

Benefits of Medical Compression Stockings throughout Pregnancy & after Birth

SIGVARIS
GROUP



PREGNANCY-RELATED SIGNS & SYMPTOMS

Pregnancy is associated with a wide variety of signs & symptoms:



NAUSEA & VOMITING

Nausea and vomiting affect approximately 50% - 80% of women in early pregnancy (that is during the first trimester and early second trimester). Symptoms can be mild, or they can even require treatment and hospitalization¹.



LEG SIGNS & SYMPTOMS

Due to physiological changes, many mothers-to-be develop varicose veins over time. This can lead to chronic venous insufficiency, which is accompanied by leg pain, heaviness and edema. These symptoms usually worsen as pregnancy progresses^{2,3}.



VENOUS THROMBOEMBOLIC EVENTS (VTE)

The risk of deep vein thrombosis (DVT) increases during pregnancy and is at its highest in the three months after birth. If left untreated, DVT can lead to a pulmonary embolism (PE). VTE (DVT, PE) remain a main cause of maternal mortality in the developed world⁴.



MATERNAL HYPOTENSION

Maternal hypotension is a frequent complication following spinal anesthesia or epidural analgesia during birth. It may cause nausea and vomiting in the mother, and it can lead to fetal complications such as hypoxia, heart rate abnormalities, or acidosis⁵.

This One-Pager reviews the effectiveness of medical compression stockings (MCS) against various signs & symptoms, throughout pregnancy & beyond.



MCS BENEFITS THROUGHOUT PREGNANCY & BEYOND



TRIMESTER 1



TRIMESTER 2



TRIMESTER 3



BIRTH



AFTER BIRTH



NAUSEA & VOMITING

MCS (23-32mmHg) **alleviate nausea** and **vomiting**¹.



LEG PAIN, HEAVINESS & SWELLING - VARICOSE VEINS, VENOUS INSUFFICIENCY

MCS (15-20mmHg) **reduce leg pain** and **increase the quality of life**³.

MCS (20-30mmHg) **improve pain, edema** and **leg heaviness**⁶.

MCS (20-30mmHg) **decrease the reflux time** and **peak reflux velocity** in the great/small saphenous veins⁷.

MCS (20-30mmHg) **reduce** the great/small saphenous **vein diameters**⁶.



VENOUS THROMBOEMBOLIC EVENTS (DVT, PE)

For the prevention of venous thromboembolic events (VTE), **MCS are recommended throughout the entire pregnancy** up to **six weeks after natural birth**, or up to **six months after a cesarean section**⁸.



MATERNAL HYPOTENSION

MCS (20-36mmHg) **reduce** the incidence of **maternal hypotension** following epidural analgesia during spontaneous term labor^{5,9}.

MCS (20-30mmHg) worn during a cesarean section effectively **reduce post-spinal maternal hypotension** and **neonatal acidosis**¹⁰.



CONCLUSION

MCS provide multiple benefits throughout pregnancy and beyond:

- Alleviation of nausea and vomiting¹
- Effective control of varicose veins and retrograde flow^{6,7}
- Improvement of venous insufficiency signs and symptoms^{3,6}
- Protection against VTE (DVT, PE)⁸
- Reduction in maternal hypotension during birth^{5,9,10}
- Increase in quality of life³

TAKE-HOME MESSAGE

MCS are recommended throughout the entire pregnancy^{1,3,6,7,8} and childbirth^{5,9,10}, for up to six weeks after natural birth, or six months after a cesarean section⁸. Because pregnancy-related venous indications may persist or worsen over time³, SIGVARIS GROUP recommends the continued wearing of MCS post-pregnancy.

References: (1) Mendoza, E., & Amsler, F. (2017). A randomized crossover trial on the effect of compression stockings on nausea and vomiting in early pregnancy. *International Journal of Women's Health*, 9, 89. (2) sigvaris.group. (3) Allegra, C., Antignani, P. L., Will, K., & Allaert, F. (2014). Acceptance, compliance and effects of compression stockings on venous functional symptoms and quality of life of Italian pregnant women. *Int Angiol*, 33(4), 357-364. (4) Marik, P. E. (2010). Venous thromboembolism in pregnancy. *Clinics in chest medicine*, 31(4), 731-740. (5) Peyronnet, V., Roses, A., Girault, A., Bonnet, M. P., Goffinet, F., Tsatsaris, V., & Lecarpentier, E. (2017). Lower limbs venous compression reduces the incidence of maternal hypotension following epidural analgesia during term labor. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 219, 94-99. (6) Saliba Júnior, O. A., Rollo, H. A., Saliba, O., & Sobreira, M. L. (2020). Graduated compression stockings effects on chronic venous disease signs and symptoms during pregnancy. *Phlebology*, 35(1), 46-55. (7) Junior, O. A. S., Rollo, H. A., Saliba, O., & Sobreira, M. L. (2020). Compression stocking prevents increased venous retrograde flow time in the lower limbs of pregnant women. *Phlebology*, 35(10), 784-791. (8) Haute Autorité de Santé. (2010). La compression médicale en prévention de la thrombose veineuse. (9) https://www.sigvaris.group/globalassets/pdf/pdf-global/compression-bulletins/cb41_en_mail.pdf (See: <https://www.sigvaris.group/en/expertise/stemmer-medical-platform/>). (10) Elgzar, W. T. E., Said, H. E., & Ebrahim, H. A. (2019). Effect of lower leg compression during cesarean section on post-spinal hypotension and neonatal hemodynamic parameters: nonrandomized controlled clinical trial. *International journal of nursing sciences*, 6(3), 252-258. **Abbreviations:** **DVT**, Deep Vein Thrombosis; **MCS**, Medical Compression Stockings; **PE**, Pulmonary Embolism; **VTE**, Venous Thromboembolic Events.