

Table III. Protocols used in the different tests for upper- and lower-body anaerobic capacity

Device	Test	Study, ref	Duration/distance	Efforts	Warming up	Resistance	Outcome parameters	Rest between efforts	Initial conditions
<i>Upper body</i>									
ACE	mWAnT	17	30 s	1	nr	35 g/kg	Ppeak (W); Pmean (W); Fatigue index	na	nr
		21	5 s	3	5 min (30 W, 60 rpm); Intervals 30 s rest/30 s (35 W, 70 rpm)	2.0, 3.0, 4.0% BM	Ppeak (W)	5 min (0W)	0 m/s
		22	10 s	1	nr	3.1–7.1% BW	Pmean (W)	na	nr
		23	30 s	1	nr	50 g/kg	Ppeak (W); Pmean (W); Fatigue index; Peakttime (s); Lowtime (s)	na	nr
		24	30 s	1	10 min; 3×5 s all-out sprint, 5 min rest	nr	Ppeak (W); Pmean (W); Fatigue index	na	Vmax
		25	30 s	1	nr	25 g/kg	Ppeak (W); Pmean (W); Fatigue index	na	nr
		26	30 s	1	3 min (0 W)	3.5% BM	Ppeak (W); Pmean (W)	na	Vmax
		27	30 s	2	3–5 min (0 W)	1 (C5), 2 (C6), 3 (C7) % BM	Ppeak (W); Pmean (W)	2–4 days	Vmax
		28	30 s	6	3–5 min (0 W)	1, 1.5, 2, 2.5, 3, 3.5% BM	Ppeak (W); Pmean (W)	20 min	Vmax
		29	30 s	2	3–5 min (0 W)	3.5% BM	Ppeak (W); Pmean (W); Fatigue index	2–7 days	>100 rpm
		30	30 s	1	nr	3.5% BM	Ppeak (W); Pmean (W); time to Ppeak (s)	na	nr
		31	30 s	1	2 min (60 rpm, 0 W)	1–2% BM	Ppeak (W); Pmean (W); Pmin (W); Fatigue index	na	>25 rpm
		32	30 s	2	nr	3.5% BM	Ppeak (W); Pmean (W)	30 min	nr
		33	30 s	1	nr	nr	Ppeak (W/kg); Pmean (W/kg); Pmin (W/kg); Fatigue index, peak time (s); low time (s)	na	nr
WCE	MW-HIE	22	Until 70 rpm cannot be maintained	1	nr	130% of mechanical aerobic peak power	Mechanical Work (J)	na	nr
	F-V relationship	34	Until 100 rpm cannot be maintained	5–7	Standard warm-up	Individually based	Ppeak; F0; V0	5 min	Rolling start
	mWAnT	72	30 s	1	nr	nr	Ppeak (W)	na	75% Vmax
		12	30 s	1	nr	0.25, 0.50, 0.75 N/kg	Ppeak (W); Pmean (W)	na	nr
		35	8 s	9	5 min (1 and 2.5 Nm)	0, 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4 Nm	Ppeak (W); Pmean (W)	5 min	0 m/s
		36	20 s	9	nr	0.8–22 Nm/wheel	Vmean (m/s); Torque (Nm); Pmean (W)	20 min	0 m/s
		38	30 s	1	3 min (0 W)	Formula Janssen et al. (44)	Ppeak (W); Pmean (W); Torque (Nm); Linear velocity (m/s)	na	nr
		39	30 s	1	3 min (0 W)	Formula Janssen et al. (44)	Ppeak (W); Pmean (W); Torque (Nm); Linear velocity (m/s)	na	nr
		40	30 s	1	3 min (0 W)	0.25, 0.50, 0.75 N/kg	Ppeak (W); Pmean (W)	na	Rolling start
		41	30 s	1	nr	No resistance	Ppeak (W)	na	1.5 m/s
		42	30 s	1	nr	1.88–4.3 Nm	Ppeak (W); Pmean (W); Vmax (km/h); Vmean (km/h)	na	Vmax
		43	30 s	1	Intervals 30 s work/30 s rest; 5 s sprint (2–3×); 5 min rest	19.6 N	Ppeak (W); Pmean (W); Fatigue index; Velocity (m/s)	na	Vmax
		44	30 s	1	Near maximum speed, brief period	0.25, 0.50, 0.75 N/kg	Ppeak (W); Pmean (W)	na	nr
		45	30 s	1	nr	Normalized to BM	Pmean (W)	na	nr
		46	30 s	6	nr	1.0, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2, 2.4 kg	Ppeak (W); Pmean (W)	20 min	60% Vmax
		47	30 s	2	nr	0.75 or 1 N/kg	Ppeak (W); Pmean (W)	nr	0 m/s
		48	30 s	1	nr	10 N/wheel	Pmean (W)	na	Vmax
		49	30 s	1	3 min; 20% estimated PO	Formula Janssen et al. (44)	Ppeak (W); Pmean (W)	na	0 m/s
		50	30 s	1	4–8 strokes forcefully; 2 min rest	Formula Janssen et al. (44)	Ppeak (W); Pmean (W)	na	0 m/s

Table III. Cont

Device	Test	Study, ref	Duration/distance	Efforts	Warming up	Resistance	Outcome parameters	Rest between efforts	Initial conditions
Wheelchair overground		51	30 s	1	3 min; 20% estimated PO	Formula Janssen et al., 1993 (44)	Ppeak (W); Pmean (W)	na	0 m/s
		52	30 s	2	5 min (0 W)	2.5, 5, 7.5, 10% BM; based on test trial	Ppeak (W); Vmax (m/s)	10–15 min	0 m/s
		53	30 s	2	5 min (0 W)	2.5, 5, 7.5, 10% BM; based on test trial	Ppeak (W); Pmean (W); Vmax (m/s); Vmean (m/s)	10–15 min	0 m/s
		54	30 s	2	nr	0.5, 0.75, 1.0 N/kg	Ppeak (W); Pmean (W)	nr	nr
		55	30 s	1	5 min (0 W); 2×3 s max	nr	Ppeak (W); Pmean (W); Time to Ppeak (s); Fatigue index	na	1 m/s
	Sprint test	56	5 s	6	1 min (1 m/s; 0.15 W/kg)	No resistance	Vmax (km/h), acceleration (m/s ²), Ppeak (W)	nr	Rolling start
		46	10 s	6	nr	No resistance	Vmax (m/s)	20 min	0 m/s
		57	10 s	10	nr	No resistance	Vmax (m/s); Fatigue index	30 s	1 m/s
		58	20 s	6	5 min (0 W)	No resistance	Vmax (m/s)	HR <100 bpm	0 m/s
		46	100 m	2	1,600 m; 5 min static flexibility	No resistance	Performance time (s)	3 min	0 m/s
		48	30 s	1	nr	No resistance	Covered distance (m)	2 min	0 m/s
		48	20 m	1	nr	No resistance	Performance time (s)	na	0 m/s
		50	15 m	1	5–10 min	No resistance	Performance time (s)	na	0 m/s
		59	5 m	3	Regular warming-up	No resistance	Performance time (s)	2 min	0 m/s
		60	5 m	3	nr	No resistance	Performance time (s)	nr	0 m/s
		61	15 m	1	nr	No resistance	Performance time (s)	2 min	0 m/s
		62	15 m	1	5–10 min	No resistance	Performance time (s)	na	0 m/s
		63	20 m	3	nr	No resistance	Performance time (s)	2 min	0 m/s
		64	20 m	3	nr	No resistance	Performance time (s)	2 min	0 m/s
		65	20 m	3	5 min low intensity, stretching, 2 accelerations	No resistance	Performance time (s)	2 min	0 m/s
		66	20 m	3	20 min standardized warming-up	No resistance	Performance time (s)	30s	0 m/s
		67	75 m	4	nr	No resistance	Performance time (s)	As long as necessary	0 m/s
		68	15 m	1	nr	No resistance	Performance time (s)	na	0 m/s
Wheelchair treadmill	Sprint test	68	15 m	1	nr	No resistance	Performance time (s)	na	0 m/s
<i>Lower body</i>									
Bicycle ergometer	mWAnT	69	30 s	1	5 min (60 rpm, PO = 100 W)	Maximum 7.1% BM	Ppeak (W); Pmean (W)	na	nr
		70	30 s	1	5 min (60 rpm, PO = 100 W)	Maximum 7.1% BM	Ppeak (W); Pmean (W)	na	nr
		71	30 s	1	5 min (PO = 1.5 W/kg)	7.5% BM	Ppeak (W/kg); Pmean (W/kg)	na	100 rpm
Recumbent ergometer	mWAnT	72	9 s	1	3 min (10 W)	15% leg extension peak torque	Pmean (W)	na	nr
No device	Sprint test	73	10 m	2	nr	No resistance	Performance time (s)	1 min	0 m/s
		73	20 m	2	nr	No resistance	Performance time (s)	1 min	0 m/s
		73	30 m	2	nr	No resistance	Performance time (s)	1 min	0 m/s
		74	25 m	1	1.5 min	No resistance	Performance time (s)	na	0 m/s
	Jump test	73	Squad	3	nr	No resistance	Jump height (cm)	2 min	Knees flexed
		73	Counter Movement	3	nr	No resistance	Jump height (cm)	2 min	Upright position
		75	Counter Movement	3	nr	No resistance	Jump height (cm)	nr	Upright position

ACE: arm crank ergometer; WCE: wheelchair ergometer; mWAnT: Modified Wingate protocol; MW-HIE: Mechanical Work in a High Intensity Exhaustion Exercise Test; F-V relationship: force-velocity relationship; na: not applicable; nr: not reported; BM: body mass (kg); BW: body weight (N). Ppeak: peak power; Pmean: mean power; rpm: rotations per minute; Vmax: maximum velocity; Pmin: minimum power; Vmean: mean velocity