## Compression Therapy

**NOTE:** Patients must be properly screened for adequate blood supply in the lower leg (circulation and ABPI). Patients must also be clinically appropriate for compression therapy (screen for CHF, edema, tolerance, level of activity and active cellulitis). Compression is usually a long-term therapy and must be appropriate for a patient’s discharge plan (self-application, VON, or family support).  

*Caution:* Go slow and start low. Closely monitor patients with diabetes, connective tissue disease or CHF.

<table>
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<tr>
<th>Examples</th>
<th>Type of compression</th>
<th>Characteristics</th>
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| **LOW (10-15 mmHg pressure)** | Lower leg assessment prior to initial application, may include ABI | Latex based, reusable, washable, multi-purpose tubular stocking. Easy application and low cost. Wear daily and wash at night.  
**Note:** Prior to client mobilizing and with patient supine, measure widest part of calf. |
| Tubigrip (Molnlycke)          | Long stretch/Elasticated Tubular Bandage               | Contains NATURAL RUBBER LATEX                                                                                                                                                                                    |
| (Double layer 10-15mmHg)      |                                                        |                                                                                                                                                                                                                 |
| When applied according to manufactures guidelines. |                                                        |                                                                                                                                                                                                                 |
| **MEDIUM (20-40 mmHg)**       | Require an ABI before initial application              | Self-adherent to prevent slippage, compression well sustained with a reduced resting pressure. May wear up to 7 days continuously.  
(see product information sheet provided) |
| Coban 2 Lite (3M)             | Short stretch/inelastic compression                    | Cohesive bandages                                                                                                                                                                                               |
| (25- 30 mmHg)                 |                                                        |                                                                                                                                                                                                                 |
| ABI ≥ 0.5                     |                                                        |                                                                                                                                                                                                                 |
| Coban 2 (3M) 2 layers (30-40 mmHg) | Short stretch/inelastic                              | Self-adherent to prevent slippage, compression well sustained with a reduced resting pressure. May wear up to 7 days continuously.  
(see product information sheet provided) |
| ABI ≥ 0.8                     |                                                        |                                                                                                                                                                                                                 |
| **HIGH (40mmHg and higher)**  | Require an ABI before initial application              | Reusable and washable sustained compression. Can wear for 7 days continuously.  
Latex free. Designed to give 40mmHg at the ankle and 17 mmHg at knee. Can wear for 1 week at a time.  
Latex free, reusable compression with slight stretch giving low resting pressure but high pressure during activity.  
Non-compliant, plaster type dressing. Important for patient to have calf muscle movement or walking to benefit from therapy. |
| Surpress 2 layer system (40mmHg) | Long stretch                                          |                                                                                                                                                                                                                 |
| Four flex 4 layer system (40mmHg) | Multilayer/Graduated compression                      |                                                                                                                                                                                                                 |
| Comprilan (40 -60mmHg)        | Short stretch/ inelastic compression                   | Used with lymphedema                                                                                                                                                                                              |
| Unna’s Boot (visco paste)     | Rigid system                                          |                                                                                                                                                                                                                 |

Tensor bandages and post-op anti-embolic stockings (e.g. TEDS). These products do not provide therapeutic compression for treatment and management of venous stasis disease. These materials have limited elasticity and tend to ‘lock-out’ at relatively low levels of extension; they are not suitable for significant levels of pressure (TEDS for BED).
Compression (21 mmHg and greater)

- Must have a physician order
- Must have an ABPI
- Is more effective than low compression for venous stasis (if tolerated)
- For compression of 30-40mmHg ABI should be equal to or greater than 0.8, for compression of 21mmHg ABI should be equal to or greater than 0.5
- Venous ulceration should be treated with high compression bandaging to achieve a pressure between 35-40 mmHg at the ankle, graduating to half pressure at calf in a normally shaped limb.
- Use protective padding over bony prominences
- High compression is indicated for treatment of Lymphedema

Compression in General

- Compression therapy should be modified (lighter compression) during episodes of acute cellulitis to manage pain
- When using elastic systems such as “high compression” bandages, the ankle circumference must be more than or padded to equal 18 cms (smaller limb size= higher pressure)
- ABI (0.5- 0.8) mild to moderate compression, close monitoring required because of risk of pressure damage and distal necrosis
- Compression stockings are not suitable in clients with high levels of exudate or open wounds. Compression bandages are used to reduce edema and control exudate. Once edema and exudate are reduced to baseline, a prescription for Compression Stocking can be made. Compression bandages should be continued until stocking s are available to patient for seamless compression therapy.

Helpful Hints:

- Some compression is better than no compression
- Start with LOW compression, even one layer of TUBIGRIP, until patient adjusts to treatment
- Reduce size of limbs before measuring patient for a more permanent system
- Frequent measurement required as limb edema reduces, adjustments to compression bandage should be made to ensure proper pressure to limb
- Applying compression bandages in a figure of 8 increases compression pressure by 10-15mmHg over spiral, for any bandage
- Patients unable to tolerate higher levels of compression (21mmHg or higher) use of TUBIGRIP (according to guide) or OTC compression socks can assist in managing leg fluid

RNAO Practice Recommendations Assessment and Management of Venous Leg Ulcers 2007
Compressin in Venous Leg Ulcers: a consensus document (Principles of Best Practice WUWHS- 2008)
Best Practice Recommendations for the Prevention and Treatment of Venous Leg Ulcers: Update 2006 (Wound Care Canada)
Compression Therapy in Practice; Christine Moffatt 2007
Product information sheets: CLWK and companies

CZ Wound Care Committee 2019