

Supplemental Table 1. Manual muscle testing results in nine *DMD* manifesting carriers. Subjects in the UDP undergo a standardized physical examination based on the original Clinical Investigation in Duchenne Dystrophy protocols (Brooke MH *et al*, Muscle Nerve 1983;6:91-103). This includes manual motor testing (MMT) in which the evaluator performs strength testing of 34 individual muscle groups and gives a 0-5 score based on the modified Medical Research Council (mMRC) scale. The mMRC scale is converted within the database to a 0-10 integral scale for analysis, and an average score is generated from all the examined muscle groups. Details of testing are available on the UDP website (<http://dystrophy.genetics.utah.edu>). Some subjects were included in the UDP database but have not undergone standardized examination; for these subjects no mMRC values are reported. These values represent data combined from individuals in differing stages of disease progression over a wide range of clinical severity, but nevertheless they demonstrate a predicted pattern of proximal greater than distal weakness.

n/a = not applicable; SD = standard deviation.

Muscle group	Across-individual mean mMRC (SD)	Mean (SD) intra-individual right-left difference in mMRC scale
Neck:		
<i>Neck Flexion</i>	7.10 (3.00)	n/a
<i>Neck Extension</i>	8.44 (2.55)	n/a
Upper extremity:		
<i>Shoulder Abduction</i>	8.28 (1.90)	0.61 (1.53)
<i>Shoulder External Rotation</i>	8.06 (2.84)	0.83 (1.62)
<i>Elbow Flexion</i>	8.33 (2.11)	0.67 (1.20)
<i>Elbow Extension</i>	8.33 (2.70)	0.89 (2.48)
<i>Wrist Extension</i>	9.11 (1.23)	0.07 (0.22)
<i>Wrist Flexion</i>	9.11 (1.08)	0.28 (0.51)
<i>Thumb Abduction</i>	8.50 (1.38)	0.41 (0.55)
Mean (SD) for upper extremities:	8.54 (1.97)	0.54 (1.33)
Lower extremity:		
<i>Hip Flexion</i>	6.25 (3.00)	0.29 (0.45)
<i>Hip Extension</i>	6.44 (3.41)	0.09 (0.19)
<i>Hip Abduction</i>	5.72 (3.06)	0.09 (0.19)
<i>Knee Extension</i>	7.56 (3.03)	0.44 (1.33)
<i>Knee Flexion</i>	7.69 (2.47)	0.04 (0.11)
<i>Ankle Dorsiflexion</i>	8.61 (1.46)	0.39 (0.60)
<i>Ankle Inversion</i>	9.33 (1.28)	0.06 (0.17)
<i>Ankle Eversion</i>	8.78 (1.44)	0.00 (0.00)
<i>Ankle Plantar Flexion</i>	9.63 (1.02)	0.04 (0.11)
Mean (SD) for lower extremities:	7.79 (2.69)	0.16 (0.52)