

3M™ Coban™ 2  
2 Layer Compression System  
Lymphoedema Intensive Therapy

Lymphoedema



# Maintain Mobility While Reducing Oedema

The background is a light blue gradient. On the right side, there are several concentric white circles of varying radii. A dark, semi-transparent horizontal band runs across the middle of the image, behind the text.

3M is redefining the  
practice of compression  
bandaging for lymphoedema  
intensive therapy

# A Breakthrough for Patients and Clinicians

Extensive research, design and testing led 3M scientists to develop 3M™ Coban™ 2 Compression System—a breakthrough in compression bandaging with the potential to change the practice of lymphoedema intensive therapy.

Until now, no one would have believed that two thin layers of compression bandages could provide:

- Clinically effective volume reduction without the bulk of traditional reusable bandages
- A twice-weekly application regimen proven effective in controlled clinical trial
- Improved comfort, mobility and function enabling patients to carry on with everyday life
- New application techniques that make wrapping sessions less taxing for clinicians and patients
- Significantly lower overall cost of care resulting from fewer visits required to achieve oedema reduction

Coban 2 Compression System delivers all this and more, improving the intensive therapy experience for patients and clinicians.



“I just felt my leg was so light I didn’t know the bandage was there. It was easier to do things. I would never want to go back to the old system.”

– Patient P7, Canada<sup>1</sup>

# Proprietary Materials Make the Difference

“The ideal compression system has been defined as a rigid sleeve with an anatomical fit around the patient’s limb which stays in place, allows functional mobility, and provides well-tolerated resting pressures and dynamic, effective working pressures.”

– Jan Schuren, RgN, BN, MSc, inventor of  
3M Coban 2 Compression System

Lymphoedema is a chronic, debilitating condition. Patients experience a wide range of psychological and physical difficulties including poor body image, anxiety, depression, embarrassment, impaired mobility and pain.<sup>1</sup>

3M™ Coban™ 2 Compression System materials were developed with unique stretch and cohesion properties to provide ideal compression and help patients overcome the challenges of wearing bandages during lymphoedema intensive therapy.

## Therapeutic Compression without the Bulk

Coban 2 Compression System comprises two thin layers proven to provide the stiffness required to generate sustained working pressures to reduce oedema as well as traditional bandages, without the bulk.

## Stays in Place for Improved Wearability

The proprietary interlocking materials cohere to each other, creating an inelastic sleeve that conforms to the limb and reduces potential for uncomfortable slipping or bunching. The inner comfort layer consists of a medical grade polyurethane foam laminated to a cohesive non-woven backing. When compressed, the foam grips the skin, and the non-woven backing provides a cohesive surface for attachment of the outer compression layer.

## Low-Profile Bandages Improve Mobility and Function

Patients can more easily perform daily activities because the bandages are lightweight, flexible and facilitate mobility. And, because they are so thin, they can be worn with regular footwear and clothing.

## Safe for Skin<sup>1</sup>

The system is latex-free, non-irritating and non-sensitising which helps to protect and improve skin integrity. The foam comfort layer is hypoallergenic, breathable, and helps to prevent friction, tissue necrosis and deterioration of the skin.

See page 10 to learn how inelastic compression bandaging works to improve lymphatic flow.



Until now, wrapping sessions have been physically and emotionally taxing for patients and clinicians. 3M™ Coban™ 2 Compression System materials enable new application techniques for a better intensive therapy experience and a higher standard of care.

### **Materials Improve Customisation and Confidence**

Clinicians can easily adapt application to accommodate any size, shape or tissue consistency with only two layers of conformable, cohesive materials. The compression layer is applied at full stretch to reduce application variability and consistently deliver the right amount of pressure.

### **Easy to Apply and Remove. No Need for Extra Padding.**

Coban 2 Compression System wrapping sessions are less demanding for patients and clinicians. The comfort foam layer protects the skin and the inelastic sleeve conforms to the limb to reduce volume and normalise limb shape as oedema is reduced, without the need to apply additional foams or pads. The compression layer is cohesive, eliminating the need for tapes or other products to hold the bandages in place.

Clinicians trained on the new application techniques find the two-layer system to be easy to apply and remove. Clinical training workshops, videos and guides are available to demonstrate various application and removal techniques.

“They are so much easier for the therapist to put them on and honestly you don’t know they are on when she has finished.”

– Patient P3, Canada<sup>1</sup>

# New Application Techniques Improve the Wrapping Experience for Clinicians and Patients



# Designed for Comfort, Proven to Work



“It has really amazed me. When it came off the other day I said, ‘look, I have knuckles on my hand!’ I haven’t seen them for 15 years.”

– Patient P5, Canada<sup>1</sup>

3M™ Coban™ 2 Compression System materials, with *Intelligent Compression Dynamics*, create a conformable, inelastic sleeve that stays in place and is comfortable to wear. These *Intelligent Compression Dynamics* enhance the effectiveness of muscle and joint movements to encourage lymph flow and reduce oedema.

## Effective with Twice-Weekly Application

Coban 2 Compression System can stay in place for up to four days even with significant volume reduction. Application two times per week has been clinically proven to effectively reduce overall limb volume. Figure 1 shows the clinical benefit in terms of volume reduction of the entire limb. This innovative system also helps to normalise and reshape distorted limbs, soften fibrotic tissue and reduce the symptoms of lymphorrhoea.<sup>1</sup>

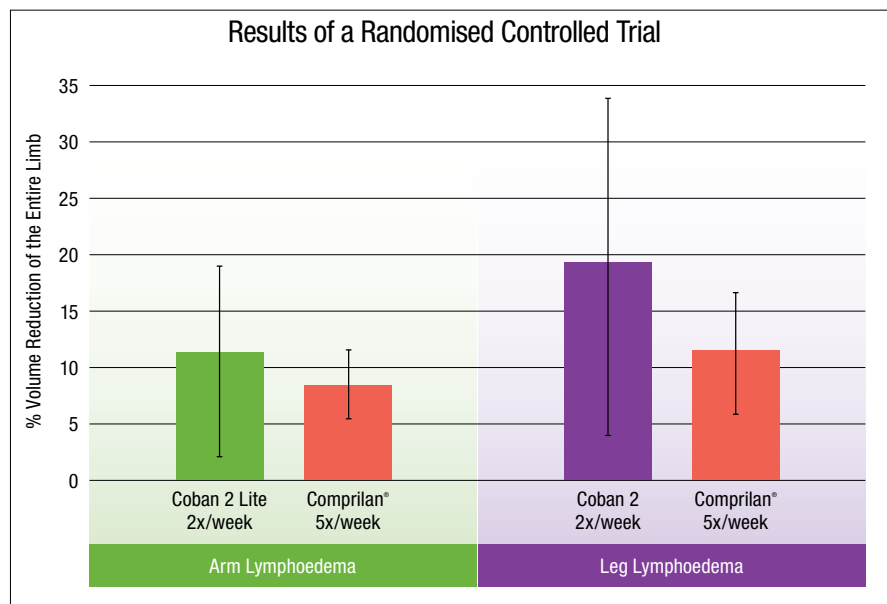


Figure 1: Percent volume reduction of study limb, end of treatment compared to baseline.

## Patient Comfort Can Improve Results

The success of lymphoedema intensive therapy is critically dependent on patient concordance. Studies have shown that because Coban 2 Compression System stays in place and is more comfortable, patients are more likely to keep the bandages on, increasing concordance and improving the potential for more effective therapy.

*“The cumulative results from these research studies support that the ‘Coban 2 Compression System’ is clinically effective and is set to fundamentally change the field of Lymphoedema.”*

Christine Moffatt CBE PhD  
Lead Researcher, Derby Hospitals  
Honorary Professor in Nursing & Health Care, Glasgow University

3M™ Coban™ 2 Compression System helps patients maintain control of their lives during intensive therapy. Living with lymphoedema can be a physically and emotionally painful experience. Multi-layer reusable bandages applied during the intensive phase of Complex Decongestive Therapy (CDT) are typically heavy, bulky, stiff and painful—limiting patient mobility and forcing them to rely on family, friends and caregivers to perform even routine tasks. Many are unable to continue working, further deteriorating their financial security and self-esteem.

## Mobility and Comfort Improves Quality of Life

Patients wrapped with Coban 2 Compression System rated their limb mobility “as good as” that of their unbandaged limb and reported a significant improvement in their quality of life during treatment.<sup>1</sup>

The lightweight flexible materials allow a full range of motion and increased function, which minimises the stiffness and pain associated with immobility. The reduced resting pressures ensure the bandages are more comfortable than traditional reusable bandages.

## Empowers Patients to Live Their Normal Lives

The low-profile bandages are aesthetically pleasing and can even be worn with normal clothing and footwear. Patients can more easily perform daily activities like personal care, household tasks and driving—and feel more confident in social situations. Patients are able to continue working, or return to work, with few restrictions and less need for time off because the bandages require less frequent application.

# Helps Patients Maintain Independence and Self-Esteem

Ms G, breast cancer survivor,  
lymphoedema patient, demonstrates  
the flexibility and function of 3M™  
Coban™ 2 Compression System.



# Significantly Reduces Cost of Care

Lymphoedema intensive therapy can be time-consuming and costly for patients and health care providers. 3M™ Coban™ 2 Compression System can significantly reduce the overall cost of treatment by requiring fewer applications. The conformable, cohesive materials provide sustained compression for up to four days, requiring reapplication only as volume is significantly reduced, or as limb shape changes.

## Longer Wear Time Reduces Number of Visits

A regimen of twice-weekly application is clinically proven to provide effective volume reduction. This long wear time significantly reduces the total number of wrapping sessions required to reduce oedema, from daily application to twice-weekly application.<sup>1</sup> Figure 2 demonstrates the potential cost savings with twice-weekly application of Coban 2 Compression System. Please note, this trial was done in the UK, so the costs are given in Euro.

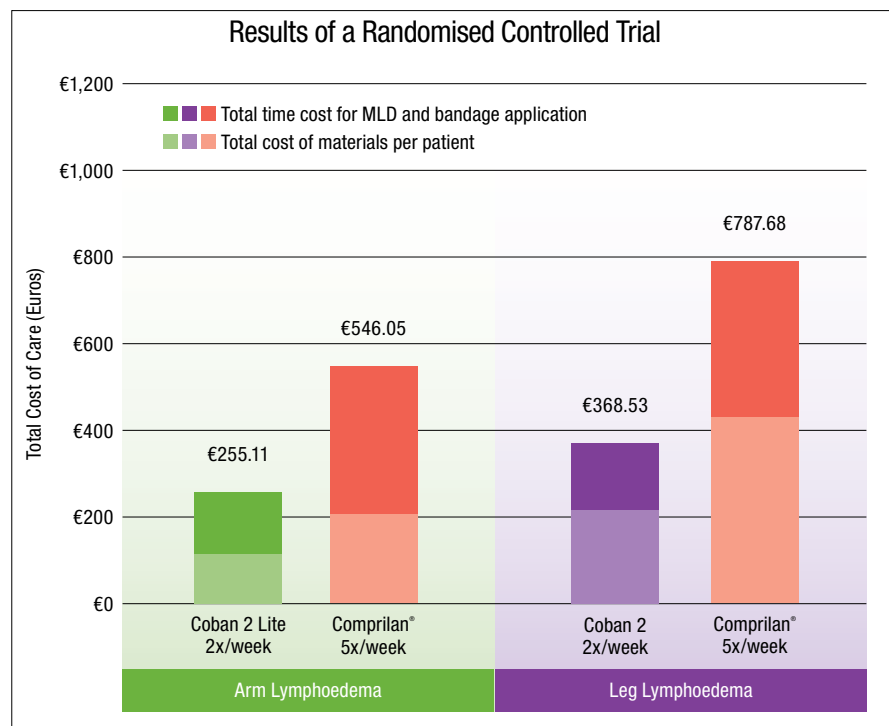


Figure 2: Total costs for nursing time and materials cost per patient showing significantly lower total cost of care with twice-weekly application of Coban 2 Compression System.

## Single-Use System More Cost-Effective

The disposable materials eliminate the time and expense of washing and re-rolling bandages, and minimise the risk and costs associated with potential contamination from reusing bandages.

Provides effective compression for up to four days, even with clinically relevant volume reduction.



# Packaging Simplifies Product Selection

## Colour-Coding Makes it Easy to Choose the Right Product

### Green for Upper Extremities and Toes



3M™ Coban™ 2 Lite Compression System, with green packaging, has the same working dynamics as the original, with a 25% reduced resting pressure making it safe and comfortable for use on arms, shoulders,

fingers and toes.<sup>1</sup>

### Purple for Lower Extremities



The original 3M™ Coban™ 2 Compression System, with purple packaging, provides comfortable, therapeutic compression to reduce oedema in the legs, feet, hips and torso.



**1** The white Comfort Foam Layer is applied first.

**2** The tan Compression Layer is applied second.

Patient icon

Roll icon

### Comfort and Compression Layers Clearly Marked

The comfort and compression layers are packaged separately so clinicians can select and customise materials to meet the size and contour challenges of every lymphoedema patient. Each individual roll is clearly marked with either 1 or 2, to indicate the order of application.

### Easy-Access Boxes Include Symbols and Icons

The easy access boxes also include a white or coloured roll icon with a 1 or 2 indicating the order of application. The roll icon identifies the contents as Comfort or Compression Layer materials. The patient icon indicates the correct body part for each product.

# The Science of Compression Therapy

3M™ Coban™ 2 Compression System materials provide the stiffness and dynamics required for effective compression.

3M™ Coban™ 2 Compression System materials were engineered with Intelligent Compression Dynamics to provide a conforming, inelastic sleeve with the required stiffness to support the muscle pump to support lymph flow and reduce lymphoedema. The role of compression during intensive therapy is to support lymph flow, shift fluid into non-compressed parts of the body, reduce volume and break down fibrosclerotic tissue. Traditional bandaging practices use layers of multiple short stretch, inelastic bandages and a variety of padding materials to create a rigid casing believed to provide pressure gradient to move fluid, according to LaPlace's Law.

## Pascal's Law a Better Predictor

Recent scientific evidence has demonstrated that Pascal's Law provides a better understanding of the effects of compression.<sup>2</sup> Pascal's Law states that when pressure is applied on a fluid (a muscle or muscle group) in a closed container (fascia and compression bandage), the pressure is transmitted equally and undiminished in all directions throughout the fluid.

## Coban 2 Compression Systems Supports Pascal's Law

This principle has been demonstrated in a controlled laboratory study with 12 healthy subjects. Two sensors were placed distally and proximally on the anterior tibialis muscle with the third at the B1 position. Coban 2 Compression System was then applied to the limb, providing a rigid sleeve, or closed container. A blood pressure cuff applied over the proximal sensor was inflated in 20 mmHg increments.<sup>2</sup>

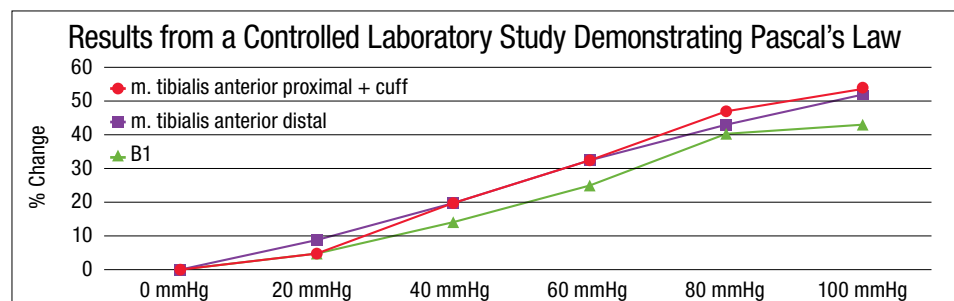


Figure 3: Percentage change in pressure is similar for all sensors.

Figure 3 illustrates the effects of Pascal's Law. The sensors not located under the blood pressure cuff show similar pressure changes at each 20 mmHg increase of pressure to the sensor under the cuff.

## Inelastic Bandages Improve Efficacy

Scientific literature describes the effects of inelastic, short stretch bandaging as providing the required resistance to support and distribute the dynamic working pressures created by functional, muscle activities to move interstitial fluids, soften fibrotic tissues and stimulate lymphatic contractility.<sup>3</sup>

One measure used to define the elasticity of a bandage and predict its ability to optimise muscle movements is the Static Stiffness Index (SSI). A bandage with an SSI greater than 10 provides stiffness to keep muscle forces inside the bandage and encourage lymphatic flow.<sup>4</sup>

Recent studies have also shown that the inelasticity of the bandages is more important than sub-bandage pressures in predicting efficacy.<sup>5</sup> For treatment of arm lymphoedema, it has been reported that low-pressure bandages are as effective as high-pressure bandages and are more comfortable.<sup>6</sup>

Coban 2 Compression System materials were designed to provide a thin, comfortable, conforming sleeve with the required stiffness to distribute muscle contraction forces equally beneath the bandage, thus supporting the muscle pump and reducing lymphoedema.

# Enhances Patient Mobility and Function




## Ordering Information

3M™ Coban™ 2 Compression System is available in a range of sizes and widths to accommodate all limb and digit wrapping needs.




### 3M™ Coban™ 2 Lite 2 Layer Lite Compression System

Indication	REF#	Roll Dimensions	Rolls/Box	Boxes/Case*
 Safe and effective for arms, shoulders, fingers and toes <sup>1</sup>	Lite Comfort Foam Layer			
	20713	7.5 cm x 2.7 m	18	4
	20714	10 cm x 2.7 m	18	2
	20716	15 cm x 2.7 m	10	4
	Lite Compression Layer			
	20721	2.5 cm x 3.5 m	36	4
	20723	7.5 cm x 3.5 m	32	4
	20724	10 cm x 3.5 m	32	2
	20726	15 cm x 3.5 m	15	4

\* Sold in box quantities in Australia



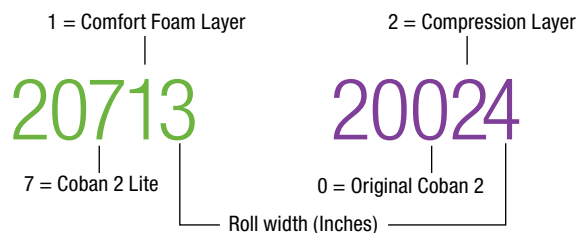
### 3M™ Coban™ 2 2 Layer Compression System

Indication	REF#	Roll Dimensions	Rolls/Box	Boxes/Case*
 Safe and effective for legs, hips and torso <sup>1</sup>	Comfort Foam Layer			
	20012	5 cm x 1.2 m	32	4
	20014	10 cm x 3.5 m	18	2
	20016	15 cm x 3.5 m	10	4
	20018	20 cm x 3.5 m	9	2
	Compression Layer			
	20022	5 cm x 2.7 m	32	4
	20024	10 cm x 4.5 m	32	2
	20026	15 cm x 4.5 m	15	4

\* Sold in box quantities in Australia

## Easy-to-Remember Reference Numbers

The product numbering system has been designed to help you when ordering Coban 2 Compression System. The five-digit reference numbers are set up as follows:



## Learn More

To learn more about 3M™ Coban™ 2 Compression System, visit our websites [www.coban2.com.au](http://www.coban2.com.au), and [www.coban2.co.nz](http://www.coban2.co.nz)

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