Winnipeg Regional Health Authority santé de Winnipeg Caring for Health À l'écoute de notre santé

Wound Care Enabler Series

Enabler #2 Sub-bandage Pressure and Lower Leg Compression

Question: Do wound dressings applied under compression wrapping increase the amount of pressure applied to the limb?

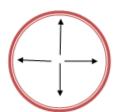
Answer: The answer is NO. Sub-bandage pressure or interface pressure (IP) is influenced by the position and activity of the person. If the systems are applied correctly there will be no increase in IP. Compression therapy other than tubular compression has two systems:

1. Short stretch or inelastic (Coban 2[™] or Comprilan®)

In supine the IP is low, called the resting pressure but it changes with muscle activation leg movement and walking is known as working pressure.

The layers of wrapping form an enclosed cast like cylinder allowing internal pressures in the leg and foot to be evenly distributed.

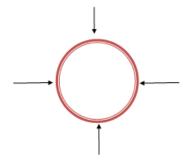
This inelastic wrap resists the expansion of the calf muscle creating an inward force compressing the deep veins which increases the velocity of the blood flow.



2. Long stretch or elastic (Three Flex® and Four Flex® or Sure Press®)

Interface pressure can vary according to limb shape and tension of bandage applied.

Sub-bandage pressure is constant maintaining a therapeutic compression at rest but with less marked changes in pressure during muscle activation.



^{1.} Woo, K.Y., & Sibbald, R.G. (2009). A cross-sectional validation study of using NERDS and STONEES to assess bacterial burden. *Ostomy Wound Management*, 55(8), 40-48.

^{2.} Edwards-Jones, V., Flanagan, M., & Wolcott R. (2015). Technological advancements in the fight against antimicrobial resistance. *Wounds International*, 6(2), 47–51.