# **Supplementary Table 3: Extracted data for studies with shoulder adduction data.**

Isometric (ISO) and isokinetic (IKO) data of concentric (Con) and Eccentric (Ecc) movement types. Age ranges (AR) included. Outcomes are relative to the described measurement unit; where available, effect sizes were extracted or calculated (Cohen's d).

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| --- | --- | --- | --- | --- |
| **Title**  | **Movement Type**  | **Measurement Unit**  | **Outcomes**  | **Effect Size (Cohen’s d)** |
| Murray, et al., 1985  | Isometric  | kg-cm  | Males: Young 45° = 1051±59 Old 45° = 833±49Females: Young 45° = 561±33 Old 45° = 387±25 | Young 45° = 8.31Old 45° = 9.10   |
| Meldrum, et al., 2007  | Isometric  | Kg  | Males:  AR: 20 (Right) = 33±21.6 AR: 20 (Left) = 31.8±21.4 AR: 25 (Right) = 32.4±21.3 AR: 25 (Left)= 31.2±21.1 AR: 30 (Right) = 31.9±21.1 AR: 30 (Left)= 30.7±20.8 AR: 35 (Right) = 31.3±20.8 AR: 35 (Left)= 30.1±20.5 AR: 40 (Right) = 30.7±20.5 AR: 40 (Left)= 29.5±20.3 AR: 45 (Right) = 30.2±20.3 AR: 45 (Left)= 29±20 AR: 50 (Right) = 29.6±20 AR: 50 (Left)= 28.4±19.7 AR: 55 (Right) = 29±19.7 AR: 55 (Left) = 27.9±19.5 AR: 60 (Right) = 28.5±19.4 AR: 60 (Left) = 27.3±19.2 AR: 65 (Right) = 27.9±19.2 AR: 65 (Left)= 26.7±18.9Females: AR: 20 (Right)= 19.5±12.1 AR: 20 (Left) = 18.3±11.8 AR: 25 (Right) = 18.9±11.8 AR: 25 (Left) = 17.7±11.5 AR: 30 (Right)= 18.3±11.5 AR: 30 (Left) = 17.1±11.3 AR: 35 (Right)= 17.8±11.2 AR: 35 (Left)= 16.6±11 AR: 40 (Right)= 17.2±11 AR: 40 (Left)= 16±10.7 AR: 45 (Right)= 16.6±10.7 AR: 45 (Left) = 15.5±10.2 AR: 50 (Right)= 16.1±10.4 AR: 50 (Left) = 14.9±10.2 AR: 55 (Right) = 15.5±10.2 AR: 55 (Left)= 14.3±9.9 AR: 60 (Right) = 15±9.9 AR: 60 (Left)= 13.8±9.6 AR: 65 (Right)= 14.4±9.6 AR: 65 (Left) = 13.2±9.6 | AR: 20 (Right) = 0.64AR: 20 (Left) = 0.63AR: 25 (Right)= 0.63AR: 25 (Left) = 0.64AR: 30 (Right)= 0.64AR: 30 (Left) = 0.65AR: 35 (Right)= 0.65AR: 35 (Left) = 0.66AR: 40 (Right) = 0.66AR: 40 (Left)= 0.67AR: 45 (Right) = 0.67AR: 45 (Left)= 0.68AR: 50 (Right) = 0.68AR: 50 (Left)= 0.69AR: 55 (Right) = 0.69AR: 55 (Left) = 0.70AR: 60 (Right) = 0.70AR: 60 (Left) = 0.70AR: 65 (Right) = 0.70AR: 65 (Left) = 0.71 |
| Huberman, et al., 2020  | Isometric  | lbs  | Males: 44.93±16.09Females:  48.20±16.15 | 0.20  |
| Holzbaur, et al., 2007  | Isometric  | Nm  | Males:  93.7±11.3Females:  42.1±5.4 | 4.57  |
| Hughes, et al., 1999  | Isometric  | Nm  | Males (Abducted 30°): AR: 20-29 = 74±21 AR: 30-39 = 67±10 AR: 40-49 = 67±12 AR: 50-59 = 61±12 AR: 60+ = 54±13Males (Abducted 60°): AR: 20-29 = 84±22 AR: 30-39 = 80±15 AR: 40-49 = 75±11 AR: 50-59 = 75±13 AR: 60+ = 65±12Males (Abducted 90°): AR: 20-29 = 79±21 AR: 30-39 = 79±18 AR: 40-49 = 71±11 AR: 50-59 = 72±14 AR: 60+ = 62±14Females (Abducted 30°): AR: 20-29 = 37±16 AR: 30-39 = 41±14 AR: 40-49 = 37±12 AR: 50-59 = 35±9 AR: 60+ = 27±8Females (Abducted 60°): AR: 20-29 = 43±15 AR: 30-39 = 49±14 AR: 40-49 = 43±11 AR: 50-59 = 41±11 AR: 60+ = 30±11Females (Abducted 90°): AR: 20-29 = 39±12 AR: 30-39 = 49±14 AR: 40-49 = 38±10 AR: 50-59 = 40±10 AR: 60+ = 31±11 | Abducted 30°:AR: 20-29 = 1.76AR: 30-39 = 2.6AR: 40-49 = 2.5AR: 50-59 = 0.33AR: 60+ = 2.08Abducted 60°: AR: 20-29 = 1.86AR: 30-39 = 2.07AR: 40-49 = 2.91AR: 50-59 = 2.62AR: 60+ = 2.92Abducted 90°:AR: 20-29 = 1.90AR: 30-39 = 1.67AR: 40-49 = 3AR: 50-59 = 2.29AR: 60+ = 0.14  |
| Marcondes, et al., 2019  | Isokinetic: 60°/s 180°/s  | Percent Body Mass  | Males: 60°/s = 111.3±10.9 180°/s = 183.3±36.4Females: 60°/s = 76.2±5.8 180°/s = 114.5±12.4 | 60°/s = 3.22 180°/s = 1.89   |
| Cahalan, et al., 1989  | Isokinetic:60°/s180°/s300°/s  | N, Nm  | Males: N = 72±15  60°/s = 79.5±16 180°/s = 72.5±14  300°/s = 64.5±13Females: N = 39.5±9  60°/s = 37.5±6.5  180°/s = 32.5±7.5 300°/s = 28±8 | N = 2.17 60°/s = 2.63 180°/s = 2.86 300°/s = 2.81   |
| Shklar and Dvir, 1995  | Isokinetic: 60°/s120°/s180°/s  | Nm  | Males: Con. 60° = 72.9±19.5 Con. 120° = 69.8±15.2 Con. 180° = 66.1±17.4 Ecc. 60° = 95.2±28 Ecc. 120° = 92.7±27.8 Ecc. 180° = 97.5±32.9Females: Con. 60° = 32.4±6.9 Con. 120° = 31±5.3 Con. 180° = 29.4±4.4 Ecc. 60° = 46.7±8.9 Ecc. 120° = 47.5±9 Ecc. 180° = 50.1±8.2 | Con. 60° = 2.08Con. 120° = 2.55Con. 180° = 2.11Ecc. 60° = 1.73Ecc. 120° = 1.63Ecc. 180° = 1.19   |
| Ivey, et al., 1985  | Isokinetic: 60°/s180°/s  | Foot-Pounds  | Males: Slow = 65.9±16.4 Fast = 55.5±17.0Females:  Slow = 37.2±6.7 Fast = 30.7±31.6 | Slow = 1.75 Fast = 1.46  |
| Reid, et al., 1989  | Isokinetic:60°/s  | Nm  | Males:  86±19Females: 46±9 | 2.11  |
| McMaster, et al., 1992  | Isokinetic: 30°/s180°/s  | Foot-Pounds  | Males:  Con. 30° (Left) = 38.2±7.8 Con. 30° (Right) = 35.3±7.7 Con. 180° (Left) = 35.2±7.2 Con. 180° (Right) = 32.6±7.8Females:  Con. 30° (Left) = 25.4±3.9 Con. 30° (Right) = 24.2±3.8 Con. 180° (Left) = 22±5.9 Con. 180° (Right) = 22.5±4 | Con. 30° (Left) = 1.64Con. 30° (Right) = 1.44Con. 180° (Left) = 1.83 Con. 1800° (Right) = 1.29  |
| Sanchez, et al., 1999  | Isokinetic:60°/s120°/s  | Nm  | Males:  60°/s (Right) = 77.63±12.5 120°/s (Right) = 75.43±9.2  60°/s (Left) = 66.31±16.2 120°/s (Left) = 66.21±15.6Females:  60°/s (Right) = 34.52±8.3 120°/s (Right) = 33.91±7.9  60°/s (Left) = 39.25±7.9  120°/s (Left) = 37.90±8.0  | 60°/s (Right) = 3.45 120°/s (Right) = 4.5160°/s (Left) = 1.67120°/s (Left) = 1.81 |
| Sanchez, et al. 2000  | Isokinetic:60°/s120°/s  | Nm  | Males:  60°/s (Right) = 77.63±12.5  120°/s (Right) = 75.43±9.2  60°/s (Left) = 64.29±9.6 120°/s (Left) = 65.65±8.4 Females:  60°/s (Right) = 34.52±8.3  120°/s (Right) = 33.91±7.9  60°/s (Left) = 31.26±6.0  120°/s (Left) = 33.91±7.9 | 60°/s (Right) = 3.45 120°/s (Right) = 4.5160°/s (Left) = 3.44 120°/s (Left) = 3.78  |
| VanMeeteren, et al., 2002  | Isokinetic: 60°/s 120°/s 180°/s  | Nm  | Males:  68.6±14.95Females:  39.35±8.85 | 1.96   |
| Harbo, et al., 2012  | Isokinetic: 60°/s  | Nm  | Males:  AR: <30 = 77±14 AR: 30-39 = 92±16 AR: 40-49 = 88±23 AR: 50-59 = 84±14 AR: 60-69 = 83±18Females:  AR: <30 = 46±14 AR: 30-39 = 50±9 AR: 40-49 = 46±10 AR: 50-59 = 45±9 AR: 60-69 = 41±7 | AR: <30 = 2.21AR: 30-39 = 2.63 AR: 40-49 = 1.83AR: 50-59 = 2.79AR: 60-69 = 2.33 |
| Mayer, et al., 1994  | Isometric; Isokinetic: Con. 300°/sCon. 240°/sCon. 180°/sCon. 60°/sEcc. 60 °/sEcc. 120 °/s Ecc. 180 °/s Ecc. 240 °/s  | Nm  | Males: ISO. = 72±17 IKO. Con. 300° = 45±18 IKO. Con. 240° = 48±17 IKO. Con. 180° = 48±13 IKO. Con. 60° = 53±11 IKO. Ecc. 60° = 55±11 IKO. Ecc. 120° = 59±10 IKO. Ecc. 180° = 61±14 IKO. Ecc. 240° = 63±14Females: ISO. = 34±9 IKO. Con. 300° = 23±7 IKO. Con. 240° = 24±7 IKO. Con. 180° = 22±6 IKO. Con. 60° = 29±8 IKO. Ecc. 60° = 31±8 IKO. Ecc. 120° = 36±10 IKO. Ecc. 180° = 39±11 IKO. Ecc. 240° = 39±9 | ISO. = 2.24IKO. Con. 300° = 1.88IKO. Con. 240° = 2.12IKO. Con. 180° = 2.12IKO. Con. 60° = 2.18IKO. Ecc. 60° = 2.18IKO. Ecc. 120° = 2.3IKO. Ecc. 180° = 1.57IKO. Ecc. 240° = 1.71  |
| Danneskiold-Samsoe, et al., 2009  | Isometric; Isokinetic: 30 °/s60 °/s90 °/s120 °/s  | N, Nm  | Males (Nm): AR: 20-29 = 64.7±16.2 (60 °/s), 61.2±16.7 (90 °/s), 61.1±17.7 (120 °/s) AR: 30-39 = 56.0±9.6 (60 °/s), 54.1±13.2 (90 °/s), 51.4±11.3 (120 °/s)  AR: 40-49 = 53.0±16.1 (60 °/s), 51.1±13.6 (90 °/s), 49.0±14.8 (120 °/s)  AR: 50-59 = 53.3±16.3 (60 °/s), 47.0±10.8 (90 °/s), 44.9±11.3 (120 °/s) AR: 60-69 = 48.2±14.0 (60 °/s), 44.8±11.1 (90 °/s), 43.2±10.1 (120 °/s)  AR: 70-79 = 46.8±7.5 (60 °/s), 43.9±7.0 (90 °/s), 42.3±7.8 (120 °/s) Males (N):  AR: 20-29 = 89.6±26.9  AR: 30-39 = 78.9±20.9  AR: 40-49 = 77.9±17.4  AR: 50-59 = 75.9±8.5  AR: 60-69 = 69.4±18.5  AR: 70-79 = 68.1±12.9Females (Nm):  AR: 20-29 = 33.3±6.5 (60 °/s), 30.2±5.3 (90 °/s), 28.2±3.9 (120 °/s) AR: 30-39 = 32.3±7.7 (60 °/s), 32.4±7.6 (90 °/s), 29.6±6.9 (120 °/s) AR: 40-49 = 34.3±8.8 (60 °/s), 32.1±7.6 (90 °/s), 30.6±8.3 (120 °/s) AR: 50-59 = 29.4±4.7 (60 °/s), 26.3±6.1 (90 °/s), 26.7±6.4 (120 °/s)  AR: 60-69 = 25.7±6.0 (60 °/s), 24.8±5.9 (90 °/s), 25.3±6.1 (120 °/s)  AR: 70-79 = 24.3±4.6 (60 °/s), 21.8±3.8 (90 °/s), 21.7±4.2 (120 °/s)Females (N):  AR: 20-29 = 42.0±7.4  AR: 30-39 = 47.0±9.5  AR: 40-49 = 47.4±12.5  AR: 50-59 = 41.9±7.4  AR: 60-69 = 39.8±9.9  AR: 70-79 = 34.0±6.6 | Nm:AR: 20-29 = 1.94 (60 °/s), 1.86 (90 °/s), 1.86 (120 °/s) AR: 30-39 = 2.47 (60 °/s), 1.64 (90 °/s), 1.93 (120 °/s) AR: 40-49 = 1.16 (60 °/s), 1.39 (90 °/s), 1.24 (120 °/s)AR: 50-59 = 1.47 (60 °/s), 1.92 (90 °/s), 1.61 (120 °/s)AR: 60-69 = 1.61 (60 °/s), 1.80 (90 °/s), 1.77 (120 °/s) AR: 70-79 = 3 (60 °/s), 3.16 (90 °/s), 2.64 (120 °/s)N:AR: 20-29 = 1.77AR: 30-39 = 1.53AR: 40-49 = 1.75 AR: 50-59 = 4 AR: 60-69 = 1.6 AR: 70-79 = 2.64  |