

Table S3: Combined Design (During Exercise & Recovery) Studies

	Study design	Performance & recovery outcome(s)	Sample size, sex; height; weight (mean ± SD)	Participant characteristics; training history	Type of CGs; manufacturer; composition <i>Worn for performance and recovery, unless otherwise stated</i>	Applied pressure (mmHg)	Duration of recovery with CGs	Exercise modality	Exercise protocol	Effects of compression clothing <i>Compared to control group (non-compression clothing), unless otherwise stated</i>	
Berry & McMurray, 1987 [50]	Crossover	Endurance	6 M; 22 ± 4.9 y; 77.5 ± 9.2 kgs	Recreationally active college students; VO ₂ max 56.4 ± 7.4 mL.kg ⁻¹ .min ⁻¹	Graduated compression stockings	MR: 18 at ankle, 8 at calf	60 mins (Experiment I); 30 mins (Experiment II)	Running, cycling	Incremental running treadmill test (Experiment I); 3 mins at 110% V02 max on bicycle ergometer (Experiment II)	VO ₂ max ↔ TTE ↔ Recovery O ₂ uptake ↔ Plasma volume ↔ Mean blood [La-] (<i>Experiment I, 15 mins post; CGs worn during test & recovery</i>) ↓* Mean blood [La-] (<i>Experiment II, 30 mins post; CGs worn during test & recovery</i>) ↓*	
Book et al., 2016 [171]	Crossover	Mm endurance, haemodynamics	7 M, 5 F; 27.3 ± 6.4 y; 73.0 ± 16.9 kgs	Healthy volunteers	Graduated compression socks (CEP Progressive + Run Socks)	Pressure difference from ankle to knee: 13.4 ± 3.9	5 minutes	BW resistance	5 min plantar flexion exercise (20 exercises per minute, 3s per exercise)	HR ↔ SBP ↔ DBP ↔ Cardiac output ↔ Blood flow velocity ↔ Mm oxygenation ↔ Mm perfusion pressure ↔ Mean arterial pressure ↔ Stroke volume ↔ Total peripheral resistance ↔ Deoxyhemoglobin (<i>baseline</i>) ↓* Total blood volume (<i>exercise</i>) ↓* Total Hb in leg (<i>exercise</i>) ↓* Mm activity ↔	
Bieuzen et al., 2014 [156]	Crossover	Endurance	11 M; 34.7 ± 9.8 y; 72.3 ± 6.8 kg	Highly trained runners; VO ₂ max 60.1 ± 6.5 mL.kg ⁻¹ .min ⁻¹ ; training 60 ± 20 km/wk	<i>During exercise:</i> knee-to-ankle sleeve (Pulse Road, Sigvaris, Saint-Just-Saint-Rambert, France; 94% polyamide, 6% elasthane); <i>Recovery:</i> stockings (Sigvaris Recovery, Sigvaris, Saint-Just-Saint-Rambert, France; elasthane, polyamide, cotton, wool) ^a	MR; <i>Sleeve:</i> constant pressure of 25; <i>Stockings:</i> constant pressure of 20	48 hours	Trail running	Simulated trail race; 3 x 5.2km laps, mountainous terrain	Finishing time ↔ Running intensity (%HR max) ↔ CMJ (<i>1, 24 hrs post</i>) ↑L CMJ (<i>48 hrs post, sleeves</i>) ↑L CMJ (<i>1, 24, 48 hrs post, stockings</i>) ↑S-M MVC (<i>knee ext, 1 hr post, sleeves</i>) ↓S CK (<i>1, 24 hrs post, stockings</i>) ↑S-M IL-6 (<i>1 hr post, stockings</i>) ↑↓S CK, IL-6 (<i>all other time points</i>) ↔ RPE (<i>final</i>) ↔ Mm soreness (<i>1, 24 hrs post; sleeves</i>) ↓S Mm soreness (<i>1, 24 hrs post; stockings</i>) ↓S	
Duffield & Portus, 2007 [160]	Crossover	Team sport attributes	10 M; 22.1 ± 1.1 y; 185.2 ± 6.5 cm; 84.65 ± 5.90 kg	Club-level cricket players	Three full-body garments (Skins, Sydney, New South Wales, Australia; Under Armour [UA], Baltimore,	NR	24 hrs	Cricket	5 maximal cricket throws (20s recover); 6 accuracy throws; 30 min intermittent repeat sprint protocol	Repeat sprint performance (<i>10m, 20m time; total distance</i>) ↔ HR ↔ Body mass ↔ Skin temp (<i>all CGs</i>) ↑L* CK (<i>24 hrs post, all CGs</i>) ↓L Blood [La-] ↔ pH, SO ₂ , pO ₂ ↔	

Table S3: Combined Design (During Exercise & Recovery) Studies

					Maryland, USA; Adidas, Herzogenaurach, Germany)					RPE	↔
										Mm soreness (<i>arms, legs; all CGs</i>)	↔
										Decline in maximal distance thrown (<i>UA only</i>)	↓L*
										Throw accuracy (<i>10, 20 min; UA only</i>)	↓L
											↑M
Duffield et al., 2008 [158]	Crossover	Team sport attributes	14 M; 19 ± 1 y; 86.5 ± 3.4 kg	Club standard, first division rugby players (training 2-3 days/wk plus game)	Unspecified length (SKINS, Sydney, Australia)	NR	15 hrs following each day	Team sport	4 x 15 mins simulated team sport, incl. 16 x 20m sprints and 6 maximal scrum efforts (80 mins total); consecutive days	Sprint time (<i>mean, total</i>) Scrum peak power HR Body mass Tympanic temp Blood [La-] (<i>immediately, 24, 48 hrs post</i>) CK (<i>immediately, 24, 48 hrs post</i>) Skin temperature Mm soreness (<i>CGs for recovery, 48 hr post</i>)	↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔*
Duffield et al., 2010 [159]	Crossover	Neuromuscular fatigue	11 subjects; 20.9 ± 2.7 y; 176.3 ± 5.8 cm; 75.4 ± 6.3 kg	Moderately trained, club/regional rugby players; 3-4 training sessions/wk plus game	Unspecified length (Bioslyx, Slazenger, Australia)	NR	24 hours	Sprinting, plyometrics	10 x 20m sprints (1 min cycle); 100 double leg bounds	Mean sprint time 20m sprint time Decline in bound distance Knee extensor peak twitch force (<i>post, 2 hrs post</i>) Concentric force (<i>decrement, recovery</i>) HR AST (<i>24 hrs post</i>) CK CRP RPE Mm soreness (<i>2 hrs post</i>) Mm soreness (<i>24 hrs post</i>)	↔ ↔ ↓M ↓* ↔ ↔ ↓M ↓S ↓S ↔ ↓M ↓L*
Hotfiel et al., 2021 [165]	Within-subject, crossover	Neuromuscular recovery	10 M, 8 F; 24.1 ± 3.6 y	Healthy, non-plyometrics trained	Below-knee sock (75% polyamide, 25% elastane) on one leg ^b	MR: 21–22	6 hours	Plyometrics, eccentric exercises	5 x 10 drop jumps from 0.25m box (5s between jumps, 1 min b/n sets); 5 x 50 eccentric heel raises on slanted block with weight vest @ 40% BW (last set to fatigue)	Jump height Calf circumference Calf range of motion Intramuscular oedema (<i>GAS</i>) Mm soreness (<i>6, 48 hrs post</i>)	↔ ↔ ↔ ↔ ↔
Leicht, Ahmadian & Nakamura, 2020 [166]	Crossover	Cardiovascular function	15 M, 15 F; 19.8 ± 1.9 y; 175 ± 9 cm; 71.7 ± 12.4 kg	Healthy, active	Unspecified length (SKINST TM Sport, SKINS Compression Garments Pty Ltd, Sydney, Australia)	NR	10 mins	Cycling	10 mins @ 70% age-predicted HR max	HR HRV Blood [La-] Cardiac autonomic activity/control Long-term RR modulation RPE	↔ ↔ ↔ ↔ ↓* ↔
Marqués-Jiménez et al., 2018 [164]	Crossover	Functional recovery	18 M; 25.2 ± 3.0 y; 177.8 ± 5.6	Semi-professional soccer players; 3-4 training sessions + 1 match/wk	Three conditions: stockings, tights & shorts (Compressport®,	MR; 20–25 at ankle, 15–20 at calf (stockings);	7 hrs x 3 days	Football (soccer)	90 min friendly match (no further details)	LDH CK (<i>72 hrs post</i>) Glutamic oxalacetic transaminase (<i>72 hrs post</i>)	↔ ↓S ↓S

Table S3: Combined Design (During Exercise & Recovery) Studies

			cm; 76.9 ± 6.5 kg		Genève, Switzerland)	25–30 at calf, 15–20 at thigh (tights); 15–20 at thigh (shorts)				Glutamic-pyruvic transaminase ↓L Gamma glutamyl transpeptidase ↓M Thigh swelling (half time, 48 hrs post) ↓S Thigh swelling (24 hrs post) ↓L Calf swelling (half time, 24, 48, 72 hrs post) ↓L Hamstring soreness (72 hrs post) ↓L Calf, quadriceps soreness (24 hrs post) ↓S Quadriceps soreness (48, 72 hrs post) ↓L Tibialis soreness (24, 72 hrs post) ↓M ↓S
Ménétrier et al., 2011 [157]	Crossover	Endurance	14 M; 21.9 ± 0.7 y; 177.6 ± 1.9 cm; 67.2 ± 2.4 kg	Moderately endurance trained (3.13 ± 0.3 h per week)	Calf sleeves (Compressport, Geneva, Switzerland, 72 % nylon, 28 % elastane)	MR: 5 at the medial ankle, 27 at the top of gastrocnemius	15 min + 30 min	Running	30 min treadmill run @ 60% max aerobic velocity (12% slope) [15 mins recovery]; TTE @ 100 % max aerobic velocity (12% slope) [30 min recovery period]	TTE ↔ SO ₂ (calf; rest, during post-TTE recovery) ↑* HR ↔ RPE ↔
Rimaud et al., 2010 [80]	Crossover	Endurance; functional recovery	8 M; 27.1 ± 0.9 y; 177 ± 2.9 cm; 72.90 ± 3.0 kg	Recreationally endurance trained; 5.4 ± 1.1 hrs training/wk	Knee-length stockings (Gibaud, Saint-Etienne, France)	MR: 22 at calf, 12 at ankle	60 mins	Cycling	Incremental test to exhaustion (2 min stages increasing by 30W each stage)	VO ₂ ↔ VO ₂ max power ↔ HR ↔ SBP, DBP ↔ Blood [La-] (post-exercise) ↑* Predicted net lactate release rate (2-4 mins recovery) ↑*
Riexinger et al., 2021 [182]	Within-subject, crossover	Mm damage	9 M, 7 F; 24.1 [18-29] y	Healthy	Below-knee sock (75% polyamide, 25% elastane) on one leg ^b	MR: 21–22	6 hours	Plyometrics, eccentric exercises	5 x 10 drop jumps from 0.25m box (5s between jumps, 1 min b/n sets); 5 x 50 eccentric heel raises on slanted block with weight vest @ 40% BW (last set to fatigue)	Total mm perfusion ↔ Perfusion fraction ↔ Tissue diffusivity (tibialis anterior, GAS; post, 30 mins, 6, 48 hrs post) ↔
Struhár, Kumstát & Králová, 2018 [161]	Double-blind, crossover	Mm function	10 M; 24.8 ± 3.45 y; 181 ± 8 cm; 74.11 ± 8.63 kg	Well-trained runners; 43.0 ± 5.4 km/wk; VO2 max 62.89 ± 7.68 ml/kg/min	Three types of below-knee socks: “low” graduated (88% nylon, 12% elastane Lycra); “medium” graduated (82% nylon, 18% elastane Lycra); “high” reverse grade compression (75%	18 at ankle, 15 at below knee (low); 25 at ankle, 21 at below knee (medium); 18 at ankle, 24 at below knee (high)	4 hours	Running	8 km treadmill run @ 75% VO ₂ max (6% grade)	Running time ↔ Strength loss (plantar flexion 60°-s-1, dorsal flexion 60°-s-1, 24, 48 hrs post) ↔ Strength loss (plantar flexion 120°-s-1; 24, 48 hrs post) ↓* Peak pressure tolerance (GAS; 24, 48 hrs post, “low” only) ↑* CK (24, 48 hrs post; “medium” and “high”) ↓* RPE ↔

Table S3: Combined Design (During Exercise & Recovery) Studies

Williams et al., 2021 [162]	Single-blind, crossover ^d	Functional recovery	10 M; age 21 ± 2 y; 178 ± 5 cm; 71 ± 11 kg	University-level cyclists; VO ₂ max 55 ± 10 mL.kg ⁻¹ .min ⁻¹	polyamide, 25% elastane Lycra ^c		~24 hours	Cycling	Day 1: ~22 mins mod-high intensity (70-90% of gas exchange threshold) and 60s max sprint; Day 2: 8 km max time trial ^c	TT (both)	↓*
										Average work rate (both)	↑*
										Blood glucose	↔
										Mb	↔
										Plasma lactate	↓*
										(0, 30, 60 mins post Day 1; "high")	↓*
										HR (average, peak)	↔
										Resting SBP	↔
										Resting DBP	↓*
										Mean arterial pressure	↓*
										(24 hrs post; "high")	↓*
										Perceived mm soreness	↔
										Sleep quality	↔
										Fatigue	↔
										Discomfort	↔

↔ no change, ↑ increase, ↓ decrease, ↓↑ mixed change, * significant change ($p < 0.05$), *S* small effect size (Cohen's d 0.20-0.50), *M* medium effect size (Cohen's d 0.50-0.80), *L* large effect size (Cohen's $d > 0.80$); *AST* aspartate transaminase, *Blood [La-]* blood lactate, *BW* bodyweight, *CK* creatine kinase, *CMJ* countermovement jump, *CRP* C-reactive protein, *DBP* diastolic blood pressure, *GAS* medial gastrocnemius, *HB* haemoglobin, *HR* heart rate, *HRV* heart rate variability (natural logarithm of the root mean square of successive RR-interval differences), *IL-6* Interleukin-6, *Mb* myoglobin, *Mm* muscle, *MR* manufacturer reported, *MVC* maximal voluntary contraction, *NR* not reported, *RM* repetition maximum, *RPE* rating of perceived exertion, *SBP* systolic blood pressure, *SO₂* oxygen saturation, *TTE* time to exhaustion

^aThere was no condition where compression was worn during exercise *and* recovery from exercise; ^bControl was participant's other leg; ^cEach pair of socks was designed in the same appearance and colour for the purpose of blinding; ^dBlinding only described as 'The participants were naive to the specific experimental hypotheses'; ^eCompression tights worn during 8km max time trial only.