T	9	986626769	0.744477	-0.0213279	0.00140815	003e-57	180726
Sex hormone-binding globulin levels	Estradiol level	rs1087177	G	A	18	1857851763	0.236131	-0.0098407	0.00145802	035e-11	180726

globulin	level	7								7			
levels	s												
Sex	Estr												
hormone-bi	adio	rs1											
nding	l	088					1372		0.0			9.30	
globulin	level	158					5607	0.2380	133	0.0014	037	180	
levels	s	2	A	G	9	8	37		501	5058	e-21	726	
Sex	Estr												
hormone-bi	adio	rs1							-0.0				
nding	l	089					1020		096			8.90	
globulin	level	527					8494	0.3408	154	0.0013	02e-	180	
levels	s	7	G	A	11	0	06		7	0251	15	726	
Sex	Estr												
hormone-bi	adio	rs1							0.0				
nding	l	107							092			8.00	
globulin	level	525					1514	0.2960	234	0.0013	018	180	
levels	s	3	A	C	16	8646	81		5	5476	e-12	726	
Sex	Estr												
hormone-bi	adio	rs1							-0.0				
nding	l	111					1028		073			4.60	
globulin	level	127					3812	0.7372	107	0.0013	002	180	
levels	s	4	A	G	12	8	79		2	8631	e-08	726	
Sex	Estr												
hormone-bi	adio	rs1							0.0				
nding	l	115							078			2.19	
globulin	level	897					7323	0.2877	724	0.0013	999	180	
levels	s	6	T	C	14	0278	21		2	6551	e-08	726	
Sex	Estr												
hormone-bi	adio	rs1							-0.0				
nding	l	115										3.10	
globulin	level	934					2594	0.6808	107	0.0013	027	180	
levels	s	7	T	C	14	7436	71		09	2486	e-17	726	
Sex	Estr												
hormone-bi	adio	rs1											
nding	l	117					1709		0.0			2.80	
globulin	level	521					9489	0.0964	127	0.0020	027	180	
levels	s	58	T	C	4	4	96		725	799	e-11	726	
Sex	Estr												
hormone-bi	adio	rs1											
nding	l	119							0.0			8.19	
globulin	level	812					5001	0.0789	261	0.0022	974	180	
levels	s	33	G	T	19	6479	84		638	7727	e-33	726	
Sex	Estr	rs1					1150	0.2318	-0.0	0.0014	2.30	180	
hormone-bi	adio	120	T	C	13	4746	57		088	6895	001	726	

nding	l	359				4		12		e-10	
globulin	level	22									
levels	s										
Sex	Estr										
hormone-bi	adio	rs1									
nding	l	132						-0.0		2.90	
globulin	level	484				6610	0.0482	143	0.0029	001	180
levels	s	43	G	A	10	2542	94	674	4711	e-08	726
Sex	Estr										
hormone-bi	adio	rs1								3.49	
nding	l	141						-0.0		945	
globulin	level	653				2702	0.0231	871	0.0040	e-11	180
levels	s	49	C	G	1	1913	58	136	8954	1	726
Sex	Estr										
hormone-bi	adio	rs1									
nding	l	149				1504		0.0		4.19	
globulin	level	492				9824	0.1113	187	0.0019	952	180
levels	s	63	C	T	7	5	88	991	6067	e-25	726
Sex	Estr										
hormone-bi	adio	rs1									
nding	l	152				1848		-0.0		3.69	
globulin	level	766				6513	0.0166	285	0.0049	999	180
levels	s	19	A	T	1	2	26	399	3428	e-11	726
Sex	Estr										
hormone-bi	adio										
nding	l	rs1				1359		-0.0		4.20	
globulin	level	154				2519	0.7730	276	0.0014	049	180
levels	s	988	A	T	3	1	31	587	6575	e-88	726
Sex	Estr										
hormone-bi	adio	rs1						0.0			
nding	l	156						095		1.20	
globulin	level	472				2178	0.2387	530	0.0014	005	180
levels	s	2	T	C	11	330	4	7	6515	e-13	726
Sex	Estr										
hormone-bi	adio	rs1						0.0			
nding	l	161				1117		086			
globulin	level	025				3412	0.2166	783	0.0014	2.1e	180
levels	s	6	T	C	12	1	65	8	9523	-09	726
Sex	Estr										
hormone-bi	adio	rs1									
nding	l	162						-0.0		1.39	
globulin	level	179				2487	0.4536	127	0.0012	991	180
levels	s	2	T	C	14	1926	47	49	4244	e-25	726
Sex	Estr	rs1	T	C	13	1147	0.1707	0.0	0.0017	1.29	180

hormone-binding globulin levels	radioassays	16338429					67040	52	0985678	2794	999e-09	726
Sex	Estr											
hormone-binding globulin levels	radioassays	rs1166624					38229926	0.047306	163325	0.0029014	999e-09	180726
Sex	Estr		A	G	19							
hormone-binding globulin levels	radioassays	rs1173440					23882519	0.293256	7697	0.00134935	997e-10	180726
Sex	Estr		G	A	4							
hormone-binding globulin levels	radioassays	rs1173915					72927292	0.427811	9379	0.00124625	991e-12	180726
Sex	Estr		T	C	5							
hormone-binding globulin levels	radioassays	rs1174381					137802404	0.560069	3646	0.00124066	986e-12	180726
Sex	Estr		T	C	5							
hormone-binding globulin levels	radioassays	rs1176641					101036562	0.01211	51561	0.00573803	999e-22	180726
Sex	Estr		T	C	12							
hormone-binding globulin levels	radioassays	rs1177344					81061523	0.061081	133401	0.00261459	1.2e-08	180726
Sex	Estr		T	C	8							
hormone-binding globulin levels	radioassays	rs1179218					81473835	0.066515	21022	0.00250814	002e-18	180726
Sex	Estr		G	A	8							
hormone-binding globulin levels	radioassays	rs1180370					21203424	0.040459	222618	0.00313784	999e-13	180726
Sex	Estr		T	A	12							

Sex	Estr											
hormone-binding globulin levels	radio level	rs1 185692										
	s	6	A	G	15	96223649	0.448829	-0.0115	0.0012	1.9002e-22	180726	
Sex	Estr											
hormone-binding globulin levels	radio level	rs1 187030										
	s	7	G	A	17	7617787	0.780506	0.0526	0.0014	1e-200	180726	
Sex	Estr											
hormone-binding globulin levels	radio level	rs1 213813										
	s	6	A	T	1	14984430	0.086596	0.0152	0.0022	6.29941e-14	180726	
Sex	Estr											
hormone-binding globulin levels	radio level	rs1 229492										
	s	492	C	T	7	81564122	0.731518	-0.0114	0.0013	6.29941e-18	180726	
Sex	Estr											
hormone-binding globulin levels	radio level	rs1 260552										
	s	4	G	A	18	22073551	0.28752	-0.0479	0.0013	1.2e-08	180726	
Sex	Estr											
hormone-binding globulin levels	radio level	rs1 261104										
	s	6	A	G	19	14291704	0.150636	-0.0096	0.0017	7.00003e-09	180726	
Sex	Estr											
hormone-binding globulin levels	radio level	rs1 269445										
	s	0	C	T	2	22001963	0.675226	-0.0640	0.0013	3.79997e-08	180726	
Sex	Estr											
hormone-binding globulin levels	radio level	rs1 269630										
	s	4	G	C	3	16948127	0.265645	0.0310	0.0013	1.7e-09	180726	
Sex	Estr											
hormone-binding globulin	radio level	rs1 279770										
	6	A	G	11	65561369	0.234588	0.0120	0.0014	6.09958e-17	180726		

levels	s											
Sex	Estr											
hormone-binding	radio	rs1										
globulin	level	295						0.0		7.39		
levels	s	056				1799	0.6139	110	0.0012	946	180	
Sex	Estr	2	T	C	17	5166	66	236	2815	e-21	726	
hormone-binding	radio	rs1						0.0				
globulin	level	295						082		7.49		
levels	s	308				5926	0.7950	792	0.0014	998	180	
Sex	Estr	7	T	C	17	5201	92	4	8126	e-09	726	
hormone-binding	radio	rs1						0.0				
globulin	level	298				1485		079		9.59		
levels	s	959				9123	0.2916	174	0.0013	997	180	
Sex	Estr	6	T	G	2	2	51	7	5721	e-10	726	
hormone-binding	radio	rs1										
globulin	level	310						-0.0		1.20		
levels	s	821				3443	0.6172	229	0.0012	005	180	
Sex	Estr	8	G	A	4	931	54	943	7338	e-79	726	
hormone-binding	radio	rs1										
globulin	level	315						-0.0		7.59		
levels	s	006				8820	0.4376	207	0.0012	976	180	
Sex	Estr	8	G	A	4	3828	37	329	3764	e-67	726	
hormone-binding	radio	rs1						0.0				
globulin	level	337						082		2.19		
levels	s	904				7425	0.2800	885	0.0013	999	180	
Sex	Estr	3	C	T	14	0126	09	2	9928	e-10	726	
hormone-binding	radio	rs1										
globulin	level	386						-0.0		3.50		
levels	s	115				5622	0.0768	148	0.0023	026	180	
Sex	Estr	41	C	T	5	8040	23	471	084	e-12	726	
hormone-binding	radio	rs1						-0.0				
globulin	level	388				5016	0.2152	367	0.0015	2e-0	180	
levels	s	20	C	T	22	4078	84	6	0694	8	726	
Sex	Estr	rs1				2197		0.0		2.69		
hormone-binding	radio	415				3000	0.3182	074	0.0013	998	180	
nding	l	293	T	A	1	6	82	343	1195	e-09	726	

globulin	level												1
levels	s												
Sex	Estr												
hormone-bi	adio	rs1											
nding	l	446					2354		0.0			1.40	
globulin	level	479					6760	0.0873	123	0.0021	001	180	
levels	s	26	A	G	1	7	56		175	7179	e-09	726	
Sex	Estr												
hormone-bi	adio	rs1											
nding	l	491							0.0			9.20	
globulin	level	316					3554	0.1743	205	0.0016	026	180	
levels	s	00	T	C	19	9122	8		782	2554	e-42	726	
Sex	Estr												
hormone-bi	adio	rs1											
nding	l	508							-0.0			9.39	
globulin	level	443					4372	0.0249	745	0.0039	94e-	180	
levels	s	04	C	A	15	6625	05		127	585	85	726	
Sex	Estr												
hormone-bi	adio								-0.0				
nding	l	rs1							075			8.40	
globulin	level	538					9482	0.5031	748	0.0012	04e-	180	
levels	s	648	G	A	10	0860	97		5	2235	13	726	
Sex	Estr												
hormone-bi	adio												
nding	l	rs1					1305		0.0			1.50	
globulin	level	579					8555	0.3036	121	0.0013	003	180	
levels	s	35	G	T	7	3	01		026	4199	e-22	726	
Sex	Estr												
hormone-bi	adio	rs1											
nding	l	703							0.0			1.20	
globulin	level	632					1238	0.1217	170	0.0018	005	180	
levels	s	6	G	A	3	9313	98		022	7533	e-18	726	
Sex	Estr												
hormone-bi	adio	rs1											
nding	l	714							0.0			9.70	
globulin	level	575					7302	0.1610	107	0.0016	063	180	
levels	s	0	T	C	7	6378	26		381	7262	e-11	726	
Sex	Estr												
hormone-bi	adio												
nding	l	rs1					1076		-0.0			4.60	
globulin	level	730					0561	0.6547	260	0.0012	045	180	
levels	s	865	T	G	1	1	68		475	9437	e-98	726	
Sex	Estr	rs1					2796	0.2872	0.0	0.0013	2.29	180	
hormone-bi	adio	736	A	G	19	021	61		173	6123	985	726	

nding	l	180							849		e-41	
globulin	level											
levels	s											
Sex	Estr											
hormone-bi	adio								-0.0			
nding	l	rs1							077		4.20	
globulin	level	745				6154	0.3758	483	0.0012	001	180	
levels	s	29	C	T	11	3961	89	9	7239	e-10	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs1							0.0		4.19	
globulin	level	758				9484	0.0484	304	0.0028	952	180	
levels	s	0	A	T	14	7262	63	227	6953	e-29	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs1							-0.0		5.69	
globulin	level	776				3419	0.9693	226	0.0035	994	180	
levels	s	899	A	G	6	3230	25	948	717	e-10	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs1							-0.0		5.79	
globulin	level	782				8107	0.3806	127	0.0012	963	180	
levels	s	652	A	T	10	4125	25	414	7529	e-27	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs1							-0.0		1.80	
globulin	level	801				6421	0.0298	334	0.0035	011	180	
levels	s	689	C	A	17	0580	71	3	0564	e-21	726	
Sex	Estr											
hormone-bi	adio								-0.0			
nding	l	rs1							084		2.49	
globulin	level	860				1384	0.4432	846	0.0011	977	180	
levels	s	018	A	G	17	6723	51	8	9697	e-13	726	
Sex	Estr											
hormone-bi	adio	rs1										
nding	l	870							-0.0		7.70	
globulin	level	792				7438	0.0139	725	0.0051	016	180	
levels	s	66	A	G	17	801	34	88	5995	e-47	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs1							-0.0		4.60	
globulin	level	871				2135	0.1517	325	0.0017	045	180	
levels	s	395	G	A	12	2315	89	026	1209	e-88	726	
Sex	Estr	rs1	A	G	7	1164	0.4530	-0.0	0.0012	9.60	180	

hormone-binding globulin levels	radioassays	874					4509	37	082	3975	064	726
Sex	Estr	37					1		696		e-14	
hormone-binding globulin levels	radioassays								6			
Sex	Estr											
hormone-binding globulin levels	radioassays	rs2										
Sex	Estr	022							0.0		3.69	
hormone-binding globulin levels	radioassays	007					1734	0.0385	711	0.0034	999	180
Sex	Estr	60	C	G	19	6854	92		034	8775	e-98	726
hormone-binding globulin levels	radioassays											
Sex	Estr											
hormone-binding globulin levels	radioassays	rs2							-0.0			
Sex	Estr	045					2681	0.1946	118	0.0015	1e-1	180
hormone-binding globulin levels	radioassays	345	G	A	1	8894	45		503	8288	3	726
Sex	Estr											
hormone-binding globulin levels	radioassays								0.0			
Sex	Estr								068			
hormone-binding globulin levels	radioassays	073					3536	0.3105	332	0.0013	2.1e	180
Sex	Estr	503	G	C	4	176	31		4	2685	-08	726
hormone-binding globulin levels	radioassays											
Sex	Estr								-0.0			
hormone-binding globulin levels	radioassays	rs2							088		1.80	
Sex	Estr	123					3522	0.6058	618	0.0012	011	180
hormone-binding globulin levels	radioassays	050	T	A	15	4247	2		7	6102	e-13	726
Sex	Estr											
hormone-binding globulin levels	radioassays											
Sex	Estr											
hormone-binding globulin levels	radioassays	rs2					2270		-0.0		1.39	
Sex	Estr	138					9515	0.6481	130	0.0012	991	180
hormone-binding globulin levels	radioassays	161	C	T	2	9	5		685	8154	e-24	726
Sex	Estr											
hormone-binding globulin levels	radioassays											
Sex	Estr								0.0		5.50	
hormone-binding globulin levels	radioassays	239					7301	0.3496	110	0.0013	047	180
Sex	Estr	222	G	A	14	1885	19		595	0116	e-17	726
hormone-binding globulin levels	radioassays											
Sex	Estr											
hormone-binding globulin levels	radioassays	rs2							-0.0		6.29	
Sex	Estr	256					6571	0.8535	140	0.0017	941	180
hormone-binding globulin levels	radioassays	657	G	A	10	2613	07		088	3169	e-18	726
Sex	Estr											
hormone-binding globulin levels	radioassays											
Sex	Estr								-0.0		2.90	
hormone-binding globulin levels	radioassays	259					9361	0.4769	118	0.0012	001	180
Sex	Estr	305	A	G	10	5903	95		863	2291	e-22	726

Sex	Estr											
hormone-binding	radio							-0.0				
globulin levels	level	rs2				1710		078		4.09		
	s	266				7696	0.4166	349	0.0012	996	180	
		782	A	G	1	6	47	3	4201	e-10	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	level	rs2						0.0		2.09		
	s	298				9524	0.3062	111	0.0013	991	180	
		058	T	C	13	8566	44	891	408	e-18	726	
Sex	Estr											
hormone-binding	radio							-0.0				
globulin levels	level	rs2				1054		067		4.30		
	s	301				0150	0.2750	890	0.0013	002	180	
		050	T	C	3	7	57	6	7554	e-08	726	
Sex	Estr											
hormone-binding	radio							-0.0				
globulin levels	level	rs2								4.00		
	s	330				2429	0.5660	100	0.0012	037	180	
		649	A	G	22	5053	63	381	6705	e-17	726	
Sex	Estr											
hormone-binding	radio							-0.0				
globulin levels	level	rs2								1.29		
	s	351				1624	0.3875	101	0.0012	987	180	
		958	A	C	11	8020	23	948	6369	e-17	726	
Sex	Estr											
hormone-binding	radio							-0.0				
globulin levels	level	rs2								3.09		
	s	575				1817	0.9197	120	0.0022	999	180	
		368	G	T	16	397	07	002	7266	e-08	726	
Sex	Estr											
hormone-binding	radio							-0.0				
globulin levels	level	rs2								8.10		
	s	612				6621	0.0960	120	0.0020	009	180	
		069	G	C	12	5292	31	066	917	e-09	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	level	rs2				2209		0.0		3.40		
	s	642				7002	0.7018	150	0.0013	017	180	
		438	G	A	1	8	28	028	3645	e-31	726	
Sex	Estr							0.0				
hormone-binding	radio	rs2				1019		090		7.89		
globulin levels	level	694				0780	0.6206	202	0.0012	951	180	
		157	C	T	7	8	54	4	6663	e-14	726	

levels	s											
Sex	Estr											
hormone-bi	adio	rs2										
nding	l	1456						-0.0			5.30	
globulin	level	721					7701	0.5251	112	0.0012	029	180
levels	s	195	C	T	8	1	3	875	38		e-21	726
Sex	Estr											
hormone-bi	adio	rs2										2.39
nding	l	839							-0.0			883
globulin	level	486					4745	0.4603	295	0.0012	e-13	180
levels	s	4	A	G	17		0775	08	18	0382	8	726
Sex	Estr											
hormone-bi	adio	rs2										
nding	l	850							0.0			5.70
globulin	level	749					7719	0.3757	139	0.0012	033	180
levels	s	1	A	G	4		7651	06	975	668	e-29	726
Sex	Estr											
hormone-bi	adio	rs2										
nding	l	854					1102		-0.0			4.90
globulin	level	928					3013	0.7741	130	0.0015	004	180
levels	s	7	A	G	1		8	48	821	8912	e-17	726
Sex	Estr											
hormone-bi	adio	rs2							-0.0			
nding	l	860					1265		064			
globulin	level	176					0003	0.4181	411	0.0012	1.5e	180
levels	s	1	G	C	8		1	25	9	6207	-08	726
Sex	Estr											
hormone-bi	adio	rs2										
nding	l	1019							0.0			3.40
globulin	level	862					1206	0.5003	108	0.0012	017	180
levels	s	954	C	T	10		4	43	541	1838	e-19	726
Sex	Estr											
hormone-bi	adio	rs2							0.0			
nding	l	872							092			4.79
globulin	level	872					6234	0.2456	882	0.0014	954	180
levels	s	881	A	G	20		2801	62	2	3199	e-11	726
Sex	Estr											
hormone-bi	adio	rs2										
nding	l	877							0.0			1.89
globulin	level	302					8807	0.1014	119	0.0020	998	180
levels	s	7	A	G	4		6227	46	206	5087	e-10	726
Sex	Estr	rs2							0.1			
hormone-bi	adio	892					9484	0.0198	383	0.0044	1e-2	180
nding	l	947	T	C	14		4947	23	03	1884	00	726

globulin	level	4											
levels	s												
Sex	Estr												
hormone-bi	adio								-0.0				
nding	l	rs2							097			1.09	
globulin	level	896				4647	0.1935	077	0.0015	999	180		
levels	s	906	C	T	16	417	87	2	6221	e-10	726		
Sex	Estr												
hormone-bi	adio												
nding	l	rs2							0.0			3.80	
globulin	level	905				2952	0.7051	140	0.0013	014	180		
levels	s	801	T	C	17	4974	21	121	0719	e-28	726		
Sex	Estr												
hormone-bi	adio												
nding	l	rs2				1580			-0.0			2.39	
globulin	level	914				1385	0.2109	085	0.0015	999	180		
levels	s	233	C	T	5	6	3	613	1926	e-09	726		
Sex	Estr												
hormone-bi	adio								-0.0				
nding	l	rs2							066				
globulin	level	924				6888	0.4290	456	0.0012	5e-0	180		
levels	s	545	A	G	11	3281	92	4	4894	9	726		
Sex	Estr												
hormone-bi	adio								0.0				
nding	l	rs2							074			6.80	
globulin	level	989				4071	0.3402	375	0.0013	002	180		
levels	s	330	G	A	21	6209	97	9	1431	e-09	726		
Sex	Estr												
hormone-bi	adio								0.0				
nding	l	rs3							076			7.90	
globulin	level	006				3117	0.3799	724	0.0012	005	180		
levels	s	593	C	G	10	1626	29	9	5767	e-10	726		
Sex	Estr												
hormone-bi	adio								0.0				
nding	l	rs3				1504			076			6.80	
globulin	level	173				9108	0.5733	835	0.0012	002	180		
levels	s	833	G	T	7	4	79	6	443	e-09	726		
Sex	Estr												
hormone-bi	adio	rs3											
nding	l	425							0.0			4.00	
globulin	level	597				4638	0.1194	272	0.0019	037	180		
levels	s	9	T	C	19	4830	63	468	0546	e-51	726		
Sex	Estr	rs3				5902	0.1798	0.0	0.0016	1.7e	180		
hormone-bi	adio	441	A	G	19	3166	75	087	0777	-08	726		

nding	l	506							676			
globulin	level	2							1			
levels	s											
Sex	Estr											
hormone-bi	adio	rs3										
nding	l	458							-0.0		1.10	
globulin	level	783				3230	0.1555	125	0.0017	002	180	
levels	s	9	A	G	20	0671	51	669	0732	e-14	726	
Sex	Estr											
hormone-bi	adio	rs3										
nding	l	485							-0.0		9.30	
globulin	level	858				1945	0.0786	157	0.0022	037	180	
levels	s	8	G	C	19	7235	55	987	9031	e-15	726	
Sex	Estr											
hormone-bi	adio	rs3							-0.0			
nding	l	486							080		3.59	
globulin	level	925				1009	0.4287	993	0.0012	998	180	
levels	s	3	C	T	4	420	35	3	5064	e-12	726	
Sex	Estr											
hormone-bi	adio	rs3							-0.0			
nding	l	513							073		7.29	
globulin	level	529				2036	0.5190	733	0.0012	962	180	
levels	s	3	T	C	2	3666	66	2	2906	e-12	726	
Sex	Estr											
hormone-bi	adio	rs3							-0.0			
nding	l	523							076		2.30	
globulin	level	433				3566	0.2574	075	0.0014	001	180	
levels	s	7	T	C	9	1243	71	9	1397	e-08	726	
Sex	Estr											
hormone-bi	adio	rs3							-0.0		8.00	
nding	l	534										
globulin	level	608				2578	0.4438	104	0.0012	018	180	
levels	s	3	A	C	1	8425	54	562	3226	e-19	726	
Sex	Estr											
hormone-bi	adio	rs3										
nding	l	608							0.0		4.49	
globulin	level	619				1651	0.5789	167	0.0012	987	180	
levels	s	5	T	C	1	0894	71	429	3754	e-44	726	
Sex	Estr											
hormone-bi	adio	rs3							-0.0			
nding	l	730				6722	0.0403	188	0.0031	2.1e	180	
globulin	level	393	A	G	16	6405	98	678	6246	-10	726	
levels	s											
Sex	Estr	rs3	T	G	1	4003	0.1971	-0.0	0.0015	1.20	180	

hormone-binding globulin levels	radio level	768 321				5928	78	155 199	4112	005 e-23	726
Sex	Estr										
hormone-binding globulin levels	radio level	rs3 795						0.0 097		1.50	
Sex	Estr										
hormone-binding globulin levels	radio level	rs3 128	C	T	20	3977 4163	0.4836 32	741 7	0.0012 3946	003 e-17	180 726
Sex	Estr										
hormone-binding globulin levels	radio level	rs3 890						-0.0 111		1.99	
Sex	Estr										
hormone-binding globulin levels	radio level	rs3 483	T	G	19	7220 596	0.4422 64	111 819	0.0012 4431	986 e-21	180 726
Sex	Estr										
hormone-binding globulin levels	radio level	rs3 891						0.0 081		3.59	
Sex	Estr										
hormone-binding globulin levels	radio level	rs3 167	G	A	18	6584 23	0.2571 63	592 3	0.0014 729	998 e-08	180 726
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 027						-0.0 141		1.29	
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 0	C	A	5	5580 4552	0.7721 21	141 665	0.0014 6708	987 e-22	180 726
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 092						0.0 085		3.59	
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 465	G	A	18	5508 0437	0.6470 16	715 4	0.0013 0236	998 e-13	180 726
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 294						-0.0 088		3.19	
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 5	G	A	16	5854 5426	0.5115 8	129 6	0.0012 4194	963 e-13	180 726
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 297						-0.0 138		1.90	
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 769	A	G	17	7944 048	0.3895 63	138 222	0.0012 432	02e-28	180 726
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 327						0.0 070		3.79	
Sex	Estr										
hormone-binding globulin levels	radio level	rs4 534	A	C	4	1576 2787	0.3198 89	071 071	0.0013 1672	997 e-08	180 726

Sex	Estr											
hormone-binding	radio											
globulin levels	l	rs4										
	level	671				6490	0.7376	156	0.0014	001	180	
	s	607	C	T	2	5898	05	863	0192	e-33	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	l	rs4				2084						
	level	675				0275	0.4601	489	0.0012	027	180	
	s	682	C	T	2	0	9	6	3031	e-15	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	l	rs4										
	level	715				5262	0.6444	086	0.0012	986	180	
	s	316	T	C	6	8998	72	613	9252	e-13	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	l	rs4										
	level	719				1977	0.3970	132	0.0012	989	180	
	s	366	A	G	7	906	59	2	634	e-11	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	l	rs4										
	level	819				2013	0.2972	897	0.0013	5e-0	180	
	s	867	A	C	22	6379	11	5	5593	9	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	l	rs4										
	level	841				9183	0.9086	221	0.0021	991	180	
	s	133	G	A	8	664	81	33	4218	e-28	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	l	rs4										
	level	918				1139						
	s	722	T	C	10	4704	0.7274	131	0.0013	035	180	
	s	722	T	C	10	0	46	8	7242	e-14	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	l	rs5										
	level	407				5780	0.7544	177	0.0014	004	180	
	s	30	C	T	12	7114	18	235	2693	e-39	726	
Sex	Estr											
hormone-binding	radio											
globulin levels	l	rs5										
	level	572										
	s	943				8851	0.2652	104	0.0014	963	180	
	s	943	G	C	16	1548	78	733	0802	e-15	726	

levels	s											
Sex	Estr											
hormone-binding globulin levels	radioactivity	rs5										
	l	586										
	level	950										
	s	2	T	C	14	0	0.4951	108	3479	e-22	726	
Sex	Estr											
hormone-binding globulin levels	radioactivity	rs5										
	l	598										
	level	740										
	s	9	T	C	20	4956	0.0725	141	0.0023	999	180	
	s	9	T	C	20	9025	38	619	8657	e-09	726	
Sex	Estr											
hormone-binding globulin levels	radioactivity	rs5										
	l	607										
	level	734										
	s	5	C	G	7	4480	0.0712	136	0.0024	001	180	
	s	5	C	G	7	8650	31	246	0009	e-09	726	
Sex	Estr											
hormone-binding globulin levels	radioactivity	rs5										
	l	633										
	level	287										
	s	1	A	C	15	9671	0.2720	298	0.0013	e-11	180	
	s	1	A	C	15	4816	43	253	9111	1	726	
Sex	Estr											
hormone-binding globulin levels	radioactivity	rs5										
	l	715										
	level	876										
	s	1	G	A	3	7117	0.4363	456	0.0012	001	180	
	s	1	G	A	3	2	7	2	4159	e-09	726	
Sex	Estr											
hormone-binding globulin levels	radioactivity	rs5										
	l	841										
	level	455										
	s	5	C	A	20	3755	0.3057	129	0.0013	998	180	
	s	5	C	A	20	4152	98	3	4031	e-08	726	
Sex	Estr											
hormone-binding globulin levels	radioactivity	rs5										
	l	891										
	level	247										
	s	2	G	A	17	1626	0.5267	103	0.0011	2.5e	180	
	s	2	G	A	17	018	09	3	9919	-09	726	
Sex	Estr											
hormone-binding globulin levels	radioactivity	rs5										
	l	920										
	level	358										
	s	2	T	A	8	8142	0.1581	175	0.0016	961	180	
	s	2	T	A	8	4720	08	04	9193	e-30	726	
Sex	Estr	rs6										
hormone-binding globulin levels	radioactivity	001										
	l	814										
	l	814	G	A	19	3375	0.1210	131	0.0019	1e-1	180	
	l	814	G	A	19	572	31	5	8109	2	726	

globulin	level	7											
levels	s												
Sex	Estr												
hormone-bi	adio												
nding	l	rs6								-0.0		4.00	
globulin	level	005				2910	0.6727	168	0.0013	037	180		
levels	s	840	G	A	22	1357	01	747	1567	e-39	726		
Sex	Estr												
hormone-bi	adio									-0.0			
nding	l	rs6								078		1.99	
globulin	level	088				3290	0.4256	444	0.0012	986	180		
levels	s	461	T	G	20	5161	7	7	5342	e-11	726		
Sex	Estr												
hormone-bi	adio												
nding	l	rs6								0.0		7.50	
globulin	level	130				4305	0.4695	174	0.0012	067	180		
levels	s	613	T	C	20	4441	85	18	5777	e-45	726		
Sex	Estr												
hormone-bi	adio	rs6											
nding	l	168								0.0		5.30	
globulin	level	664				1508	0.2597	103	0.0014	029	180		
levels	s	4	G	A	1	819	71	828	7133	e-14	726		
Sex	Estr												
hormone-bi	adio	rs6											
nding	l	201								-0.0		1.10	
globulin	level	128				6379	0.3424	126	0.0012	002	180		
levels	s	6	A	G	15	1125	96	136	9832	e-25	726		
Sex	Estr												
hormone-bi	adio	rs6								-0.0			
nding	l	225								091		2.09	
globulin	level	993				4938	0.4381	097	0.0012	991	180		
levels	s	9	A	G	3	6047	62	2	3926	e-13	726		
Sex	Estr												
hormone-bi	adio												
nding	l	rs6				1607				0.0		5.70	
globulin	level	243				7290	0.4734	151	0.0012	033	180		
levels	s	19	A	G	6	0	85	961	3751	e-40	726		
Sex	Estr												
hormone-bi	adio	rs6											
nding	l	247				1431				0.0		9.59	
globulin	level	272				0556	0.0608	170	0.0026	997	180		
levels	s	8	T	C	7	6	94	313	0051	e-10	726		
Sex	Estr	rs6				3295	0.0455	0.0	0.0029	5.19	180		
hormone-bi	adio	261	T	C	11	6492	36	187	4867	996	726		

nding	l	869							921		e-11	
globulin	level	3										
levels	s											
Sex	Estr											
hormone-bi	adio											
nding	l	rs6							-0.0		8.69	
globulin	level	316				6928	0.5823	168	0.0012	961	180	
levels	s	95	G	T	11	3303	62	256	4634	e-47	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs6							0.0		3.80	
globulin	level	422				9303	0.7928	129	0.0015	014	180	
levels	s	513	A	G	1	2467	96	507	0077	e-18	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs6							-0.0		3.80	
globulin	level	480				6963	0.6696	109	0.0013	014	180	
levels	s	299	G	C	10	1393	46	315	0057	e-17	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs6				1000			-0.0		4.70	
globulin	level	532				4224	0.7064	200	0.0013	002	180	
levels	s	796	G	A	4	2	04	993	4644	e-51	726	
Sex	Estr											
hormone-bi	adio								-0.0			
nding	l	rs6				1213			077		1.79	
globulin	level	541				3803	0.3796	373	0.0012	999	180	
levels	s	725	A	C	2	2	09	7	627	e-09	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs6				1655			0.0		6.20	
globulin	level	717				3966	0.4029	113	0.0012	012	180	
levels	s	858	C	T	2	1	74	005	4935	e-21	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs6							-0.0		2.99	
globulin	level	736				4251	0.9787	329	0.0042	985	180	
levels	s	913	G	A	2	0018	16	121	3623	e-15	726	
Sex	Estr											
hormone-bi	adio											
nding	l	rs6							-0.0		3.50	
globulin	level	758				7053	0.0667	169	0.0024	026	180	
levels	s	199	T	C	2	7173	65	05	6789	e-12	726	
Sex	Estr	rs6	G	A	3	2452	0.6940	0.0	0.0013	2.09	180	

hormone-binding globulin levels	radio level	792					0283	54	120	744	991	726
Sex	Estr	725							526		e-21	
hormone-binding globulin levels	radio level								-0.0			
Sex	Estr											
hormone-binding globulin levels	radio level	rs6					1303		089		7.39	
Sex	Estr	900					7581	0.6881	042	0.0013	946	180
hormone-binding globulin levels	radio level	473	G	A	6	0	61	9	3223		e-12	726
Sex	Estr											
hormone-binding globulin levels	radio level	rs6							-0.0		1.10	
Sex	Estr	939					4170	0.2618	112	0.0014	002	180
hormone-binding globulin levels	radio level	861	A	G	6	3041	47	806	2004		e-15	726
Sex	Estr											
hormone-binding globulin levels	radio level	rs6							0.0		9.89	
Sex	Estr	950					9791		316	0.0015	92e-	180
hormone-binding globulin levels	radio level	023	G	T	7	5635	0.8144	741	7952		96	726
Sex	Estr											
hormone-binding globulin levels	radio level	rs7							0.0		9.70	
Sex	Estr	085					6476	0.1040	305	0.0020	063	180
hormone-binding globulin levels	radio level	615	A	G	10	8990	62	713	0364		e-59	726
Sex	Estr											
hormone-binding globulin levels	radio level	rs7							-0.0		6.79	
Sex	Estr	092					6442	0.8506	108	0.0017	986	180
hormone-binding globulin levels	radio level	853	T	C	10	9307	78	014	1373		e-11	726
Sex	Estr											
hormone-binding globulin levels	radio level	rs7							0.0		3.69	
Sex	Estr	127					6193	0.2149	089	0.0015	999	180
hormone-binding globulin levels	radio level	472	T	C	11	7658	18	718	0774		e-09	726
Sex	Estr											
hormone-binding globulin levels	radio level	rs7							0.0		3.29	
Sex	Estr	148							068			
hormone-binding globulin levels	radio level	054					5996	0.3821	865	0.0013	997	180
Sex	Estr	2	A	C	15	6306	97	6	0727		e-08	726
hormone-binding globulin levels	radio level	rs7							-0.0			
Sex	Estr											
hormone-binding globulin levels	radio level	rs7							072		3.89	
Sex	Estr	177					4028	0.3488	800	0.0012	996	180
hormone-binding globulin levels	radio level	179	C	T	15	7982	82	3	9819		e-08	726

Sex	Estr											
hormone-binding	radio	rs7						-0.0				
globulin	level	201				1113	0.4044	927	0.0012	992	180	
levels	s	30	T	G	16	2633	37	8	5987	e-09	726	
Sex	Estr											
hormone-binding	radio	rs7						-0.0			5.19	
globulin	level	225				7324	0.8325	133	0.0016	996	180	
levels	s	349	A	G	17	0009	22	437	0389	e-17	726	
Sex	Estr											
hormone-binding	radio	rs7						0.0				
globulin	level	266				1041		092			2.59	
levels	s	681				2914	0.2044	226	0.0015	998	180	
		7	A	G	4	1	51	8	249	e-10	726	
Sex	Estr											
hormone-binding	radio	rs7										
globulin	level	268						0.0			2.99	
levels	s	392				5073	0.0196	339	0.0044	985	180	
		3	C	T	14	5947	79	786	3863	e-16	726	
Sex	Estr											
hormone-binding	radio	rs7										
globulin	level	278						0.0			7.10	
levels	s	758				3301	0.0233	246	0.0040	003	180	
		1	A	G	2	2808	97	186	9905	e-10	726	
Sex	Estr											
hormone-binding	radio	rs7										
globulin	level	284						-0.0			3.40	
levels	s	281				7296	0.0333	653	0.0035	017	180	
		1	T	C	17	899	89	578	7483	e-77	726	
Sex	Estr											
hormone-binding	radio	rs7										
globulin	level	292						0.0			6.20	
levels	s	984				6168	0.0765	196	0.0023	012	180	
		7	A	G	1	4630	46	337	0744	e-18	726	
Sex	Estr											
hormone-binding	radio	rs7										
globulin	level	294				1781		-0.0			4.70	
levels	s	811				6708	0.0948	122	0.0020	002	180	
		5	T	C	2	6	7	848	9101	e-09	726	
Sex	Estr											
hormone-binding	radio	rs7				1115		0.0			1.50	
globulin	level	314				2202	0.0684	301	0.0024	003	180	
		285	G	T	12	6	74	165	3544	e-41	726	

levels	s											
Sex	Estr											
hormone-binding	radio								0.0			
globulin	level	rs7							068		2.19	
levels	s	318				3389	0.6650	962	0.0013	999	180	
Sex	Estr	39	A	G	19	9065	34	6	066	e-08	726	
hormone-binding	radio											
globulin	level	rs7							0.0		1.80	
levels	s	384				4432	0.2162	309	0.0014	011	180	
Sex	Estr	09	G	C	22	4727	44	602	9718	e-96	726	
hormone-binding	radio								-0.0			
globulin	level	rs7				1962			085		4.20	
levels	s	430				3313	0.2521	125	0.0014	001	180	
Sex	Estr	950	C	A	3	6	59	1	1712	e-10	726	
hormone-binding	radio	rs7							-0.0			
globulin	level	455				1171			083			
levels	s	159				7756	0.2439	688	0.0014	1e-0	180	
Sex	Estr	8	C	A	9	6	84	3	3759	9	726	
hormone-binding	radio	rs7										
globulin	level	513							-0.0		3.10	
levels	s	074				2541	0.0715	296	0.0023	027	180	
Sex	Estr	4	C	G	12	0741	54	028	8856	e-39	726	
hormone-binding	radio								0.0			
globulin	level	rs7				2002			093		1.09	
levels	s	540				6561	0.8187	657	0.0015	999	180	
Sex	Estr	115	C	A	1	8	22	9	874	e-09	726	
hormone-binding	radio	rs7							-0.0			
globulin	level	563							084		2.19	
levels	s	164				1804	0.2169	979	0.0015	999	180	
Sex	Estr	2	C	T	4	9216	19	6	2246	e-08	726	
hormone-binding	radio	rs7										
globulin	level	689							0.0		2.39	
levels	s	596				4384	0.0208	554	0.0047	994	180	
Sex	Estr	3	G	T	12	844	99	107	3659	e-33	726	
hormone-binding	radio	rs7				1110			0.0		3.69	
globulin	level	748				9688	0.0169	303	0.0048	999	180	
levels	s	356	T	C	4	3	78	068	5249	e-10	726	

globulin	level	4											
levels	s												
Sex	Estr												
hormone-bi	adio												
nding	l	rs7								0.0		6.09	
globulin	level	767				9927	0.0673	152	0.0024	958	180		
levels	s	46	T	C	7	0539	12	833	5492	e-11	726		
Sex	Estr												
hormone-bi	adio									0.0			
nding	l	rs7				1163		074					
globulin	level	773				6314	0.4011	937	0.0012	2.1e	180		
levels	s	423	G	A	6	9	4	3	5965	-09	726		
Sex	Estr												
hormone-bi	adio												
nding	l	rs7				1390		0.0		6.09			
globulin	level	860				8967	0.5738	123	0.0012	958	180		
levels	s	634	A	G	9	9	24	675	4597	e-25	726		
Sex	Estr												
hormone-bi	adio	rs7								0.0			
nding	l	867				1130		089		2.39			
globulin	level	931				3390	0.1871	348	0.0015	999	180		
levels	s	8	G	T	9	7	87	4	856	e-09	726		
Sex	Estr												
hormone-bi	adio	rs7											
nding	l	889				1598		0.0		8.90			
globulin	level	074				3447	0.1088	136	0.0019	02e-	180		
levels	s	5	A	G	4	4	78	529	8065	12	726		
Sex	Estr												
hormone-bi	adio									0.0			
nding	l	rs7				1056		077		1.09			
globulin	level	920				6817	0.5044	388	0.0012	999	180		
levels	s	217	T	C	10	2	13	2	2079	e-09	726		
Sex	Estr												
hormone-bi	adio	rs7											
nding	l	928				1722		-0.0		3.59			
globulin	level	717				9450	0.0317	397	0.0036	998	180		
levels	s	8	A	G	3	0	51	047	8077	e-30	726		
Sex	Estr												
hormone-bi	adio	rs7											
nding	l	939						-0.0		5.00			
globulin	level	186				5373	0.0138	960	0.0053	035	180		
levels	s	2	C	A	15	9426	2	251	6866	e-81	726		
Sex	Estr	rs7				1214	0.6230	0.0	0.0012	5.10	180		
hormone-bi	adio	970	A	G	12	2337	1	194	7145	035	726		

nding	l	695				6		022		e-54	
globulin	level										
levels	s										
Sex	Estr										
hormone-bi	adio	rs7									
nding	l	971						-0.0		2.60	
globulin	level	779				5262	0.1550	246	0.0016	016	180
levels	s	3	A	G	10	267	45	105	8938	e-55	726
Sex	Estr										
hormone-bi	adio	rs7									
nding	l	976						-0.0		1.99	
globulin	level	070				5329	0.1130	175	0.0019	986	180
levels	s	5	T	G	5	8716	23	959	4631	e-21	726
Sex	Estr										
hormone-bi	adio							0.0			
nding	l	rs8						091		4.30	
globulin	level	071				7379	0.3065	897	0.0012	031	180
levels	s	650	A	G	17	7871	66	5	9802	e-13	726
Sex	Estr										
hormone-bi	adio							0.0			
nding	l	rs8						075		2.30	
globulin	level	113				1838	0.6338	642	0.0012	001	180
levels	s	367	G	A	19	8250	85	3	8012	e-09	726
Sex	Estr										
hormone-bi	adio							-0.0			
nding	l	rs8				1534		077		1.29	
globulin	level	160				2141	0.6214	370	0.0012	999	180
levels	s	40	T	G	5	2	49	7	6761	e-09	726
Sex	Estr										
hormone-bi	adio							-0.0			
nding	l	rs8						077		1.29	
globulin	level	205				6667	0.1374	112	0.0017	999	180
levels	s	03	A	C	9	928	37	088	888	e-11	726
Sex	Estr										
hormone-bi	adio							-0.0			
nding	l	rs8				2342		073		1.09	
globulin	level	387				9479	0.6794	180	0.0013	999	180
levels	s	16	C	G	2	1	94	8	1343	e-09	726
Sex	Estr										
hormone-bi	adio							0.0			
nding	l	rs8						097		2.09	
globulin	level	491				2819	0.5014	447	0.0012	991	180
levels	s	35	A	G	7	6413	03	1	2939	e-17	726
Sex	Estr	rs8	G	A	17	7499	0.5830	-0.0	0.0012	1e-2	180

hormone-binding globulin levels	radioassay	585					382	99	452	1789	00	726
Sex	Estr	26							906			
hormone-binding globulin levels	radioassay								-0.0			
Sex	Estr								075		2.99	
hormone-binding globulin levels	radioassay	764					2287	0.5903	673	0.0012	985	180
Sex	Estr	35	A	G	8		3533	37	5	6472	e-11	726
hormone-binding globulin levels	radioassay								-0.0		5.50	
Sex	Estr											
hormone-binding globulin levels	radioassay	265					3129	0.8357	153	0.0017	047	180
Sex	Estr	285	C	T	6		2157	23	547	2826	e-19	726
hormone-binding globulin levels	radioassay								-0.0		5.00	
Sex	Estr											
hormone-binding globulin levels	radioassay	288					1915		089		5.00	
Sex	Estr	177	A	G	2		8525	0.3742	894	0.0012	035	180
hormone-binding globulin levels	radioassay								-0.0		1.29	
Sex	Estr											
hormone-binding globulin levels	radioassay	304					4760	0.7644	079	0.0014	999	180
Sex	Estr	665	A	T	19		2577	8	175	5512	e-08	726
hormone-binding globulin levels	radioassay								-0.0			
Sex	Estr											
hormone-binding globulin levels	radioassay	379					7231	0.1153	153	0.0019	1e-1	180
Sex	Estr	084	A	G	6		843	46	264	8813	5	726
hormone-binding globulin levels	radioassay								0.0		1.39	
Sex	Estr											
hormone-binding globulin levels	radioassay	461					2593	0.3969	108	0.0012	991	180
Sex	Estr	224	T	G	6		6402	51	95	6004	e-20	726
hormone-binding globulin levels	radioassay								-0.0		3.79	
Sex	Estr											
hormone-binding globulin levels	radioassay	rs9					3261	0.1829	755	0.0017	997	180
Sex	Estr	492	C	A	6		0976	92	6	6134	e-09	726
hormone-binding globulin levels	radioassay								-0.0		1.10	
Sex	Estr											
hormone-binding globulin levels	radioassay	697					1314		-0.0		1.10	
Sex	Estr	210	A	G	9		6874	0.1452	187	0.0017	002	180
							0	55	441	5123	e-29	726

Sex	Estr										
hormone-bi	adio							-0.0			
nding	l	rs9						094		1.29	
globulin	level	739				5378	0.1679	813	0.0016	999	180
levels	s	640	G	A	12	3174	95	8	6929	e-08	726

Supplementary Table S9. Instruments for causal estimation from BioT level to SHBG.

Exposure	Outcome	SNP	Effect allele	Other allele	Chromosome	Genetic position	Effect allele frequency	Beta	Standard error of beta	P-value	Sample size
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs10271971	G	A	7	40870935	0.46218	-0.021738	0.00306173	7e-13	178782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1073870	G	A	9	24973797	0.430636	-0.020481	0.0030877	5e-11	178782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1086708	C	T	9	14077472	0.489079	0.02263	0.00304395	6e-14	178782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1098215	A	T	9	11708806	0.06954	0.04770	0.00622867	7e-14	178782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1112195	G	A	3	24085166	0.495419	0.02475	0.00306001	2e-10	178782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1122176	C	G	4	10464106	0.05773	-0.0494	0.006598	5e-14	178782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1144929	C	T	4	70572301	0.11256	-0.0249	0.00483022	9e-08	178782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1145	A	T	4	10470557	0.03578	-0.05	0.00829446	8.6e-000	178782

testosterone levels	binding globulin levels	48805				8		28		3e-10	
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1						-0.22		2.8002	
testosterone levels	binding globulin levels	152602				10477469	0.0119	71	0.0146	7e-178	178
Bioavailable testosterone levels	Sex hormone-binding globulin levels	27	G	A	4	8	39	47	193	56	782
testosterone levels	binding globulin levels	rs1						0.026		1.3999	
Bioavailable testosterone levels	Sex hormone-binding globulin levels	272				6088	0.3866	76	0.0031	1e-178	178
testosterone levels	binding globulin levels	131	C	T	14	6150	95	42	5783	17	782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1						-0.03		2.7002	
testosterone levels	binding globulin levels	302				1171	0.5535	99	0.0030	3e-178	178
Bioavailable testosterone levels	Sex hormone-binding globulin levels	9	T	G	2	2075	1	4	7167	24	782
testosterone levels	binding globulin levels	rs1						-0.03		8.8003	
Bioavailable testosterone levels	Sex hormone-binding globulin levels	306				6166	0.1308	51	0.0045	5e-178	178
testosterone levels	binding globulin levels	546				2996	52	9	199	13	782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	3	A	G	3						
testosterone levels	binding globulin levels	rs1						0.018		4.9000	
Bioavailable testosterone levels	Sex hormone-binding globulin levels	383				8905	0.4242	98	0.0030	4e-178	178
testosterone levels	binding globulin levels	5	A	C	15	6040	08	02	8562	10	782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1						-0.07		8.6996	
testosterone levels	binding globulin levels	453				7850	0.0241	76	0.0106	1e-178	178
Bioavailable testosterone levels	Sex hormone-binding globulin levels	599				4431	11	46	751	15	782
testosterone levels	binding globulin levels	38	C	G	7						
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1						-0.08			
testosterone levels	binding globulin levels	461						78			
Bioavailable testosterone levels	Sex hormone-binding globulin levels	154				2937	0.0185	74	0.0113	1e-178	178
testosterone levels	binding globulin levels	16	T	C	11	8978	66	2	221	15	782
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1						0.044		7.5006	
testosterone levels	binding globulin levels	770				5153	0.2552	27	0.0035	7e-178	178
Bioavailable testosterone levels	Sex hormone-binding globulin levels	388				0097	65	84	0043	40	782
testosterone levels	binding globulin levels	3	C	T	15						
Bioavailable testosterone levels	Sex hormone-binding globulin levels	rs1	C	T	14	9000	0.1999	-0.	0.0038	5.1	178

able	hormone-b	812				7637	44	03	5917	003	782
testoster	inding	755						38		5e-	
one	globulin							63		19	
levels	levels										
Bioavail	Sex							-0.			
able	hormone-b							05		6.4	
testoster	inding	rs2				2346		02		003	
one	globulin	011				2760	0.0796	52	0.0056	e-2	178
levels	levels	425	G	T	2	8	15	4	5644	0	782
Bioavail	Sex							-0.			
able	hormone-b							03		1.6	
testoster	inding	rs2				1089		09		998	
one	globulin	090				6708	0.3159	32	0.0032	1e-	178
levels	levels	409	A	C	9	8	43	1	844	21	782
Bioavail	Sex										
able	hormone-b							0.0		1.2	
testoster	inding	rs2						18		999	
one	globulin	327				8878	0.6570	14	0.0032	9e-	178
levels	levels	121	C	G	20	250	9	09	2022	08	782
Bioavail	Sex										
able	hormone-b							0.0		6.8	
testoster	inding	rs2				1058		21		992	
one	globulin	438				7112	0.5758	82	0.0030	2e-	178
levels	levels	086	G	A	2	9	3	79	7572	13	782
Bioavail	Sex										
able	hormone-b							0.0		8.3	
testoster	inding	rs2						33		004	
one	globulin	631				2111	0.1036	10	0.0050	2e-	178
levels	levels	864	G	A	8	2084	25	54	1603	12	782
Bioavail	Sex							-0.			
able	hormone-b							02		1.6	
testoster	inding	rs2						92		998	
one	globulin	668				4475	0.5307	23	0.0030	1e-	178
levels	levels	776	T	C	18	0365	19	8	5978	22	782
Bioavail	Sex										
able	hormone-b							0.0		5.4	
testoster	inding	rs2						37		000	
one	globulin	764				2006	0.3340	04	0.0032	8e-	178
levels	levels	772	A	T	16	0653	5	36	33	33	782
Bioavail	Sex							-0.			
able	hormone-b							01		8.1	
testoster	inding	rs2						88		997	
one	globulin	959				2884	0.5568	41	0.0030	4e-	178
levels	levels	132	T	C	11	4928	69	4	6042	11	782

Bioavail	Sex											
able	hormone-b							0.0				
testoster	inding	rs2				1659		19		3.2		
one	globulin	961				3204	0.4686	11	0.0030	e-1	178	
levels	levels	853	C	T	5	8	71	52	5362	0	782	
Bioavail	Sex							-0.				
able	hormone-b							01				
testoster	inding	rs3				1523		85				
one	globulin	020				4812	0.3271	09	0.0032	1e-	178	
levels	levels	421	A	G	6	2	94	9	529	08	782	
Bioavail	Sex							-0.				
able	hormone-b	rs3						03		2.1		
testoster	inding	404				1072		48		999		
one	globulin	077				3510	0.0756	25	0.0059	9e-	178	
levels	levels	9	C	T	3	9	71	2	1069	09	782	
Bioavail	Sex							-0.				
able	hormone-b	rs3						01		4.2		
testoster	inding	419						98		000		
one	globulin	278				1741	0.3096	15	0.0033	1e-	178	
levels	levels	8	A	T	6	6258	74	5	2811	09	782	
Bioavail	Sex							-0.				
able	hormone-b							04				
testoster	inding	rs3				1127		33				
one	globulin	742				2519	0.0966	21	0.0052	1e-	178	
levels	levels	223	C	T	13	6	04	7	1873	16	782	
Bioavail	Sex											
able	hormone-b							0.0		3.5		
testoster	inding	rs4						32		999		
one	globulin	562				6170	0.7569	35	0.0035	8e-	178	
levels	levels	360	G	A	8	4817	47	26	5024	20	782	
Bioavail	Sex							-0.				
able	hormone-b							02		3.6		
testoster	inding	rs4						31		999		
one	globulin	872				2524	0.2472	05	0.0035	9e-	178	
levels	levels	310	A	G	8	7181	56	9	2473	12	782	
Bioavail	Sex											
able	hormone-b							0.0		5.8		
testoster	inding	rs5				1185		18		000		
one	globulin	035				9074	0.4503	30	0.0030	3e-	178	
levels	levels	42	G	A	11	3	11	01	761	10	782	
Bioavail	Sex	rs5						0.0				
able	hormone-b	579				1461		17		1.5		
testoster	inding	585				2350	0.3294	99	0.0032	e-0	178	
one	globulin	8	C	T	7	0	14	44	98	8	782	

levels	levels											
Bioavail	Sex											
able	hormone-b	rs5						0.0				
testoster	inding	760						53		2.1		
one	globulin	648				3579	0.0266	29	0.0095	e-0	178	
levels	levels	6	A	G	14	6645	98	39	1357	8	782	
Bioavail	Sex											
able	hormone-b	rs6						0.0				
testoster	inding	204						23		1.6		
one	globulin	153				7392	0.2126	33	0.0037	e-1	178	
levels	levels	2	G	T	16	2719	19	61	2844	0	782	
Bioavail	Sex							-0.				
able	hormone-b							02		2.9		
testoster	inding	rs6				1309		61		000		
one	globulin	486				5220	0.4294	14	0.0030	1e-	178	
levels	levels	542	T	C	12	9	29	9	9397	18	782	
Bioavail	Sex											
able	hormone-b							0.0		1.2		
testoster	inding	rs6				1804		32		000		
one	globulin	718				9792	0.2747	24	0.0034	5e-	178	
levels	levels	154	T	C	2	3	55	55	0933	22	782	
Bioavail	Sex							-0.				
able	hormone-b							01				
testoster	inding	rs7				1016		74		3.2		
one	globulin	089				9315	0.3934	18	0.0031	e-0	178	
levels	levels	031	G	T	10	5	77	8	234	8	782	
Bioavail	Sex							-0.				
able	hormone-b							02		3.6		
testoster	inding	rs7						13		999		
one	globulin	147				5378	0.3732	18	0.0031	9e-	178	
levels	levels	86	A	G	3	9022	37	2	4574	13	782	
Bioavail	Sex							-0.				
able	hormone-b	rs7						03		1.9		
testoster	inding	152						59		998		
one	globulin	928				7787	0.2518	42	0.0034	6e-	178	
levels	levels	9	T	C	8	9487	98	8	7805	25	782	
Bioavail	Sex							-0.				
able	hormone-b							03		4.0		
testoster	inding	rs7						17		003		
one	globulin	265				3352	0.1788	21	0.0040	7e-	178	
levels	levels	992	A	G	20	5407	41	7	2147	16	782	
Bioavail	Sex	rs7						0.0		1.7		
able	hormone-b	266				3227	0.5754	18	0.0030	e-0	178	
testoster	inding	493	C	T	1	4901	33	67	9656	9	782	

one	globulin	5										69	
levels	levels												
Bioavail	Sex											-0.	
able	hormone-b											02	
testoster	inding	rs7										13	1.2
one	globulin	454					1124	0.2813	05	0.0033	e-1	178	
levels	levels	86	T	C	9		2155	97	4	8763	0	782	
Bioavail	Sex												
able	hormone-b	rs7										0.0	9.8
testoster	inding	659										42	000
one	globulin	289					2757	0.0483	90	0.0071	9e-	178	
levels	levels	1	C	T	6		2715	15	54	8355	10	782	
Bioavail	Sex												
able	hormone-b											0.0	3.8
testoster	inding	rs7										50	001
one	globulin	679					2202	0.0949	16	0.0053	4e-	178	
levels	levels	843	G	C	4		8079	82	14	3198	22	782	
Bioavail	Sex												
able	hormone-b											0.0	
testoster	inding	rs7										19	
one	globulin	700					9580	0.4013	30	0.0031	4e-	178	
levels	levels	874	C	T	5		8483	56	16	0924	10	782	
Bioavail	Sex												
able	hormone-b											0.0	5.1
testoster	inding	rs7					1001		29			003	
one	globulin	758					0502	0.4517	09	0.0030	5e-	178	
levels	levels	796	A	G	6		8	96	3	7465	22	782	
Bioavail	Sex												
able	hormone-b											0.0	5.8
testoster	inding	rs7										17	000
one	globulin	857					1957	0.4753	31	0.0030	3e-	178	
levels	levels	865	A	G	9		974	48	8	6171	09	782	
Bioavail	Sex												
able	hormone-b											0.0	6.2
testoster	inding	rs7										61	001
one	globulin	912					6726	0.4155	19	0.0030	2e-	178	
levels	levels	521	C	T	10		2089	88	9	8282	94	782	
Bioavail	Sex												
able	hormone-b											-0.	9.6
testoster	inding	rs7					1216		02			999	
one	globulin	915					6046	0.2021	08	0.0037	6e-	178	
levels	levels	430	G	T	10		5	49	41	9473	09	782	
Bioavail	Sex	rs7					1250	0.7217	-0.	0.0033	1.1	178	
able	hormone-b	928	T	C	11		9522	98	02	9392	000	782	

testosterone levels	binding globulin levels	369				1		40		2e-	
Bioavailable testosterone levels	Sex hormone-binding globulin levels							24		13	
								8			
								-0.			
								02			
testosterone levels	binding globulin levels	rs8						38			
		076				7561	0.7041	70	0.0033	1e-	178
		703	T	C	17	2643	35	9	3901	12	782
Bioavailable testosterone levels	Sex hormone-binding globulin levels										
								0.0		2.4	
								40		997	
testosterone levels	binding globulin levels	rs9									
		122				7722	0.3433	19	0.0032	7e-	178
		02	C	G	9	5603	28	86	0718	38	782
Bioavailable testosterone levels	Sex hormone-binding globulin levels										
								-0.			
								04		2.0	
testosterone levels	binding globulin levels	rs9						87		999	
		322				1053		09	0.0032	1e-	178
		822	T	C	6	6959		2	0.0032	1e-	178
						8	0.3215	2	5272	52	782
Bioavailable testosterone levels	Sex hormone-binding globulin levels										
								-0.			
								03		3.1	
testosterone levels	binding globulin levels	rs9						36		002	
		507				1356		83	0.0044	7e-	178
		16	G	A	5	8054	0.1373	3	0.0044	7e-	178
						0	81	3	2472	14	782
Bioavailable testosterone levels	Sex hormone-binding globulin levels										
								0.0		4.1	
								25		001	
testosterone levels	binding globulin levels	rs9									
		824				2880	0.7208	98	0.0033	5e-	178
		196	T	G	3	7441	96	6	9312	16	782
Bioavailable testosterone levels	Sex hormone-binding globulin levels										
								0.0		2.8	
								55		002	
testosterone levels	binding globulin levels	rs9									
		986				1501	0.5068	60	0.0030	7e-	178
		829	A	G	7	9259	65	73	5395	76	782

Supplementary Table S10. Instruments for causal estimation from estradiol level to SHBG.

Exp osur e	Outcome	SN P	Eff ect alle le	Ot her alle le	Chr omo somes	Gene tic posit ion	Effect allele freque ncy	Bet a	Standa rd error of beta	Pva lue	Sa mp le size
	Sex										
Estr adiol level s	hormone-bi nding globulin levels	rs1 000 645 2						-0.0 072 809 8		5.3 002 9e- 18	206 927
	Sex										
Estr adiol level s	hormone-bi nding globulin levels	rs1 049 143 1						0.0 077 444 3		1.7 999 9e- 10	206 927
	Sex										
Estr adiol level s	hormone-bi nding globulin levels	rs1 128 811 96						0.0 077 249 518		5.6 001 5e- 30	206 927
	Sex										
Estr adiol level s	hormone-bi nding globulin levels	rs1 130 479 93						-0.0 096 615 9		8.7 000 1e- 09	206 927
	Sex										
Estr adiol level s	hormone-bi nding globulin levels	rs1 178 265 58						0.0 076 136 375		2.6 999 8e- 08	206 927
	Sex										
Estr adiol level s	hormone-bi nding globulin levels	rs2 547 234						-0.0 076 012 2		2.7 002 3e- 11	206 927
	Sex										
Estr adiol level s	hormone-bi nding globulin levels	rs3 401 914 0						-0.0 116 61 62566		6.8 992 2e- 42	206 927
Estr adiol level	Sex hormone-bi nding	rs3 751 591						0.0 077 766		6.5 993 3e-	206 927

s	globulin										12	
	levels											
	Sex											
Estr	hormone-bi	rs4									7.8	
adiol	nding	544									995	
level	globulin	669				9933	0.0424	156	0.0020	1e-	206	
s	levels	8	G	T	7	2948	35	669	9754	14	927	
	Sex											
Estr	hormone-bi	rs5									2.6	
adiol	nding	619						0.0			001	
level	globulin	686				2908	0.0314	209	0.0024	6e-	206	
s	levels	0	A	C	12	330	92	011	192	18	927	
	Sex											
Estr	hormone-bi							-0.0			5.5	
adiol	nding	rs6				1361		083			004	
level	globulin	571				3926	0.3388	530	0.0008	7e-	206	
s	levels	52	A	C	9	5	66	2	9229	21	927	
	Sex											
Estr	hormone-bi										3.5	
adiol	nding	rs7						0.0			999	
level	globulin	173				5153	0.6487	158	0.0008	8e-	206	
s	levels	595	T	C	15	3736	1	526	86215	72	927	
	Sex											
Estr	hormone-bi							0.0			1.8	
adiol	nding	rs7						056			001	
level	globulin	274				7537	0.5572	632	0.0008	1e-	206	
s	levels	28	C	T	17	792	21	5	52078	11	927	