

Table S2: During Recovery Studies

	Study design	Recovery outcome(s)	Sample size, sex; height; weight (mean ± SD)	Participant characteristics; training history	Type of CGs; manufacturer; composition	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>	
<b>Armstrong et al., 2015 [117]</b>	Double-blinded	Functional recovery	23 M, 10 F; 38.5 ± 7.2 y; 174.4 ± 9.7 cm	Moderately trained runners; 7.7 ± 7.6 y running experience; 6.2 ± 3.2 training hrs/wk	Below-knee socks (BSN Medical Inc., Rutherford College, NC, USA; 58% polyester, 20% nylon, 10% cotton, 12% spandex) <sup>a</sup>	MR: 30–40 at ankle, 21–28 at calf	48 hours	Running	Competitive outdoor marathon (42.2 km)	TTE ( <i>treadmill</i> ) HR ( <i>max</i> ) RPE	↑* ↔ ↔
<b>Atkins et al., 2020 [124]</b>	Parallel group	Basketball performance	30 M; 22.5 ± 4.1 y; 179.3 ± 4.0 cm; 71.7 ± 6.3 kg	Competitive basketball players; 6.2 ± 3.8 y experience; training time 9.6 ± 4.7 h per week	Full-length tights (Li-Ning, PowerShell AULM043-I, Beijing, China)	7 ± 3 at ankle, 10 ± 3 at calf, 8 ± 2 at thigh (post-exercise); 8 ± 3 at ankle, 10 ± 2 at calf, 8 ± 2 at thigh (post-recovery)	15 hours	Basketball	2 x 12 min trials of Basketball Exercise Simulation Test (2 mins rest b/n trials); plus 10 lunge jumps, 2 min isometric wall sit	Vertical jump height Impulse Repeated sprint time 5-0-5 agility time 20m sprint time Sprint decrement Sleep duration Fatigue Mm soreness Perceived sleep quality	↔ ↔ ↔ ↔ ↓S ↓S ↔ ↓L* ↓L* ↑S
<b>Broatch et al., 2019 [125]</b>	Crossover	Cardiovascular & neuromuscular function	12 F; 25 ± 2 y; 78.9 ± 4.5 kg	Elite volleyball players, 5 ± 2 y competing internationally	Knee-high socks (2XU Compression Socks, Melbourne, Australia)	23 ± 11 at calf, 19–22 ± 8 at ankle (from prior research)	~ 9.5 hours (duration of Australia to Philippines flight)	Volleyball	1 x mod-high intensity volleyball session (2 hrs); 1 x low intensity skill-based session (1 hr) <sup>b</sup>	CMJ height & mean velocity (24 hrs) CMJ relative power (48 hrs) SO <sub>2</sub> (6.5 hrs, 9 hrs) SBP (12 hrs) HR (9 hrs) Calf girth (right leg) Bloods (tissue factor, tissue factor pathway inhibitor, thrombin-antithrombin complex, D-Dimer) Fatigue (6.5 hrs) Mm soreness (6.5 hrs) Overall health (6.5 hrs) Alertness (9 hrs) Mm soreness (9 hrs)	↑M ↑M ↑L ↓M ↓M ↓M ↔ ↓L ↓M ↑S ↑M ↓L
<b>Brophy-Williams et al., 2017 [118]</b>	Crossover	Endurance	12 M; 30.5 ± 8.1 y; 181.4 ± 6.9 cm; 77.8 ± 6.5 kg	Well-trained runners; 5-km run time 19:29 ± 1:18 min:s; minimum 4 training runs/wk	Socks (2XU Elite Compression Sock, Melbourne, Australia)	23 ± 11 at maximal calf girth, 22 ± 8 at upper ankle, 19 ± 8 at lower ankle	60 minutes	Running	5km treadmill TT	Decrement from TT1 to TT2 Calf X-sectional area Blood [La-] Mm soreness Fatigue Perceived recovery	↓M ↓L* ↔ ↓M* ↓S ↑S
<b>Brown et al., 2022 [121]</b>	Parallel group	Strength	45 M; 23 ± 4.3 y; 180 ± 8 cm; 91.9 ± 14.5 kg	Recreational rugby players; minimum 2 years training experience	Waist-to-ankle tights (2XU, MA1551b men's; Melbourne, Australia); in “standard” and “custom-fitted” (CF) sizes <sup>c</sup>	32 ± 3 at ankle, 24 ± 4 at calf, 19 ± 3 at thigh (“standard”); 11 ± 5 at ankle, 10 ± 3 at calf, 7 ± 3	48 hours	Sprinting, jumping	20 x 20-m sprints with 5-m deceleration; 100 drop jumps from 0.6m platform	Strength recovery (48 hrs post, CF) CMJ force (CF only) Sprint time (post-ex, 48 hrs post, CF) Sprint time (post-ex, 24, 48 hrs post, “standard”) Midthigh girth (post-ex, 24, 48 hrs; CF)	↑* ↑S ↑L ↑S-M ↑S-L

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Table 1. Summary of the effects of thigh compression on performance and recovery in elite athletes																					
Study	Design	Intervention	Subjects	Duration	Stockings	Thigh circumference	Compression	Activity	Effects												
									Performance	Recovery											
Brown et al., 2021 [151]	Single-blind, crossover	Functional recovery	5 M, 6 F; 22 ± 2 y; 79.1 ± 16.3 kg	National level judoka	Custom-fitted full-length stockings and arm sleeves (Isobar Compression, Manchester, UK) <sup>d</sup>	18 ± 4.5 at thigh, 21 ± 5 at calf, 29 ± 3.5 at ankle, 20.5 ± 2.5 at wrist, 12.5 ± 2.5 at bicep	Approx. 12 hours (after training, overnight until next day's session)	Judo	3 x randori (sparring) sessions (~2 hrs each) over a three-day camp	Midhigh girth (48 hrs, "standard" only)	↓S										
										CK (48 hrs, CF)	↓M*										
										Mm soreness (post-ex, 24, 48 hrs; "standard")	↓S										
										Mm soreness (post-ex, 24 hrs; CF)	↑S										
										Peak CMJ force (36 hrs)	↑S										
										Grip strength (43 hrs)	↑S										
										CK	↓S										
										Forearm circumference (12, 36 hrs)	↓S										
										Midhigh girth (43 hrs)	↓S										
										Upper arm circumference (12-43 hrs)	↓S-L										
Carvalho et al., 2021 [153]	Crossover	Endurance, running kinematics	10 M; 45 ± 9 y; 166 ± 4 cm; 69 ± 7 kg	Experienced competitive runners; 14 ± 13 y experience; best 5km time 20:13 ± 3:54 min:s	Knee to foot stockings (10% polyamide, 75% polyester, 15% elastomer) in 3 types: regular, with camphor and with menthol	MR: 21-24 (anatomical location not reported)	24 hours	Running	10km treadmill run @ competitive race pace (90% of personal best pace); average speed 3.5 ± 0.2 m/s	Skin temperature (mean, max; anterior & posterior thigh)	↔										
										HR (rest, max)	↔										
										Overall comfort, perception of recovery (day 2)	↔										
										Stride length	↔										
										Stride rate	↔										
										Angular kinematics (trunk, hip, knee, ankle)	↔										
										Chatard et al., 2004 [11]	Crossover	Endurance	12 M; 63 ± 3 y; 169 ± 8 cm; 68 ± 9 kg	Trained cyclists; average 5,108 km/year for past 10 ± 4 y; VO <sub>2</sub> max 49 ± 6 mL.kg <sup>-1</sup> .min <sup>-1</sup> ; max aerobic power 270 ± 31 W	Elastic stockings (micro-3 tights with grip-top, Ganzoni-Sigvaris, StJust-StRambert, France; 60% polyamide, 40% elastane (lycra))	MR: 33 at ankle, 18 at calf, 13 at mid-thigh (converted from hPa)	80 minutes	Cycling	2 x 5 min maximal cycling (at max possible power output)	Decrement in max power	↓*
																				HR	↔
																				Plasma volume	↔
																				Blood [La-]	↔
Hct	↓*																				
RPE	↔																				
Leg pain sensation	↔																				
Davies, Thompson & Cooper, 2009 [146]	Crossover	Team sport performance	4 M, 7 F; 23 ± 2.8 y; 180 ± 9 cm; 77.6 ± 11 kg	University level netball & basketball athletes	Unspecified length tights (Linebreak)	MR: graduated pressure of ~15 from lower to upper legs	48 hours	Plyometrics	5 x 20 drop jumps from a 0.6m platform, with maximal upward jump at end (2 mins rest b/n sets)											CMJ	↔
																				5-0-5 agility test	↔
																				Sprint times (5, 10, 20m)	↑L*
										CK (24, 48 hrs)	↔										
										LDH (24, 48 hrs)	↔										
										Midhigh girth (24, 48 hrs)	↔										
										CK (24 hrs, female subjects only)	↓M*										
										Mm soreness (48 hrs)	↓L*										
										de Glanville & Hamlin, 2012 [119]	Single-blind, crossover	Endurance	14 M; 33.8 ± 6.8 y; 180 ± 1 cm; 74.6 ± 4.4 kg	Trained multisport athletes; 6.5 ± 3.4 hrs training/wk	Ankle-to-hip graduated tights (Skins, Sydney, Australia; 76% Meryl Elastane, 24% Lycra) <sup>e</sup>	11.8 ± 2.5 at thigh, 14.7 ± 2.5 at calf, 6.0 ± 2.4 at ankle	24 hours	Cycling	Simulated 40km race (cycle ergometer)	Performance time	↑*
																				Average power output (total; per 10km stage)	↑*
HR (10km time point)	↑*																				
BP (end recovery)	↓*																				
O <sub>2</sub> cost	↔																				
Blood [La-]	↔																				
HR (all other time points)	↔																				
RPE	↔																				

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<b>Ferguson, Dodd &amp; Paley, 2014 [141]</b>	Crossover	Functional recovery	21 M; 21 ± 1 y; 179 ± 7 cm; 76 ± 9 kg	Trained team sport athletes; predicted VO <sub>2</sub> max 54 ± 5 mL.kg <sup>-1</sup> .min <sup>-1</sup>	Graduated socks (2XU, Melbourne, Australia) <sup>f</sup>	MR: 40 at ankle to 20 at calf	12 hours	Running	Loughborough intermittent shuttle test: 2 x 45 mins continuous intermittent running (15 mins rest in b/n bouts)	Knee extensor strength loss (24 hrs post) Knee flexor strength loss CK LDH Plasma IL-6 CRP Mm soreness (24 hrs)	↓* ↔ ↔ ↔ ↔ ↔ ↓*
<b>French et al., 2008 [128]</b>	Parallel group	Functional recovery	26 M; 24.12 ± 3.2 y; 180.7 ± 7.5 cm; 80.4 ± 11.8 kg	Mixed level team sport athletes with >1 y resistance training experience	Waist-to-ankle tights (Skins, Campbeltown, Australia; composite Lycra & Meryl microfiber) <sup>g</sup>	MR: 12 at calf, 10 at thigh	12 hours	Resistance exercise	6 x 10 parallel back squats (Smith machine) @ 100% BW; 1 x 5s eccentric negative phase-only back squat (against a load relative to predicted 1RM)	CMJ 10m sprint time 30m sprint time CK Mb Midthigh girth Midcalf girth Ankle dorsiflexion Hip extension Knee flexion Hip flexion Hip abduction Mm soreness (1, 24, 48 hrs post)	↔ ↔ ↑* ↔ ↔ ↔ ↔ ↔ ↓* ↓* ↓* ↔
<b>Goto &amp; Morishima, 2014 [133]</b>	Crossover	Mm strength	9 M; 21.0 ± 0.4 y; 172.7 ± 2.0 cm; 69.1 ± 2.4 kg	Resistance-trained for >2 y prior	Whole-body garment (Recharge; Under Armour, Baltimore, MD)	NR	24 hrs	Resistance exercise	3-5 sets x 10 reps @ 70% 1RM, w 90s rest (chest press, lat pulldown, seated rowing, shoulder press, arm curl, and triceps press-down; bilateral leg press, bilateral knee extension, calf raise)	1RM chest press recovery speed (3, 5, 8 hrs post) MVC recovery speed (unilateral knee extension) Serum free testosterone Blood [La-] Serum Mb Plasma IL-6 IL-1ra Serum CK Upper arm circumference Thigh circumference Mm soreness (24 hrs post) Fatigue (24 hrs post)	↓* ↓* ↔ ↔ ↔ ↔ ↔ ↔ ↓* ↓* ↓* ↓*
<b>Goto, Mizuno &amp; Mori, 2017 [139]</b>	Crossover	Functional recovery	11 M; 22.7 ± 0.9 y; 175.7 ± 6.7 cm; 73.6 ± 10.2 kg;	Recreationally active, resistance trained for >1 y	Whole-body garment (Recharge; Under Armour, Baltimore, MD)	8.6 ± 0.5 at thigh, 13.2 ± 1.4 at calf (from prior research; converted from hPa)	4 hrs after session 1, ~18 hrs after session 2	Cycling, resistance exercise, plyometrics	10 × 6 s all-out cycling sprints @ 7.5% BW (30s rest); 3-5 sets x 10 reps (chest press, lat pulldown, shoulder press, bilateral leg press) @ 75% 1RM (2 mins rest b/n sets); 5 x 10 drop jumps from 0.4m platform (repeated twice in one day; 60 mins total per session)	Decrement in peak & mean power output (bench press, 5, 10 hrs post) CMJ (height, contact time) Rebound jump (height, contact time) Repeated sprint test (power output) Blood [La-] Blood glucose Serum Mb CK Plasma IL-6 Leptin Mm soreness (24 hrs post, pectoralis major)	↓* ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↓*

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										Mm soreness ( <i>hamstring, biceps brachii, triceps brachii, quadriceps femoris</i> )	↔
										Fatigue	↔
<b>Govus et al., 2018 [142]</b>	Parallel group	Neuromuscular & perceptual recovery	18 M, 14 F; 21.2 ± 1.9 y; 176.7 ± 5.9 cm; 69.2 ± 6.8 kg	National level cross country skiers	Long sleeve shirt + waist-to-ankle tights (Craft Sportswear™, Borås, Sweden) <sup>h</sup>	MR: 14.6 ± 0.1 at ankle, 13.7 ± 1.3 at calf, 5.3 ± 1.1 at mid-thigh	~17 hours	Cross-country skiing	1570 m cross-country skiing competition (individual time-trial, followed by quarter-finals, semi-finals and finals) at 700m altitude	CMJ Urea CK Mm pain	↔ ↔ ↔ ↔
<b>Hamlin et al., 2012 [122]</b>	Single-blind, crossover	Team sport performance	21 M; 20.1 ± 2.1 y; 182.1 ± 5.5 cm; 88.4 ± 8.8 kg	Well-trained rugby union players; 3 years training experience; 3-4 physical conditioning sessions/wk	Ankle-to-hip graduated tights (Skins, Sydney, Australia; 76% Meryl Elastane, 24% Lycra) <sup>i</sup>	8.6 ± 2.6 at ankle, 13.4 ± 2.0 at mid-calf, 9.0 ± 2.2 at thigh	24 hrs	Rugby circuit	~84 minutes of rugby-specific circuit test; sprinting, tackling, scrum drives, passing accuracy etc; 12 circuits of 14 stations (10 min break for 'halftime')	Mean sprint time 3km time Best sprint time Speed decrement (%) HR (3km TT, average) HR (max) Blood [La-] (3km TT) Blood [La-] (end RS test) CK (24 hrs post) Mm soreness (48 hrs post)	↓S ↓S ↔ ↓M ↓S ↔ ↔ ↑S ↔ ↓*
<b>Heiss et al., 2018 [143]</b>	Within-subject, crossover	Mm damage	8 M, 7 F; 25 ± 6 y; 179 ± 11 cm; 69 ± 12 kg	Recreational sports players, >5 hrs training/wk	Sock (Compression Sock Run & Walk, Bauerfeind AG, Zeulenroda-Triebes, Germany; 97% polyamide, 7% elastane) on one leg <sup>j</sup>	MR: 18-21 ( <i>landmark unknown</i> )	60 hours	Eccentric exercise	5 x 30 eccentric heel raises with weighted vest (25% BW) (10 s rest b/n sets; last set to volitional fatigue)	T2-weighted TIRM signal intensity Absolute T2 relaxation time Intramuscular edema (GAS) Passive ankle dorsiflexion Calf circumference CK Mm soreness (resting, going downstairs)	↔ ↔ ↔ ↔ ↔ ↔
<b>Hettchen et al., 2019 [134]</b>	Crossover	Mm strength	19 M; 31.3 ± 7.7 y; 183.5 ± 8.6 cm; 81.1 ± 7.6 kg	Handball players; >5 yrs experience in competitive ball sports; resistance-trained; 176 ± 64 mins exercise/wk	Waist-to-ankle tights (Recovery Pro tights, Cep, Bayreuth, Germany; 75% polyamide, 25% spandex)	MR: 18.1-23.4 at ankle; 16.3-23.5 at maximal calf girth; 9.9-13.9 at mid-thigh	24 hrs + 12 hrs ( <i>separated by 12 hrs without tights</i> )	Resistance exercise	2 x 8-10 reps (lunges, unilateral calf raises, squats) with dumbbells to failure (4 sec eccentric/1 sec isometric/explosive concentric; 60s rest b/n sets) <sup>k</sup>	Decrement in maximum hip/leg extension strength Decrement in CMJ CK (24, 48, 72, 96 hrs post) Mb Perceived Physical State Pain sensation, ailments	↓* ↓* ↓* ↔ ↑* ↓*
<b>Hill et al., 2014 [144]</b>	Parallel group	Neuromuscular recovery	17 M, 7 F; 44.4 ± 10.7 y; 176.6 ± 8.6 cm; 72.5 ± 11 kg	Trained runners; 38.1 ± 12.9 miles/week training; VO <sub>2</sub> max 54.7 ± 9.3 mL.kg <sup>-1</sup> .min <sup>-1</sup>	Waist-to-ankle tights (2XU, MA1551b men's compression tights, WA1552b women's compression tights, Melbourne, Australia) <sup>l</sup>	9.9 ± 2 at thigh, 19.3 ± 2.6 at calf ( <i>anatomical position</i> )	72 hours	Running	26.2-mile (marathon) self-paced outdoor run	Finishing time CK CRP (24, 48, 72 hours post) MVC (24, 48, 72 hours post) Mm soreness (24 hrs post)	↔ ↔ ↔ ↔ ↓*
<b>Hill et al., 2017 [130]</b>	Parallel group	Neuromuscular recovery	26 M, 19 F; 30.1 ± 5.5	Recreationally active	Waist-to-ankle tights (2XU, MA1551b)	8.1 ± 1.3 at thigh, 14.8 ±	72 hours	Plyometrics	5 x 20 drop jumps from a 0.6m	Decrement in CMJ height ("High" vs "low")	↓*

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			y; 174.2 ± 9.5 cm; 72.2 ± 11.5 kg		men's compression tights and WA1552b women's compression tights, Melbourne, Australia; "Low" condition); full length stocking (Alleviant class II medical stockings, Jobskin, Nottingham, UK; "high" condition) <sup>m</sup>	2.1 mm at calf ("low"); 14.8 ± 2.2 at thigh, 24.3 ± 3.7 mm at calf ("high")			platform (10s b/n jumps, 2 mins b/n sets)	Decrement in CMJ height ( <i>both</i> ) Decrement in max voluntary contraction ( <i>hip/knee, 24-72 hrs post, "high"</i> ) Decrement in max voluntary contraction ( <i>24-48 hrs post, "low"</i> ) CK ( <i>post, 24, 72 hrs, "low"</i> ) CK ( <i>post, "high"</i> ) Mb ( <i>24, 72 hrs, both</i> ) CRP Global soreness ( <i>48, 72 hrs, "low"</i> ) Global soreness ( <i>48, 72 hrs, "high"</i> ) Quadriceps soreness ( <i>48, 72 hrs, "high"</i> )	↓S-L ↓L* ↓S ↓S ↓M ↓S-M ↔ ↓S ↓S,M ↓S
<b>Hu et al., 2020 [155]</b>	Double-blind, crossover	Cardiovascular function	10 M; 21.5 ± 1.4 y; 184 ± 4 cm; 81.7 ± 4.3 kg	Novice runners; >5 miles/month running	Waist-to-ankle graduated tights (Power Recovery Tight, 2XU® Pty. Ltd., Melbourne, Australia) <sup>n</sup>	MR: 26 at ankle to 8 at gluteus	4-5 hours	Running	2 week running program; daily runs of 2-5 miles	Mean HRV ( <i>CGs vs sham</i> ) Mean HRV ( <i>CGs vs control</i> ) Daily fluctuation in HRV ( <i>CGs vs sham</i> )	↑* ↔ ↓*
<b>Jakeman, Byrne &amp; Eston, 2010a [85]</b>	Parallel group	Functional recovery	17 F; 21.4 ± 1.7 y; 168 ± 4 cm; 66.9 ± 5.9 kg	Physically active; 3 exercise sessions/wk	Waist-to-ankle tights (Skins, Sydney, Australia; 76% nylon tactel microfibre and 24% elastane)	17.3 at calf and 14.9 at thigh ( <i>from prior research</i> )	12 hours	Plyometrics	10 x 10 reps plyometric drop jumps from a 0.6-m box (10 s between jumps, 1 min between sets)	Decrement in squat jump height ( <i>24, 48, 72, 96 hrs post</i> ) Decrement in CMJ height ( <i>48 hrs post</i> ) Knee extensor strength loss ( <i>24, 48, 72, 96 hrs post</i> ) CK Mm soreness ( <i>1, 24, 48, 72 hrs post</i> )	↓* ↓* ↓* ↔ ↓*
<b>Jakeman, Byrne &amp; Eston, 2010b [131]</b>	Mixed model	Functional recovery	32 F; 21.4 ± 1.7 y; 166 ± 4.7 cm; 66.7 ± 6.8 kg	Physically active; 3 exercise sessions/wk	Waist-to-ankle tights (Skins, Sydney, Australia; 76% nylon tactel microfibre, 24% elastane) <sup>o</sup>	17.3 at calf and 14.9 at thigh ( <i>from prior research</i> )	12 hours	Plyometrics	10 x 10 reps plyometric drop jumps from a 0.6-m box (10 s between jumps, 1 min between sets)	Decrement in CMJ height ( <i>24, 48 hrs post, CG &amp; combined treatment</i> ) Decrement in CMJ height ( <i>72 hrs post, CG only</i> ) Decrement in squat jump height ( <i>24, 48, 72, 96 hrs post, CG &amp; combined treatment</i> ) Decrement in squat jump height ( <i>1 hr post, CG only</i> ) Knee extensor strength loss ( <i>24, 48, 72, 96 hrs post, CG &amp; combined treatment</i> ) Knee extensor strength loss ( <i>48 hrs post, CG only</i> ) CK Mm soreness ( <i>24, 48, 72 hrs post</i> )	↓* ↓* ↓* ↓* ↓* ↓* ↔ ↓*
<b>Kim, Kim &amp; Lee, 2017 [145]</b>	Parallel group	Neuromuscular recovery	16 M; 23.7 ± 2.5 y; 174.9 ± 6.8 cm; 75.0 ± 11.2 kg	Healthy, non-resistance trained	Bicep-to-wrist arm sleeves (PRO Racing Arm Sleeve, Compressport International, S.A., Nyon, Switzerland)	MR: 5-10	24 hours	Eccentric exercise	2 x 25 reps elbow flexion on a modified preacher curl machine	Elbow flexor strength loss ( <i>24-96 hrs post</i> ) CK Tumor necrosis factor-alpha Mm soreness ( <i>24, 96 hrs post</i> )	↓* ↔ ↔ ↓*

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<b>Kraemer et al., 2001a [12]</b>	Parallel group	Neuromuscular recovery	20 W; 21.2 ± 3.1 y; 164.7 ± 4.8 cm; 61.3 ± 4.7 kg	Recreationally active, non-strength trained	Arm sleeve (Raschell fabric, 25% Lycra)	10 ( <i>unspecified landmark</i> )	24 hours x 5 days	Eccentric exercise	2 x 50 passive arm curls (dominant arm); maximal eccentric action every 4th rep (3 mins rest b/n sets)	Decrement in peak torque & power ( <i>day 3</i> ) Arm circumference ( <i>day 5</i> ) Resting elbow angle Cortisol LDH CK ( <i>days 2-5</i> ) Mm soreness ( <i>days 2-4</i> ) Ease in performing daily activities ( <i>days 3-5</i> )	↓* ↓* ↓* ↔ ↔ ↓* ↓* ↑*
<b>Kraemer et al., 2001b [13]</b>	Parallel group	Neuromuscular recovery	15 M; 22.2 ± 3.1 y; 185.7 ± 3.3 cm; 85.8 ± 4.7 kgs	Healthy, non-resistance trained	Arm sleeve (Raschell fabric, 25% Lycra)	10 ( <i>unspecified landmark</i> )	24 hours x 3 days	Eccentric exercise	2 x 50 passive arm curls (dominant arm); maximal eccentric action every 4th rep (3 mins rest b/n sets)	Decrement in peak torque ( <i>48, 72 hrs post</i> ) Decrement in power ( <i>24, 48, 72 hrs post</i> ) Arm circumference ( <i>day 2</i> ) Elbow extension ( <i>days 2-3</i> ) CK ( <i>day 3</i> ) Arm soreness ( <i>day 3</i> ) Ease in performing daily activities ( <i>day 3</i> ) Pain ( <i>day 3</i> )	↓* ↓* ↓* ↓* ↓* ↑* ↓*
<b>Kraemer et al., 2010 [127]</b>	Crossover	Functional recovery	11 M, 9 F; 23.1 ± 2.6 y; 170.1 ± 8.1 cm; 72.8 ± 7.6 kgs	Resistance-trained for >2 y prior	Whole-body garment (Recharge; Under Armour, Baltimore, MD; 75% nylon and 25% spandex)	NR	24 hours	Resistance exercise	3 sets x 8 reps @ 8-10 RM zone (back squat, bench press, stationary lunge, bent over row, RDL, bicep curl, sit up, high pull from hang; 2 mins rest b/n sets)	CMJ peak & average power CMJ performance decrement Squat jump Reaction time Bench press throw power Mm swelling ( <i>thigh</i> ) Limb circumference Patella thickness CK Blood [La-] Mm soreness ( <i>torso</i> ) Vitality Fatigue Sleep quality	↔ ↔ ↔ ↔ ↑* ↓* ↔ ↔ ↓* ↓* ↑* ↓* ↔
<b>Lee et al., 2021 [120]</b>	Crossover	Endurance	13 M; 20.9 ± 1.4 y; 173.3 ± 4.8 cm; 65.9 ± 7.8 kg	Physically active; >5 hrs exercise/wk; peak power output 254.2 ± 27.2 W	Leg sleeves (UA 3568b, 2XU, Melbourne, Australia) worn on top of sport compression tights (MA1959b, 2XU, Melbourne, Australia)	47.4 ± 8.8 at calf, 27.5 ± 5.0 at knee, 24.1 ± 2.4 at thigh	60 mins	Cycling	20 mins as 5 mins each @ 30%, 40%, 65% and 85% of peak power output	Cadence ( <i>5 min max test</i> ) Power output ( <i>5 min max test</i> ) Blood [La-] ( <i>5, 15 mins recovery</i> ) Stroke volume ( <i>15, 30, 45 mins</i> ) Cardiac output ( <i>5, 45 mins</i> ) HR ( <i>15, 30 mins</i> ) Mean arterial pressure Systemic vascular resistance RPE Mm soreness ( <i>legs</i> ) Comfort Pain Tightness	↑* ↑* ↓M* ↑* ↑* ↓* ↔ ↔ ↔ ↓L* ↔ ↔ ↑*
<b>Martínez-Navarro et al., 2020 [138]</b>	Parallel group	Mm damage, inflammatory response	19 M, 13 F; 41 ± 6 y; BMI 22.8 ± 2.0 kg/m <sup>2</sup>	Recreational ultra-endurance athletes; 8 ± 3 y running experience, 70 ± 22 kms training/wk, VO <sub>2</sub>	Full body garment (unspecified) (Aitex, Textile Research Institute; 88% polyamide, 12% elastane)	MR: 10–15	24 hours	Trail running	Competitive outdoor trail race (107.4km, elevation gain 5604m, elevation loss 4356m)	Glomerular filtration rate ( <i>24 hrs post</i> ) CK ( <i>24 hrs post</i> ) Blood [La-] ( <i>24 hrs post</i> ) CRP Cretinine	↓S ↓S ↓S ↔ ↔

**Table S2: During Recovery Studies**

				max 54.1 ± 5.2 mL.kg <sup>-1</sup> .min <sup>-1</sup>						Mm soreness (posterior leg, 24 hrs post)	↓L*
<b>McDonnell et al., 2019 [163]</b>	Parallel group	Mm pain	12 M, 8 F; 25.6 ± 8.9 y; 175 ± 8 cm; 70.9 ± 10.9 kg (hike); 12 M, 6 F; 32.7 ± 16.8 y; 175 ± 8 cm; 74.9 ± 10.2 kg (trail run); 15 M, 6 F; 26.8 ± 5.3 y; 178 ± 8 cm; 75.4 ± 12.9 kg (calf exercise)	Regularly active (2-3 hrs/wk)	Knee-length graduated socks and knee-length uniform compression socks (Intersock; 94% polyamide, 6% elastane)	21 ± 0.7 at ankle, 13.2 ± 1.9 at calf (graduated); 20.5 ± 2.2 at ankle, 21.0 ± 2.4 at calf (uniform)	3 days (daytime only, not including sleep)	Hiking, running, strength exercise	HIKE: 10km simulated treadmill hike (5km uphill, 5km descent, 4-6 km/hr); TRAIL RUN: 14km mixed terrain outdoor run (250m elevation change; competitive/race pace); CALF EXERCISE: 6 x 10 reps @ 100% 3RM eccentric calf raises (standing calf raise machine)	Calf circumference Ankle flexibility Sit & reach test MVC (calf: post-hike, post-trail run, post-calf exercise) Calf pain (post-hike, day 2) Calf pain (post-trail run, day 2, uniform socks only)	↔ ↔ ↔ ↔ ↓* ↓*
<b>Nguyen, Eager &amp; Nguyen, 2019(b) [88]</b>	Crossover	Cardiovascular function	7 M, 7 F; 24.7 ± 4.5 y; 166.0 ± 7.6 cm; 60.9 ± 12.0 kg	Healthy	Long sleeved shirt and waist-to-ankle tights (SportSkins Classic CGs; Skins, Campbelltown, New South Wales, Australia; 24% Roica Spandex, 76% Meryl Microfiber & nylon)	NR	2 hours	Running	10 min treadmill run as 2 mins @ 6 km/h, increasing by 1 km/h every 2 mins to a max 11 km/h	HR (30 mins, 90-120 mins post) Corrected QT interval (90-120 mins post) ST interval (60, 90-120 mins post)	↓* ↓* ↑*
<b>da Silva Chiappa et al., 2021 [136]</b>	Crossover	Neuromuscular recovery	16 M; 26.08 ± 3.92 y; 175.7 ± 2.4 cm; 93.7 ± 10.6 kg	Resistance-trained (min. 2 years)	Full-length arm sleeves (Microfiber-3, Model Second Skin, Brazil)	MR: 12-22 at biceps	20 mins	Resistance exercise	3 x 10 reps bench press, die bend, seated row, shoulder lift, barbell curl, triceps down @ 70% 1RM (90s b/n sets)	Blood [La-] (5, 10, 15, 20 mins) Blood [La-] (area under the curve) RPE	↓* ↓* ↔
<b>Piras &amp; Gatta, 2017 [154]</b>	Crossover	Cardiovascular function	10 M; 21.60 ± 1.58 y; 179 ± 5 cm	National-level swimmers; minimum 14 hrs training/wk	Full body swimsuit (Powerskin Recovery Compression; Arena, Macerata, Italy; 65% polyamide, 34% elastane, 1% carbon fiber on the periphery; 58% polyamide and 42% elastane on central body part)	~13 on forearms, ~10 on upper arms, ~6 on chest, ~15 on GAS, ~8 on mid-thigh, ~5 on mid-hip	90 minutes	Swimming	Max 400m freestyle (as in competition)	Baroflex sensitivity, Cardiac output (20-30 mins post) Blood pressure HRV (40-50 mins post) HR recovery (70 mins) Total peripheral vascular resistance (50 mins)	↓* ↓* ↔ ↓* ↓* ↓*
<b>Pruscino, Halson &amp; Hargreaves, 2013 [140]</b>	Crossover	Functional recovery	8 M; 21.9 ± 2.3 y; 180.1 ± 8 cm; 77.9 ± 13.9 kg	Highly trained, national/international level hockey players	Waist-to-ankle graduated tights (2XU Compression, Australia)	19.1 ± 3.6 at ankle, 7.2 ± 2.8 at calf, 4.8 ± 1.6 at thigh	24 hours	Running	Loughborough intermittent shuttle test: 5 x 15 mins continuous intermittent	5-CMJ mean power (48 hrs post) 5-CMJ mean force Squat jump peak force Blood [La-]	↓* ↔ ↔ ↔

**Table S2: During Recovery Studies**

									running (3 mins rest in b/n bouts) (Simulating duration of field hockey match)	Tumour Necrosis Factor alpha Interleukin 1 beta Plasma IL-6 CK CRP (baseline) Perceived recovery (24 hrs post) Mm soreness (average)	↔ ↔ ↔ ↔ ↑* ↑* ↓*
<b>Sahin et al., 2021 [137]</b>	Crossover	Neuromuscular recovery	10 M; 21.1 ± 1.2 y; 176 ± 5 cm, 69.3 ± 8.1 kg	Healthy	Stockings (Mediven 303 Dougmont Series CCL2; Medi GmbH, Bayreuth, Germany)	MR: 23-32 at thigh	30 mins	Resistance exercise	3 x 8-12 reps squats and deadlifts @ 80% 1 RM (90-120s between sets, 3 mins between exercises)	CK (24, 72 hrs post; active recovery conditions) LDH IL-6 TNF Blood [La-] (30 mins post, active recovery conditions)	↓* ↔ ↔ ↔ ↓*
<b>Shimokochi et al., 2017 [132]</b>	Crossover	Neuromuscular recovery	17 M; 21.8 ± 1.8 y; 170.7 ± 5.8 cm; 68.3 ± 9.1 kg	Physically active; at least 30 mins exercise 3 x per week	Upper and lower body garments (unspecified lengths) (RY-400, Skins International Trading AG, Steinhausen, Switzerland; 76% nylon, 24% polyurethane)	NR	~8 hours (overnight)	Isokinetic dynamometry	10 x 10 maximal isokinetic eccentric and concentric knee extensor contractions (@ 90°/s and 60°/s for concentric & eccentric respectively; 30s b/n sets)	MVIC (24 hrs post) EMG (VAS, rectus femoris; 24 hrs post)	↑* ↔
<b>Sperlich et al., 2013 [183]</b>	Within-subject, crossover	Mm blood flow	6 M; 22 ± 2 y; 181 ± 7 cm; 72 ± 4 kgs	Healthy; VO <sub>2</sub> peak 54 ± 6 mL.kg <sup>-1</sup> .min <sup>-1</sup>	Hip-to-knee shorts (Sigvaris, Winterhur, Switzerland; 94% Polyamide and 6% Lycra), on one thigh only <sup>j</sup>	36.7 ± 4.1 average across thigh; 35 ± 3 at rectus femoris; 37 ± 4 at vastus lateralis; 36 ± 6 at vastus medialis; 39 ± 2 at biceps femoris	100 mins (unclear)	Cycling	Ramp test to exhaustion (1 min passive recovery); then ~19 mins @ 75% peak O <sub>2</sub> uptake	Blood flow (biceps femoris) Blood flow (quadriceps femoris) Glucose uptake (biceps femoris, quadriceps femoris)	↔ ↓* ↔
<b>Terbizan 2018 [185]</b>	Parallel group	Neuromuscular recovery	30 M; 21.4 ± 2.3 y; 180.7 ± 0.8 cm; 79.5 ± 12.3 kg	Recreationally active; 3-5 days exercise/wk; non-plyometrics trained	Two conditions: Waist-to-ankle tights (SKINS A400 Men's Active Long Tights) and knee-high stockings (SKINS Unisex Active Compression Socks; 89% polyamide, 9% elastane, and 2% copper fiber)	MR: 19-33 (not specific to garments used)	12 hours	Plyometrics	10 x 10 box drops from 0.6m box (10s b/n jumps, 1 min b/n sets)	Vertical jump Mm thickness (rectus femoris, lateral gastrocnemius) Mm isokinetic strength (knee extensors, plantar flexors) Perceived mm soreness (knee extensors, plantar flexors)	↔ ↔ ↔ ↔
<b>Trenell et al., 2006 [149]</b>	Within-subject, crossover	Mm damage	11 M; 21.2 ± 3.1 y; 181 ± 6 cm;	Recreational athletes	Waist-to-ankle tights (Skins, Sydney, Australia; 76%	16 ± 2 at calf (17 ± 2 after	48 hours	Walking	30 minutes downhill walking on treadmill (6	Phosphomonoester	↔ ↔



**Table S2: During Recovery Studies**

			77.9 ± 9.1kg		nylon tactel microfibre, 24% roica spandex) <sup>j</sup>	48 hrs), 10 ± 2 at thigh			km/h @ 25% grade)	Phosphocreatine/inorganic phosphate ( <i>blood pH</i> )	↔
										Intracellular free magnesium	↔
										Phosphodiester ( <i>1 hr post</i> )	
										Perceived mm soreness	
<b>Upton, Brown &amp; Hill, 2017 [123]</b>	Parallel group	Functional recovery	19 M; 20.3 ± 1.7 y; 184.2 ± 7.5 cm, 89.5 ± 9.9 kg	Club-level rugby union players; 2 years competitive experience; min. 2 training sessions/wk + matches	Waist-to-ankle tights (2XU, MA1551B, Melbourne, Australia) <sup>p</sup>	14 ± 4.1 at calf, 8.5 ± 2.3 at front thigh	48 hours	Simulated rugby union match-play	20 x 20-m sprints with 10-m deceleration; 10 including tackle bag 'slam' after sprinting (on 1 min rolling clock)	CMJ	↔
										MVIC ( <i>knee extension</i> )	↔
										CK	↓*
										Perceived mm soreness ( <i>24, 48 hrs post</i> )	↓*
<b>Zinner et al., 2017 [126]</b>	Crossover	Functional recovery	12 subjects; 22 ± 4 y; 187 ± 7 cm; 89.7 ± 12.7 kg	Well-trained handball players	Hip-to-ankle tights (Sigvaris, Switzerland; 94% Polyamide and 6% Lycra) in “low” and “high” pressure conditions	11 ± 1 at thigh (“low”); 23 ± 2 at thigh (“high”)	48 hours	Sprinting, jumping	30 x 30m sprints; 2 x CMJs	30m sprint	↔
										CMJ performance decrement (“high”)	↓^
										CRP	↔
										CK ( <i>24, 48 hrs post, “low”</i> )	↓^
										Urea ( <i>24, 48 hrs post, “low”</i> )	↑^
										Urea ( <i>24 hrs post, “high”</i> )	↑^
										Overall recovery	↔
										Mm stress	↔
										Physical performance capability	↔

<sup>^</sup> indicates ‘very likely positive’ change (as per Hopkins, 2002)

↔ 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  $d > 0.80$ ); *Blood [La-]* blood lactate, *BP* blood pressure, *BW* bodyweight, *CK* creatine kinase, *CMJ* countermovement jump, *CRP* C-reactive protein, *DBP* diastolic blood pressure, *EMG* electromyography, *GAS* medial gastrocnemius, *Hct* haematocrit, *HR* heart rate, *HRV* heart rate variability (natural logarithm of the root mean square of successive RR-interval differences), *IL-6* Interleukin-6, *IL-1ra* Interleukin-1 receptor antagonist, *LDH* lactate dehydrogenase, *Mb* myoglobin, *Mm* muscle, *MR* manufacturer reported, *MVC* maximal voluntary contraction, *NR* not reported, *PSIS* posterior superior iliac spine, *RM* repetition maximum, *RPE* rating of perceived exertion, *SBP* systolic blood pressure, *SO<sub>2</sub>* oxygen saturation, *TNF* tumour necrosis factor-alpha, *TT* time trial, *TTE* time to exhaustion, *VAS* vastus lateralis & medialis.

<sup>a</sup>Compared to placebo socks (minimally compressive knee-high diabetic socks; Knit-Rite Inc., Kansas City, KS, USA); <sup>b</sup>\*All participants also underwent 30 mins recovery after training (10 minutes hydrotherapy, 20 mins intermittent pneumatic compression therapy); <sup>c</sup>Compared to 5-minute sham ultrasound on each of the thighs, calves, and hamstrings; <sup>d</sup>Compared to placebo “recovery drink” (one spoonful of sucralose-based sweetener (2 g carbohydrate, 0.1 g protein) added to shakes in plain sight); <sup>e</sup>Compared to non-compressive tights; for the purpose of blinding, participants were informed that the study was to compare two types of compression garments; <sup>f</sup>Compared to 12 hrs using neuromuscular electrical stimulation device (Firstkind Limited, High Wycombe, UK) above posterior fold of knee joint; <sup>g</sup>Compared to contrast bathing intervention: 4 x cold (8-10°) and 3 x hot (37-40°) baths up to 50cm depth (60s in cold water, 180s in hot water); <sup>h</sup>Compared to 20 min standardised neuromuscular electrical stimulation protocol (rectus femoris, vastus medialis and vastus lateralis) by trained researchers; <sup>i</sup>Compared to non-compressive placebo garment (Ronhill Vizion Contour; RonHill, Cheshire, United Kingdom; 92% Polyamide [nylon], 8% Lycra); <sup>j</sup>Control was participant’s other leg; <sup>k</sup>Participants also received whole-body electrostimulation focused on gluteus, thigh and calf (85 hz, impulse width of 350  $\mu$ s) during resistance exercise; <sup>l</sup>Compared to 15 minutes (5 minutes of quadriceps, 5 minutes of hamstrings, and 5 minutes of gastrocnemius) of sham ultrasound applied within 1 hour of the completion of the marathon run; <sup>m</sup>Compared to 10 minutes (5 minutes each thigh) of sham ultrasound; <sup>n</sup>Compared to sham tights (same garment but two sizes larger) and control (3 week free-living baseline; ad libitum training); <sup>o</sup>Compared to passive recovery AND combined treatment group (30 minute professional massage on legs and then same compression tights for 12 hours); <sup>p</sup>Compared to sham ‘recovery drink’ (Robinsons no added sugar, fruit juice; 1 g carbohydrate and 0 g protein).