



## One session of partial-body cryotherapy (-110 °C) improves muscle damage recovery.

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### Abstract

To evaluate the effects of a single session of partial-body cryotherapy (PBC) on muscle recovery, 26 young men performed a muscle-damaging protocol that consisted of five sets of 20 drop jumps with 2-min rest intervals between sets. After the exercise, the PBC group (n = 13) was exposed to 3 min of PBC at -110 °C, and the control group (n = 13) was exposed to 3 min at 21 °C. Anterior thigh muscle thickness, isometric peak torque, and muscle soreness of knee extensors were measured pre, post, 24, 48, 72, and 96 h following exercise. Peak torque did not return to baseline in control group (P < 0.05), whereas the PBC group recovered peak torques 96 h post exercise (P > 0.05). Peak torque was also higher after PBC at 72 and 96 h compared with control group (P < 0.05). Muscle thickness increased after 24 h in the control group (P < 0.05) and was significantly higher compared with the PBC group at 24 and 96 h (P < 0.05). Muscle soreness returned to baseline for the PBC group at 72 h compared with 96 h for controls. These results indicate that PBC after strenuous exercise may enhance recovery from muscle damage.

**KEYWORDS:** Recovery modality; muscle soreness; muscle thickness; peak torque

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