STUDENT'S CORNER
LETTER TO THE EDITOR

# Compression garments optimising performance, recovery and well-being

Varisha Latif[1], Reeha Amjad[2], Muhammad Mustafa[3]

To the Editor, Wearing compression garments during exercise has become a common practice due to their potential to enhance physical performance, reduce fatigue, and aid recovery. These garments can help lessen discomfort and pain in the days following physical activity, improve heat regulation during and after exercise, and increase skin temperature where they are worn.[1] It is believed that improved blood flow plays a significant role in the benefits of sports compression garments.[2]

Compression shorts and socks demonstrate beneficial effects; however, compression tights are the most efficient clothing for elevating indicators of venous return and muscle blood flow in the lower limbs during rest. For compression tights and socks, increases in blood flow are accompanied by improvements in muscle oxygenation. Hence, while the lower limbs are at rest, sports compression garments may serve as a useful intervention to enhance venous return and muscle blood flow.[2]

Additionally, compression shorts have been observed to reduce vibration and muscle activation in the hamstrings and quadriceps femoris during drop jumps. There is also early evidence suggesting that soft tissue vibration can be decreased by external compression without compromising neuromuscular function.[3] Moreover, by compressing the iliotibial tract, the Distal Thigh Compression Garment may improve dynamic knee stability and pelvic deltoid kinesthetic acuity.[4]

Compression therapy has also been shown to improve the quality of life for patients with acute lower limb deep vein thrombosis (DVT) by alleviating pain and swelling during the acute phase and, over time, reducing the frequency and severity of post-thrombotic syndrome (PTS).[5]

When exercising, compression garments offer various advantages, including temperature regulation, reduced discomfort and pain, and improved blood circulation, particularly in the lower limbs. At rest, compression tights enhance venous return and muscle blood flow. Furthermore, compression therapy can significantly improve the quality of life for individuals with conditions like DVT. However, further research is needed to develop a consistent strategy for evaluating the advantages of compression garments. Such an approach would enable researchers to collect data efficiently and provide reliable insights into the effectiveness of these garments.

**DOI: https://doi.org/10.47391/JPMA.21519**

**Disclaimer:** None.

**Conflict of Interest:** None.

**Source of Funding:** None.

## References

1. Weakley J, Broatch J, O'Riordan S, Morrison M, Maniar N, Halson SL. Putting the Squeeze on Compression Garments: Current Evidence and Recommendations for Future Research: A Systematic Scoping Review. Sports Med. 2022; 52:1141-60. doi: 10.1007/s40279-021-01604-9.
2. O'Riordan SF, McGregor R, Halson SL, Bishop DJ, Broatch JR. Sports compression garments improve resting markers of venous return and muscle blood flow in male basketball players. J Sport Health Sci. 2023; 12:513-22. doi: 10.1016/j.jshs.2021.07.010.
3. Deng L, Yang Y, Yang C, Fang Y, Zhang X, Liu L, et al. Compression Garments Reduce Soft Tissue Vibrations and Muscle Activations during Drop Jumps: An Accelerometry Evaluation. Sensors. 2021; 21:5644. doi: 10.3390/s21165644.
4. Nyland J, Boschert D, Pyle B, Yoshida K, Rossi M, Vieira ELC. Distal thigh compression garment improves knee control and safety perceptions during single-leg triple-hop for distance. J Bodyw Mov Ther. 2021; 28:557-62. doi: 10.1016/j.jbmt.2021.09.013.
5. Thieme D, Linnemann B, Mühlberg K, Noppeney T, Kreutz M, Thieme M. Compression Therapy in Acute Deep Venous Thrombosis of the Lower Limb and for the Prevention of Post-Thrombotic Syndrome. Dtsch Arztebl Int. 2024; 121:188-94. doi: 10.3238/arztebl.m2024.0001.

[1]2nd Year MBBS Student, Dow International Medical College, Dow University of Health Sciences, Karachi, Pakistan. [2]3rd Year MBBS Student, Dow Medical College, Dow University of Health Sciences, Karachi, Pakistan. [3]4th Year MBBS Student, Dow International Medical College, Dow University of Health Sciences, Karachi, Pakistan.

**Correspondence:** Reeha Amjad. **Email:** amjadreeha@gmail.com
**ORCID ID:** 0000-0002-4436-8021

**Submission complete:** 08-08-2024 **First Revision received:** 14-11-2024
**Acceptance:** 18-01-2025 **Last Revision received:** 17-01-2025

**AUTHORS' CONTRIBUTIONS:**
**VL:** Literature review, writing-original draft, writing, reviewing and editing.
**RA:** Literature review, writing, revision and editing.
**MM:** Concept and revision.