

Supplementary file 5. Characteristics of the included studies

Orthotic devices					
Authors	Year	Country	Study design	MD type(s)	Participant characteristics
Glanzman et al. ⁴²	2011	USA	Case series	DMD	n=9 (M), mean age: 8.9 ±2.1 years; IC: ability to rise from the floor independently, lacking ROM to neutral dorsiflexion and/or habitual toe walkers
Aprile et al. ⁴³	2013	Italy	Before-after study (no CG)	FSHD	n=15 (F: n=11; M, n=4), mean age 47.3±16.7 years; IC: CSS grade 2.5-4 grade
Taktak et al. ⁴⁴	1995	UK	Before-after study (no CG)	DMD	n=9 (M), age range: 5-13 years
Manual therapy					
Carroll et al. ³⁸	2020	Australia	Crossover study	DMD	n=20 (M), mean age: 9.3 years (range: 8.0–10.5 years); IC: ability to walk independently (> 10 m) and to lay prone (> 10 min)
Assistive technologies					
Heutinck et al. ³⁰	2018	Netherlands	RCT	DMD	n=16 (M); SG, n=7, mean age: 12.9±2.8 years; CG, n=9, mean age: 12.6±3.4 years; IC: inability to walk and impaired arm function (grade 2-4 Brooke Upper Extremity Scale)
Vry et al. ⁴⁵	2014	Germany	Before-after study (no CG)	DMD	n=14 (M), mean age: 8.8 years; IC: ability to walk unaided (≥ 10 m)
Pegoraro et al. ⁴⁷	2020	Italy	Before-after study (no CG)	DM1	n=9 (F: n=1; M, n=8), mean age: 47 years (range: 38-67 years); IC: MIRS grade 2+ and tibialis anterior muscle strength <4 MRC scale
Zupan et al. ¹⁶	1995	Slovenia	Before-after trial (with CG)	DMD, BMD, LGMD, FSHD	n=10 (DMD, n=2; BMD, n=3; LGBMD, n=3; FSHD, n=1), mean age: 14.3±4.3 years
Chisari et al. ⁴⁶	2013	Italy	Before-after study (no CG)	DM1, CMD	n=6; DM1: n=5 (F: n=2; M: n=3), age range: 28-65 years; CMD: n=1, gender not specified, age: 39
Colson et al. ⁴⁴	2010	France	Before-after study (no CG)	FSHD	n=9 (F: n=3; M, n=6), mean age: 55.21 years; IC: quadriceps femoris muscle weakness and ability to walk unaided (Vignos scale ≤5)
Kilinç et al. ²²	2015	Turkey	Before-after trial (with CG)	LGMD	n=24 (F, n=5; M, n=19); Electrical stimulation group, n=11; mean age: 31.62±16.92 years; Exercise group, n=13; mean age: 30.14±11.04 years; IC: ability to walk without assistive devices and muscle strength grade 3+ (MRC scale)
Ribot-Ciscar et al. ⁴¹	2015	France	Before-after study (no CG)	FSHD	n=9 (F, n=6; M, n=3), mean age: 58±11 years; IC: preserved shoulder abduction and Brooke Upper Extremity Scale grade 2-4

Exercise interventions					
Authors	Year	Country	Study design	MD type(s)	Participant characteristics
Aerobic training					
Bulut et al. ³⁸	2022	Turkey	RCT	DMD	n=21; SG: n=10, median age: 7.9 years (7.2, 8.7), CG: n=11, median age: 8.6 years (7.9, 10.1); IC: grade 1-2 Vignos Scale
Sherief et al. ³²	2021	Egypt	RCT	DMD	n=30 (M); Group A, n=15; mean age: 8.34 ± 0.88 years; Group B, n=15; mean age: 8.49 ± 0.83 years; IC: grade 3+ MRC scale (lower limbs and trunk); sufficient functional upper and lower limb ROMs; and level I and II AFCS
Bankolé et al. ³³	2016	France	RCT	FSHD	n=19; SG: n=10 (F, n=4; M, n=6); CG: n=9 (F, n=1; M, n=8). 16 participants completed the study. 8 in CG (F, n=1; M, n=7, mean age: 41±9 years), 8 in SG (F, n=3; M, n=5, mean age: 40±13 years)
Mikhall et al. ⁵⁵	2022	Canada	Before-after study (no CG)	DM1	n=22; SG, n=11 (F, n=6; M, n=5), mean age: 42.6±3 years; CG, n=11 (F, n=6; M, n=5), mean age: 42.5±2 years
Svein et al. ⁵⁴	2008	Denmark	Before-after study (no CG)	BMD	n=11 (M), mean age: 32 ± 4 years
Orngreen et al. ⁵³	2005	Denmark	Before-after study (no CG)	DM1	n=12 (F, n=3; M, n=9); age range: 21-58 years
Aerobic training and/or cognitive behavioural therapy					
Okkersen et al. ²³	2018	France, Germany, UK and Netherlands	RCT	DM1	n=255; SG: n=128 (F, n=58; M, n=70, mean age: 44.8±11.7 years; CG, n=127 (F, n=60; M, n=67), mean age: 46.4±11.3 years. IC: ability to walk independently (walking aids permitted)
Voet et al. ²⁴	2014	Netherlands	RCT	FSHD	n=57; CBT: n=13 (F, n=5; M, n=8) median age: 49 years (range: 24-69 years); ATG: n=20 (F, n=8; M, n=12) median age: 59 years (range: 21-68 years); CG, n=24 (F, n=17; M, n=17), median age: 52 years (range: 20-79 years). IC: ability to walk independently (orthoses and walking aids permitted)
Strength and aerobic training					
Kontou et al. ⁵²	2020	Greece	Before-after study (no CG)	DM2	n=10 (F, n=3; M, n=7), mean age: 63.0 ± 8.3 years; IC: ability to walk
Jensen et al. ⁵¹	2016	Denmark	Before-after study (no CG)	BMD, LGMD type 2I	n=8; BMD: n=5 (M); LGMD2I: n=3 (F, n=2; M, n=1); mean age: 36 ± 4 years; IC: ability to stand/walk, but inability to exercise unsupervised (e.g., running, cycling)
Berthelsen et al. ⁵⁰	2014	Denmark	Before-after study (no CG)	BMD, LGMD type 2I	n=8; BMD: n=5 (M); LGMD2I: n=3 (F, n=2; M, n=1); mean age: 36 ± 4 years; IC: ability to stand/walk, but inability to exercise unsupervised (e.g., running, cycling)
Strength training					
Güneş Gencer et al. ³⁴	2022	Turkey	RCT	DMD	n=26 (M); SG: n=13, mean age: 11.6 ± 2.6 years; CG: n=13, mean age: 10.6±3.4 years
Kenis-Coskun et al. ³⁵	2022	Turkey	RCT	DMD	n=22 (M); SG: n=10, mean age: 8.80 ± 2.93 years; CG: n=12, mean age: 7.00±2.00 years; IC: ability to walk
Maghbouli et al. ²⁸	2021	Iran	RCT	MD (subtype not specified)	n=40; SG, n=20 (F, n=6; M, n=14), mean age: 37.3±1.8 years; CG, n=20 (F, n=5; M, n=15), mean age: 31.2±5.5 years. IC: ability to walk (≥ 10 m) (walking aids permitted)
Alemdaroglu et al. ³⁶	2015	Turkey	RCT	DMD	n=24 (M), age range: 8–12 years; SG; n=12, mean age: 9.50±1.38 years; CG: n=12, mean age: 9.33±1.37 years. IC: grade 1-3 Brooke Upper Extremity scale
Aldehag et al. ³⁹	2013	Sweden	RCT (with cross-over design)	DM1	n=35 (F, n=21; M, n=14); mean age: 46 years, range: 26-69 years; Group A: n=18 (F: n=5; M, n=13); Group B: n=17 (F, n=8; M, n=9). IC: MRC scale grade 3+ (wrist and hand muscles)
Jansen et al. ²⁹	2013	Netherlands	RCT	DMD	n=30 (M), mean age: 10.5±2.6 years; SG: n=17, mean age: 10.8±2.4 years; CG: n=13, mean age: 10.5±2.8 years. IC: ambulant individuals with impaired gait and/or difficulties with rising from the floor; wheelchair-dependent individuals able to touch the top of their head with both hands, or able to use a hand-operated wheelchair
Lindeman et al. ³⁷	1995	Netherlands	RCT	MD (subtype not specified)	n=30; SG: n=15 (F, n=6; M, n=9), mean age: 40±11 years (range:18-57 years); CG: n=15 (F, n=3; M, n=12), mean age: 37±10 years (range: 20-55 years)
O'Dowd et al. ⁴⁰	2022	UK	Before-after study (no CG)	FSHD, LGMD, BMD	n=17 (F, n=13; M, n=7), mean age: 44±11 years; FSHD: n=6 (F, n=2; M, n=4), mean age: 43±12 years; LGMD: n=6 (F: n=2; M: n=4), mean age: 47±11; BMD: n=5, mean age: 40±8 years; IC: ability to walk (≥ 7 m) (walking aids permitted)
Lessard et al. ²⁷	2021	Canada	Before-after study (no CG)	DM1	n=15 (M), mean age: 47.7±10.9 years (range: 28-62 years)
Roussel et al. ²⁶	2020	Canada	Before-after study (no CG)	DM1	n=11 (M), age range: 30-65 years. IC: ability to walk without assistance

Bostock et al. ²⁵	2019	UK	Before-after study (no CG)	LGMD, BMD, FSHD	n=17 (F, n=4; M, n=13), mean age: 44±11 years; LGMD, n=6; BMD, n=5; FSHD, n=6. IC: ability to walk (≥ 7 m) (walking aids permitted)
Tollbäck et al. ⁴⁹	1999	Sweden	Before-after trial (with CG)	MD (subtype not specified)	n=9 (F, n=7; M, n=2), mean age: 37±8.6 years; IC: ability to walk and to fully extend the knee against a 3 kg load
Hydrotherapy					
Hind et al. ¹⁷	2017	UK	RCT	DMD	n=12; median age: 8.0 years (7.5, 9.5); SG: n=8, mean age: 8.0±0.9 years; CG: n=4; mean age: 9.8±2.5 years. IC: ability to walk (≥ 10 m) without aids/assistance and NSAA score of 8–34
Balance training					
Hammarén et al. ⁴⁸	2015	Sweden	Before-after study (no CG)	DM1	n=11 (F, n=3; M, n=8), mean age: 49 (range: 36-60 years)
Multicomponent intervention					
Kierkegaard et al. ²⁰	2011	Sweden	RCT	DM1	n=35; SG: n=18 (F, n=10; M, n=8), mean age: 44±11 years (range: 20-60 years); CG: n=17 (F, n=10; M, n=7), mean age: 41±15 years (range: 20-65 years). IC: ability to walk (≥ 50 m) without assistance and MIRS grade 2–5
Missaoui et al. ²¹	2010	France	Retrospective study	DM1	n=20 (F, n=7; M, n=13), mean age: 51 years (range: 32-69 years), IC: ability to walk unaided (≥ 10 m) and stand for 1 min

Abbreviations: MD, Muscular Dystrophy; DMD, Duchenne Muscular Dystrophy; M, Males; IC, Inclusion Criteria; ROM, Range of Motion; CG, Control Group; FSHD, Facioscapulohumeral dystrophy; F, Females; CSS, Clinical Severity Scale; RCT, Randomised Controlled Trial; SG, Study Group; CG, Control Group; DM1, Myotonic Dystrophy type 1; MIRS, Muscular Impairment Rating Scale; MRC, Medical Research Council; BMD, Becker Muscular Dystrophy; LGMD, Limb-girdle muscular dystrophy; CMD, Congenital Muscular Dystrophy; AFCSD, Ambulatory Functional Classification System for DMD; CBT, Cognitive Behavioural Therapy; ATG, Aerobic Training Group; DM2, Myotonic Dystrophy type 2; NSAA, North Star Ambulatory Assessment.