

The Effects of Compression Garments on Heart Rate and Perceived Exertion during Submaximal Exercise Testing

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Compression garments have been commonly used in the medical setting as a method to increase venous return. Increased venous return during exercise may enhance cardiovascular function and subsequently enhance performance. **PURPOSE:** The purpose of this study was to investigate the effect of lower extremity compression garments on heart rate (HR) and rate of perceived exertion (RPE) during submaximal exercise testing in minimally-active college students. **METHODS:** Twenty minimally-active college students (age 20.7 ± 1.87 yrs; body mass index (BMI) 22.75 ± 2.91) participated in two submaximal stress tests in a randomized cross-over design. During the exercise, either full length, lower body compression garments (COMP) or non-compression shorts or pants (CON) were worn. Submaximal exercise involved the performance of the Bruce protocol. HR was recorded every minute and blood pressure (BP) and RPE was recorded every second minute of each stage to determine the physiological effects of the garments. **RESULTS:** There were no significant differences in any stage of the stress testing between CON and COMP in HR (CON: 111.7 ± 20.2 , 132.8 ± 20.9 , 158.7 ± 20.2 , 174.4 ± 13.5 bpm; COMP: 111.1 ± 18.4 , 129.8 ± 20.1 , 157.3 ± 19.4 , 175.1 ± 15.5 bpm; $p > 0.05$) or RPE (CON: 7.5 ± 1.1 , 9.7 ± 1.6 , 12.5 ± 1.9 , 15.4 ± 1.7 ; COMP: 7.3 ± 1.3 , 9.4 ± 1.5 , 12.6 ± 1.6 , 15.6 ± 2.0 ; $p > 0.05$). **CONCLUSION:** Compression gear did not have a significant effect on heart rate or RPE during submaximal exercise in the minimally active college co-eds.