

EVIDENCE BASED STATEMENT

DOMAIN **09**, Statement **02**

TOPIC: “Compression compliance optimization”

SEARCH TERMS & SOURCES

(graduated compression) AND (compliance)

INCLUSION CRITERIA

- Lower limb only
- Systematic Reviews, Meta-Analysis, Reviews, RCI
- Publication < 10 years, only ENG

SEARCH RESULT BEFORE - AFTER SELECTION

9/5

PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Gong JM, Du JS, Han DM, et al. Reasons for patient non-compliance with compression stockings as a treatment for varicose veins in the lower limbs: A qualitative study. PLoS One. 2020;15(4):e0231218. Published 2020 Apr 28. doi:10.1371/journal.pone.0231218
2. Kankam HKN, Lim CS, Fiorentino F, et al. A Summation Analysis of Compliance and Complications of Compression Hosiery for Patients with Chronic Venous Disease or Post-thrombotic Syndrome. Eur J Vasc Endovasc Surg. 2018 Mar;55(3):406-416.
3. Kankam HKN, Lim CS, Fiorentino F, et al. A Summation Analysis of Compliance and Complications of Compression Hosiery for Patients with Chronic Venous Disease or Post-thrombotic Syndrome. Eur J Vasc Endovasc Surg. 2018 Mar;55(3):406-416.
4. Craigie S, Tsui JF, Agarwal A, Sandset PM, Guyatt GH, Tikkinen KA. Adherence to mechanical thromboprophylaxis after surgery: A systematic review and meta-analysis. Thromb Res. 2015 Oct;136(4):723-6. doi: 10.1016/j.thromres.2015.06.023. Epub 2015 Jun 21. PMID: 26140737.
5. Raju S, Hollis K, Neglen P. Use of compression stockings in chronic venous disease: patient compliance and efficacy. Ann Vasc Surg. 2007 Nov;21(6):790-5.

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IDENTIFIED REFERENCES

1. Knight Nee Shingler SL, Robertson L, Stewart M. Graduated compression stockings for the initial treatment of varicose veins in people without venous ulceration. *Cochrane Database Syst Rev*. 2021 Jul 16;7(7):CD008819.
2. Jin YH, Wang GH, Sun YR, et al. A critical appraisal of the methodology and quality of evidence of systematic reviews and meta-analyses of traditional Chinese medical nursing interventions: a systematic review of reviews. *BMJ Open*. 2016 Nov 14;6(11):e011514.
3. Wade R, Paton F, Woolacott N. Systematic review of patient preference and adherence to the correct use of graduated compression stockings to prevent deep vein thrombosis in surgical patients. *J Adv Nurs*. 2017 Feb;73(2):336-348.
4. Wade R, Sideris E, Paton F, et al. Graduated compression stockings for the prevention of deep-vein thrombosis in postoperative surgical patients: a systematic review and economic model with a value of information analysis. *Health Technol Assess*. 2015 Nov;19(98):1-220.
5. Rostagno C. Prophylaxis of venous thromboembolism in major orthopedic surgery: a practical approach. *Cardiovasc Hematol Agents Med Chem*. 2013 Sep;11(3):230-42.

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TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 01, Statement 02, TOPIC: “Compression compliance optimization”

Graduated compression stockings are a main pillar in lower limb venous and lymphatic disease management, yet the general misconception of their being not easily tolerable by the patient hampers their potential use benefit.

The major reasons for lack of patient compliance were identified as related to wrong prescription, including lack of final user education on the topic.

[Raju S, Hollis K, Neglen P. Use of compression stockings in chronic venous disease: patient compliance and efficacy. Ann Vasc Surg. 2007 Nov;21(6):790-5].

According to a recent literature revision, less than two thirds of patients affected by chronic venous disease or deep venous thrombosis are compliant to graduated compression.

Lower pressure doses were associated with a better compliance, nevertheless proper data collection on compliance assessment is missing.

[Kankam HKN, Lim CS, Fiorentino F, et al. A Summation Analysis of Compliance and Complications of Compression Hosiery for Patients with Chronic Venous Disease or Post-thrombotic Syndrome. Eur J Vasc Endovasc Surg. 2018 Mar;55(3):406-416].

A 2020 publication on the topic demonstrated four main themes and nine subthemes related to the reasons for non-compliance with graduated compression stockings for lower limb varicose veins.

The lack of proper health and non-health professionals education was confirmed as a main justification of the phenomenon.

Sociopsychological factors related to the use of graduated compression stockings were also identified.

***[Gong JM, Du JS, Han DM, et al. Reasons for patient non-compliance with compression stockings as a treatment for varicose veins in the lower limbs: A qualitative study. PLoS One. 2020;15(4):e0231218. Published 2020 Apr 28].**

Moreover, training of prescribers was demonstrated to be an important factor in influencing the knowledge, the attitude, and the good practice toward the correct use of graduated elastic compression.

[Xu Y, Wang W, Zhao J, et al. Knowledge, attitude, and practice of healthcare professionals toward clinically applying graduated compression stockings: results of a Chinese web-based survey. J Thromb Thrombolysis. 2019 Jan;47(1):102-108].

The involved prescribers should dedicate time and commitment to educate their patients on the topic, considering that a direct association between the knowledge and the patient attitude was demonstrated as well.

[Uhl JF, Benigni JP, Chahim M, Frédéric D. Prospective randomized controlled study of patient compliance in using a compression stocking: Importance of recommendations of the practitioner as a factor for better compliance. Phlebology. 2018 Feb;33(1):36-43].

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STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 09, Statement 02

“If properly prescribed and applied, compression stockings are highly tolerable. Specific devices can help donning and doffing them”

SELECTED REFERENCES

1. Raju S, Hollis K, Neglen P. Use of compression stockings in chronic venous disease: patient compliance and efficacy. *Ann Vasc Surg.* 2007 Nov;21(6):790-5
2. Kankam HKN, Lim CS, Fiorentino F, et al. A Summation Analysis of Compliance and Complications of Compression Hosiery for Patients with Chronic Venous Disease or Post-thrombotic Syndrome. *Eur J Vasc Endovasc Surg.* 2018 Mar;55(3):406-416
3. *Gong JM, Du JS, Han DM, et al. Reasons for patient non-compliance with compression stockings as a treatment for varicose veins in the lower limbs: A qualitative study. *PLoS One.* 2020;15(4):e0231218. Published 2020 Apr 28
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identified LITERATURE BIAS

Heterogeneous compliance assessment modalities

SUGGESTED NEXT LINES OF RESEARCH

Real world data on compliance measure by homogenous objective parameteres