

3M™ COBAN™ 2 Compression

made easy

Volume 2 | Issue 1 | February 2011 www.woundsinternational.com



Introduction

The 3M™ Coban™ 2 Compression System is designed to address some of the problems that may be associated with multi-component compression systems, eg two- or four-layer bandaging, or compression hosiery. This system has two layers, is quick and easy to apply¹ and produces effective, consistent pressure that effectively manages oedema²⁻⁴. The 3M™ Coban™ 2 Compression System also demonstrates reduced slippage⁵ and is suitable for a wide range of patients⁶. This article describes why, when and how to effectively and safely use this system.

Authors: Vowden K, Vowden P, Partsch H, Treadwell T. Full author details are on page 6.

Challenges associated with compression therapy

When compression therapy is indicated, clinicians need to ensure that it is applied in a way that will safely deliver sufficient pressure to reduce oedema without causing pressure damage⁷. Clinicians need to be knowledgeable of the features of the different bandage systems and their appropriate use. In addition, they require training and should have demonstrated competency in the bandage application technique for the system in use⁸.

Non-compliance

Non-compliance with compression therapy in patients with venous leg ulceration is a recurring problem⁹. In a study of 150 patients with venous insufficiency, less than half of patients reported full compliance with compression therapy¹⁰. A recent review found that poor concordance with compression therapy reduces venous leg ulcer healing rate, doubling the time to complete healing¹¹. A wide variety of physical and psychosocial factors have been identified as contributing to non-compliance^{12,13}. For example, patients may choose to remove the bandages if they are associated with pain, make the patient feel too hot, slip down, or are too bulky to wear with the patient's usual shoes or clothes¹². Removal of the bandages may result in an interruption to therapy, and has the potential to delay wound healing.

What are the properties of the ideal compression system?

The ideal compression system enables clinicians to deliver effective compression with a low complication rate (Box 1).

Box 1 Properties of the ideal compression system (adapted from^{7,14})

- Proven clinical effectiveness
- Delivers tolerable sustained compression during rest and high pressure peaks during walking
- Enhances calf muscle pump function
- Easy application encourages safe, accurate and consistent application
- Non-slip and likely to stay in place until next bandage application
- Comfortable and can be adapted to cope with limb distortion
- Comfortable and allows the patient to mobilise and to wear appropriate footwear and clothing
- Non-allergenic
- Durable

What is the 3M™ Coban™ 2 Compression System?

The 3M™ Coban™ 2 Compression System is a two-layer compression bandage system that is easier to apply and less bulky than traditional four-layer bandage systems. There are two forms of the system: 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite.

The inner latex-free foam sheet of both products is identical. It has a cohesive backing, is applied foam side to the skin and is highly conformable, ie will mould to the shape of the leg easily. The cohesive backing has adhesive properties that enable it to attach to the outer layer of the compression system across its whole surface to form a stable, effective compression system. The outer layer is a short stretch cohesive bandage that is applied over the inner layer to provide compression. It interlocks with the inner layer creating an inelastic bandage system that is less likely to slip down the leg during wear. The outer layer of 3M™ Coban™ 2 Lite is different in appearance to that of 3M™ Coban™ 2, and allows lower resting pressures, but similar working pressures to 3M™ Coban™ 2.

Part of the inspiration for designing the 3M™ Coban™ 2 Compression System to be inelastic came from examining the properties of giraffe skin. It is known that the fibrous, inelastic skin of giraffes helps to explain why they do not experience skin changes as a result of venous hypertension¹⁵.

Clinical evidence for the 3M™ Coban™ 2 Compression System

Compression therapy is considered the gold standard of care for treating venous hypertension and venous ulceration¹⁶. A Cochrane review of compression therapy for venous leg ulcers concluded that venous ulcers heal more rapidly when compression is used than when it is not¹⁷. Box 2 (see page 2) details the mechanisms of action of compression therapy in reducing oedema and aiding healing of venous leg ulceration.

The studies demonstrating the effectiveness and patient acceptability of the 3M™ Coban™ 2 Compression System are summarised in Table 1 (see page 5). These studies have

3M™ COBAN™ 2 Compression **made easy**



demonstrated that 3M™ Coban™ 2 Compression System:

- provides effective, therapeutic compression for the treatment of venous leg ulcers^{4, 24-25}
- has reduced slippage⁵
- improves health-related quality of life⁵
- is safe, well-tolerated and comfortable^{2,5}, and preferred by patients in comparison with a four-layer system⁵.

How does the system provide effective compression?

Enhanced calf muscle pump

The two interlocking layers of 3M™ Coban™ 2 together produce a relatively stiff inelastic sleeve that resists being stretched when the calf muscle expands as it contracts during movement.

The effect of this resistance by the sleeve to muscle expansion during muscle contraction is to produce peaks in pressure under the sleeve and within the calf muscle during movement (working pressure) (Figure 1).

Since the compression sleeve does not give way when the muscle contracts, intermittent pressure peaks can be registered under the bandage, reflecting a massaging effect on the leg during walking. As the muscle relaxes between contractions, the pressure drops producing the variation in pressure amplitude during movement. The pressure peaks cause intermittent 'squeezing' of the veins and muscles that enhances venous return and calf muscle pump function.

3M™ Coban™ 2 Lite also produces spikes in pressure during movement, but because it has fewer elastic fibres than 3M™ Coban™ 2, when it is applied with comparable stretch, it produces a resting pressure that is 25% lower. This reduces the risk of pressure damage and so makes it more suitable for patients who have arterial occlusive disease (ABPI 0.5–0.8) or reduced tolerance for compression.

Effective compression at rest

After application of the cohesive layer of 3M™ Coban™ 2 at full stretch, a resting pressure of more than 40mmHg can be

Box 2 How does compression therapy reduce oedema and heal leg ulcers?

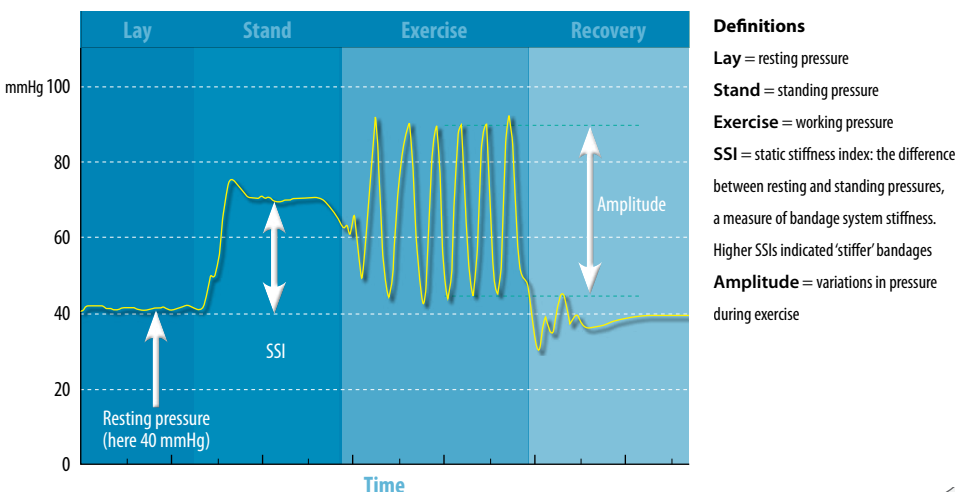
The effect of compression therapy is to squeeze the limb, and so to reduce oedema by:

- reducing the diameter of major veins and consequently local blood volume¹⁸
- aiding venous return of blood to the heart by improving calf muscle pump action¹⁹
- reducing the formation of excess interstitial fluid²⁰
- improving the microcirculation and tissue oxygenation¹⁸
- enhancing lymphatic function²⁰
- removing and decreasing production of proteases and inflammatory cytokines in the wound microenvironment²¹.

In venous leg ulceration, the underlying pathophysiology is assumed to be a result of venous hypertension resulting in chronic venous insufficiency²². Venous hypertension increases capillary permeability resulting in tissue oedema and a number of biochemical and physiological effects that may contribute to cell damage, tissue breakdown and the formation of venous leg ulcers^{16,18,23}. It is thought that the same mechanisms may also hinder tissue repair. Compression improves venous return and reduces oedema, which will aid healing.

delivered. On standing, both 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite will produce a pressure of more than 60mmHg (see Figure 1), which is the level accepted as the pressure required to counteract venous hydrostatic pressure in the lower leg^{20,26}.

Figure 1 Pressure changes under the 3M™ Coban™ 2 Compression System



What makes the bandage system easy to apply?

3M™ Coban™ 2 and 3M™ Coban™ 2 Lite each have only two layers and the outer layer is designed to be applied at full stretch. This simplifies application: there are fewer layers to apply and there is less uncertainty in obtaining the correct tension to achieve the desired pressure.

In an international multicentre study 32 expert bandagers applied the bandage they used the most to an artificial limb over pressure sensors three times and repeated the process with 3M™ Coban™ 2. The bandagers were found to apply 3M™ Coban™ 2 at more consistent

pressures than the other systems¹. In addition, participants found 3M™ Coban™ 2 application to be fast and easy to learn¹.

How does the 3M™ Coban™ 2 Compression System avoid slippage?

Ideally, a compression bandage system should stay in place for the duration of wear because slippage will result in a failure to deliver compression. However, bandages may slip down the limb becoming bunched and uncomfortable, thereby losing some compressive ability^{5,20}.

When the inner foam layer of 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite is compressed, the system holds on to the skin, and prevents slippage. After application, the inner layer provides a cohesive surface for the attachment of the outer compression layer. The two layers lock together to create an inelastic sleeve that conforms to the limb and reduces the potential for slippage and bunching.

A laboratory study of 10 different compression systems assessed slippage over 48 hours of wear in 60 healthy volunteers²⁷. 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite were shown to have the lowest slippage and were the most effective in maintaining resting pressures and amplitudes at values known to be effective for ulcer healing²⁷ (Figure 2).

A clinical study in patients with venous leg ulcers found that slippage measured at each bandage change was significantly lower for 3M™ Coban™ 2 when compared with a four-layer bandage system⁵.

Box 3 Why select the 3M™ Coban™ 2 Compression System?

3M™ Coban™ 2:

- is a two-layer inelastic compression system that is quick and easy to apply¹
- provides effective compression²⁻⁴
- is less likely to slip than other multi-component bandage systems⁵
- is suitable for a wide range of patients⁶.

3M™ Coban™ 2 Lite has similar benefits and in addition can be applied with a 25% reduction in resting pressure reducing the likelihood of pressure damage and non-concordance in patients who have arterial disease (ABPI 0.5–0.8), are frail or less mobile, or who have unknown tolerance to compression therapy.

Box 4 Contraindications/precautions

- Clinicians should ensure that the patient has an adequate arterial blood supply before applying either compression system. If the patient's ABPI is <0.8, 3M™ Coban™ 2 should not be used. If the patient's ABPI is ≥0.5, 3M™ Coban™ 2 Lite may be used⁶
- 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite are not designed to be used as a wound dressing.

Indications for 3M™ Coban™ 2

3M™ Coban™ 2 is suitable for most patients with venous leg ulcers, lymphoedema and other conditions where compression therapy is appropriate, and for patients with different limb sizes and shapes⁶ (Box 3). It is important to ensure adequate arterial blood flow before applying 3M™ Coban™ 2 (Box 4).

Indications for 3M™ Coban™ 2 Lite

3M™ Coban™ 2 Lite achieves a lower resting pressure than 3M™ Coban™ 2. As a result, it is more comfortable for patients less tolerant of compression therapy (Box 3), including those who:

- **have a leg ulcer of mixed aetiology with an ABPI ≥ 0.5**
- **are new to compression and have unknown tolerance for compression**
- **are frail or less mobile⁶.**

3M™ Coban™ 2 Lite reduces the risk of tissue damage and necrosis when compression therapy is considered necessary in patients with an ABPI between 0.5 and 0.8⁶ (Box 4). Even so, careful observation for early signs of skin damage remains a requirement for the safe management of these patients.

Clinical practice points

Prior to application

Wounds should be managed with dressings appropriate to the wound condition. The decision to use 3M™ Coban™ 2 or 3M™ Coban™ 2 Lite will be guided by full clinical assessment, including assessment of peripheral arterial circulation (ABPI) (see Box 4) and the patient's ability to tolerate compression.

Box 5 Basic application and removal technique for the 3M™ Coban™ 2 Compression System

Application

- Apply the inner foam layer with the foot dorsiflexed and starting at the base of the fifth metatarsal head. Leaving the bottom of the heel exposed, proceed by winding the foam up the leg using minimal overlap to just below the fibular head. Cut off excess material.
- Apply the compression layer with the foot dorsiflexed and starting at the base of the fifth metatarsal head. Apply at full stretch and proceed up the leg using 50% overlap. The bottom of the heel should be covered with the compression layer.
- End at the fibular head or just below the back of the knee and level with the top edge of the foam layer. Cut off any excess material.
- Gently press and conform the entire surface of the system to ensure that the two layers are firmly bound together.

Removal

- 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite may be removed with bandage scissors or by unwrapping each layer. The bandages should not be reused.

(See: 3M™ Coban™ 2 Layer Compression System Application and Removal Techniques²⁸).

PRODUCTS FOR PRACTICE

Application technique

The technique for 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite is easy to learn and results in comfortable and effective compression during wear. Full details can be found in *3M™ Coban™ 2 Layer Compression System Application and Removal Techniques*²⁸.

The outer compressive layer of 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite is designed to be applied at full stretch and requires an application technique that is different from many other systems (Box 5).

Full stretch application

Full stretch can be determined by stretching the compression layer the few centimetres necessary until it just reaches its limit. This degree of stretch should be maintained throughout the application to the limb. The bandage should not be applied more tightly as this confers no benefit and may cause damage through constriction. If 3M™ Coban™ 2 is not tolerated at full stretch, then 3M™ Coban™ 2 Lite may be applied. It should be noted that compression bandages become more comfortable after a few hours of movement.

The 3M™ Coban™ 2 Compression System can be used on highly contoured or thin legs with minor modifications to the application technique: see *3M™ Coban™ 2 Layer Compression System Application and Removal Techniques*²⁸ for full details.

Patients new to compression therapy

Patients new to compression therapy may not initially tolerate pressure levels delivered by multi-component compression systems. However, bandages often become more comfortable after a few hours, especially if the patient is encouraged to walk as much as possible. Should a patient have problems with even 3M™ Coban™ 2 Lite,

then this may initially be applied at less than full stretch, with the intention of increasing the stretch at subsequent bandage changes as tolerance improves.

When to replace the bandages

3M™ Coban™ 2 and 3M™ Coban™ 2 Lite should be changed if they become loose fitting, no longer conform to the shape of the leg, become soiled with wound drainage, or have been in place for seven days. Care should be taken to keep 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite dry to prevent any wound getting wet and the bandages becoming heavy and uncomfortable.

When should treatment be discontinued?

If patients experience pain, numbness, tingling, discolouration or swelling of their toes, they should be advised to promptly remove 3M™ Coban™ 2 or 3M™ Coban™ 2 Lite and contact their healthcare provider.

What are the economic arguments for using compression systems?

There are a number of challenges

involved when presenting a robust cost-effectiveness argument for any wound management intervention.

Using a theoretical model, Franks and Posnett (2003) were able to demonstrate that high compression therapy was a cost-effective intervention in the management of venous leg ulcers, with leg ulcer healing as a key clinical outcome²⁹.

However, they stressed that a thorough evaluation of the cost-effectiveness of compression therapy systems is awaited²⁹.

Romanelli et al assert that factors such as frequency of dressing/bandage change, nursing time, avoidance of ulcer recurrence, cost of care setting and the ability to return to paid employment are factors that should always be considered by clinicians when assessing the cost-effectiveness of treatments³⁰.

It is likely that compression systems that are quick and easy to apply, enhance healing of venous leg ulcers, and encourage concordance seem likely to have economic benefits.

Figure 2 Results of a controlled laboratory study measuring slippage of various compression systems²⁷

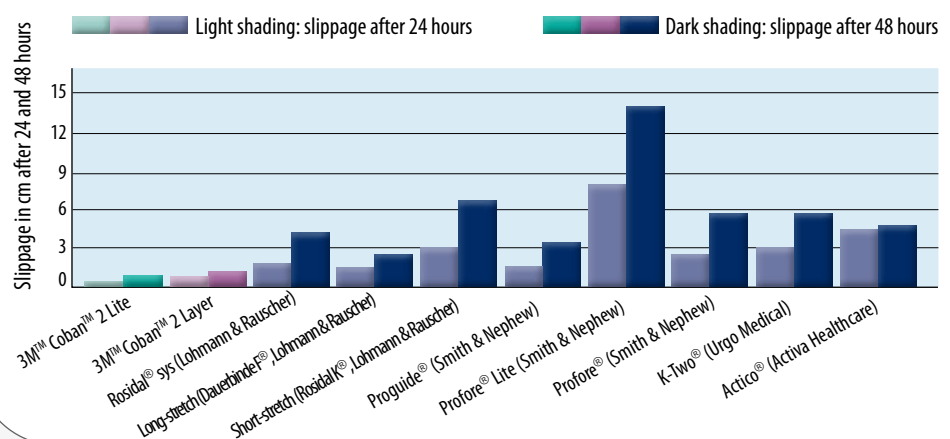


Table 1 Summary of clinical evidence for the 3M™ Coban™ 2 Compression System

Study reference	Title	Type	Purpose	Outcomes
Moffatt CJ, Edwards L, Collier M, et al. <i>Int Wound J</i> 2008; 5(2): 267-79 ⁵	A randomised eight-week crossover clinical evaluation of the 3M™ Coban™ 2 Compression System versus Profore™ to evaluate the product performance in patients with venous leg ulcers	RCT, eight-week crossover design; 81 patients	To compare systems for slippage, health-related quality of life, patient preference and wound healing	<ul style="list-style-type: none"> There was significantly less slippage after 3–7 days with 3M™ Coban™ 2 (p<0.0001) No significant difference in % wounds that healed or in wound area reduction between the different compression systems 72% of patients preferred 3M™ Coban™ 2 over Profore Patient preference was similar regardless of randomisation order
Hampton S, Kerr A, Crossley M. Data on file. 3M, 2006 ²⁴	Summary of five case studies on the treatment of venous leg ulcers with a new two layer compression system in a community setting	Case study series following five patients for six weeks	To evaluate clinical acceptability and product performance (slippage and wear time) of 3M™ Coban™ 2	<ul style="list-style-type: none"> 3M™ Coban™ 2 was easy to learn and easy to apply The system conformed well to a variety of limb shapes The system was found to be aesthetically pleasing and demonstrated seven-day wear time on the majority of patients (minimum wear time four days) The system was never changed as a result of slippage or sagging
Jünger M, Hasse H, Ladwig A, et al. Data on file. 3M, 2010 ²	Compression therapy in patients with peripheral arterial occlusive disease: A prospective clinical study with the 3M™ Coban™ 2 Layer Lite Compression System for ABPI≥0.5	Single-centre, open label study of 15 patients with ABPI of 0.5–0.8	To assess safety and tolerability of 3M™ Coban™ 2 Lite in patients with impaired arterial circulation (ABPI 0.5–0.8)	<ul style="list-style-type: none"> 3M™ Coban™ 2 Lite was safe and well tolerated by patients with ABPI 0.5-0.8 Average supine sub-bandage pressure was 28mmHg immediately after bandage application No pressure-related skin damage occurred and no pain related to tissue hypoxia was reported 3M™ Coban™ 2 Lite demonstrated beneficial effects on the microcirculation
Bain G. Data on file. 3M, 2008 ²⁵	Evaluation of new bandage system to improve wound healing outcomes for patients with problematic venous leg ulcers	Case study series of eight patients; patients were assessed weekly for four weeks	To measure healing for patients whose venous leg ulcers had not responded to conventional compression bandaging	<ul style="list-style-type: none"> 3M™ Coban™ 2 obtained faster reduction in oedema, pain and exudation than the traditional multi-layer compression systems used previously A 30–40% reduction in wound surface area was observed in 6 patients over the four-week trial period; one patient's ulcer was healed by the 6th weekly visit, after two years of non-healing Minimal bandage bulk allowed patients to wear normal shoes
McGuinness B, Rice J. Data on file. 3M, 2008 ³	Understanding the clinical and patient outcomes of new bandaging system: summary of four case studies	Case study series of four patients; patients were assessed weekly	To understand effect of dressings on clinical and patient outcomes	<ul style="list-style-type: none"> 3M™ Coban™ 2 was comfortable and well tolerated by all patients The persistent leg ulcers of two patients healed within the four-week evaluation period In all cases, considerable oedema reduction was achieved
Hayes W, Day J. <i>J Wound Care</i> 2007; 3M (Suppl): 1-12 ⁴	Evaluating a new and unique two-layer compression system for patients with venous leg ulceration	Case study series of four patients; patients were assessed weekly for six weeks	To evaluate clinical acceptance (bandage slippage and wear time), in venous leg ulcer patients treated with 3M™ Coban™ 2	<ul style="list-style-type: none"> 3M™ Coban™ 2 provided effective therapeutic levels of compression that patients could tolerate In all cases, wound dimensions reduced during the six-week evaluation period Patients were able to wear their choice of clothing and footwear All patients experienced improved comfort levels and were concordant with treatment

Healthcare practitioners are advised to consult the manufacturer's instructions before applying any dressing.

Supported by an educational grant from 3M. The views expressed in this 'Made Easy' section do not necessarily reflect those of 3M.

References

1. Collier M, Schuren J. Ease of use and reproducibility of five compression systems. *J Wound Care* 2007; 3M supplement: 8-10.
2. Jünger M, Hasse H, Ladwig A, et al. Compression therapy in patients with peripheral arterial occlusive disease: A prospective clinical study with the 3M™ Coban™ 2 Layer Lite Compression System for ABPI≥0.5. Data on file. 3M, 2010. Available at: <http://multimedia.3m.com/mws/mediawebservlet?mwsld=666666UuZjcfSLXTtnXMto8TEEVuQEcuZgVs6EVs6E666666&fn=70-2010-7575-4.pdf>
3. McGuinness B, Rice J. Evaluating a new and unique 2 layer compression system for patients with venous leg ulceration. Data on file. 3M, 2008. Available at: <http://multimedia.3m.com/mws/mediawebservlet?mwsld=JJJJJ4qBV8jckLFPrtcodVxm4hXV4qzmKJXmKJXJJJJJ-->
4. Hayes W, Day J. Evaluating a new and unique 2 layer compression system for patients with venous leg ulceration. *J Wound Care* 2007; 3M (Suppl): 1-12.
5. Moffatt C, et al. A randomised, controlled 8-week crossover clinical evaluation of the 3M™ Coban™ 2 Layer Compression System versus Profore™ to evaluate produce performance in patients with venous leg ulcers. *Int Wound J* 2008; 5(2): 267-79.
6. 3M™ Coban™ 2 Layer Compression. A Product Monograph. 3M, 2010. Available at: http://solutions.3m.com/wps/portal/3M/en_US/SH/SkinHealth/solutions/skin-wound-care/venous-ulcers/coban2/evaluation/
7. World Union of Wound Healing Societies (WUWHS). *Principles of best practice: Compression in venous leg ulcers*. A consensus document. MEP Ltd, 2008.
8. Keller A, Müller ML, Calow T, et al. Bandage pressure measurement and training: simple interventions to improve efficacy in compression bandaging. *Int Wound J* 2009; 6(5): 324-30.
9. Van Hecke M, Grypdonck M, Defloor T. Interventions to enhance patient compliance with leg ulcer treatment: a review of the literature. *J Clin Nurs* 2008; 17(1): 29-39.
10. Heinen M, van der Vleuten C, de Rooij M, et al. Physical activity and adherence to compression therapy in patients with venous leg ulcers. *Arch Dermatol* 2007; 43(10): 1283-88.
11. Moffatt C, Kommala D, Dourdin N, Choe Y. Venous leg ulcers: patient concordance with compression therapy and its impact on healing and prevention of recurrence. *Int Wound J* 2009; 6(5): 386-93.
12. Edwards LM. Why patients do not comply with compression bandaging. *Br J Nurs* 2003; 12(11Suppl): S5-10.
13. Moffatt C. *Compression Therapy in Practice*. Aberdeen, UK: Wounds UK, 2007.
14. Marston W, Vowden K. Compression therapy: a guide to safe practice. In: EWMA Position Document: *Understanding Compression Therapy*. London, UK: MEP Ltd, 2003.
15. Hargens AR, Millard RW, Pettersson K, Johansen K. Gravitational haemodynamics and oedema prevention in the giraffe. *Nature* 1987; 329: 59-60.
16. Trent JT, Falabella A, Eaglstein WH, Kirsner RS. Venous ulcers: pathophysiology and treatment options - part 1. *Ostomy Wound Manage* 2005; 51(5): 38-54.
17. O'Meara S, Cullum NA, Nelson EA. Compression for venous leg ulcers. *Cochrane Database of Systematic Reviews* 2009, Issue 1. Art. No.: CD000265. DOI: 10.1002/14651858.CD000265.pub2.
18. Partsch H. Understanding the pathophysiological effects of compression. In: EWMA Position Document: *Understanding Compression Therapy*. London, UK: MEP Ltd, 2003.
19. Enoch S, Grey JE, Harding KG. ABC of wound healing: non-surgical and drug treatments. *BMJ* 2006; 332(7546): 900-3.
20. Partsch H, Jünger M. Evidence for the use of compression hosiery in lymphoedema. In: *Lymphoedema Framework. Template for Practice: compression hosiery in lymphoedema*. London: MEP Ltd, 2006.
21. Marston WA, et al. Protease and cytokine levels in non-healing venous leg ulcers before and after compression therapy. Presented at Symposium on Advanced Wound Care/Wound Healing Society Meeting, San Diego, CA, USA. April 25, 2008.
22. Grey JE, Enoch S, Harding KG. Venous and arterial leg ulcers. In: Grey JE, Harding KG (eds). *ABC of Wound Healing*. London, UK: BMJ Books, 2006; 5-8.
23. Shami SK, Shields DA, Scurr JH, Smith PD. Leg ulceration in venous disease. *Postgrad Med J* 1992; 68: 779-85.
24. Hampton S, et al. Summary of five case studies on the treatment of venous leg ulcers with a new two layer compression system in a community. Data on file. 3M, 2006. Available at: <http://multimedia.3m.com/mws/mediawebservlet?mwsld=666666UuZjcfSLXTtM8Ty5XMMEVUQEcuZgVs6EVs6E666666&fn=70-2009-7387-6.pdf>
25. Bain G. Evaluation of new bandage system to improve wound healing outcomes for patients with problematic venous leg ulcers. Data on file. 3M, 2008. Available at: <http://multimedia.3m.com/mws/mediawebservlet?mwsld=NNNNNNPpuFZAnGSo53TVxGShx9qpl9ZpuCqQON9qQON9NNNNNN-->
26. Partsch H. The static stiffness index: a simple method to assess the elastic property of compression material in vivo. *Dermatol Surg* 2005; 31(6): 625-30.
27. Schuren J, Andreas C. Pressure and slippage during 48 hours of compression therapy: a study on healthy volunteers. Poster presentation: SAWC, 2010.
28. 3M™ Coban™ 2 Layer Compression System Application and Removal Techniques. Available at: http://solutions.3m.com/wps/portal/3M/en_US/SH/SkinHealth/solutions/skin-wound-care/venous-ulcers/coban2/?WT.mc_id=www.3m.com/Coban2Layer
29. Franks PJ, Posnett J. Cost-effectiveness of compression therapy. In: EWMA Position Document: *Understanding compression therapy*. London: MEP Ltd, 2003.
30. Romanelli M, et al. Economic burden of hard-to-heal wounds. In: EWMA Position Document: *Hard-to-heal wounds: a holistic approach*. London: MEP Ltd, 2008.

Author details

K Vowden¹, P Vowden², H Partsch³, T Treadwell⁴.

1. Nurse Consultant, Bradford Teaching Hospitals NHS Foundation Trust and University of Bradford, Bradford, UK
2. Consultant Vascular Surgeon and Visiting Professor of Wound Healing Research, Bradford Teaching Hospitals NHS Foundation Trust & University of Bradford, UK
3. Professor of Dermatology, University of Vienna, Austria
4. Medical Director, Institute for Advanced Wound Care, Baptist Medical Center, Montgomery, Alabama, USA

Summary

The 3M™ Coban™ 2 Compression System provides thin, conformable compression that delivers therapeutic levels of compression and has demonstrated clinical efficacy. 3M™ Coban™ 2 and 3M™ Coban™ 2 Lite have only two layers making them quick to apply and the application technique easy to learn. The system's reduced bulk encourages concordance by allowing patients to wear their usual clothing and footwear.

To cite this publication

Vowden K, Vowden P, Partsch H, Treadwell T. 3M™ COBAN™ 2 Compression Made Easy. *Wounds International* 2011; 2(1): Available from <http://www.woundsinternational.com>