Table 3: Results of patient product evaluation

Patient	Diagnosis	Adore product evaluated	Texture/feel (worse, similar, good or better)	Comfort/fit (worse, similar, good or better)	Measurement at three months (increased, reduced, or maintained)	Effectiveness of hosiery
1	Secondary lymphoedema	Class 1, thigh-length	Similar	Good or better	Reduced	Yes
2	Chronic oedema	Class 1, below-knee	Good or better	Good or better	Reduced (measured at one month)	Yes
3	Post-thrombotic syndrome	Class 2, thigh-length	Good or better	Good or better	Reduced	Yes
4	Chronic oedema and red legs	Class 1, below-knee	Good or better	Good or better	Not recorded	Yes
5	Chronic oedema	Class 2, below-knee	Similar	Good or better	Maintained	Yes

All evaluators rated the texture and feel of the product either similar to previous compression hosiery worn, or good if compression hosiery had not been worn before. All wearers reported that the comfort of the product was good or better than previous compression hosiery they had worn (*Table 3*).

In terms of product performance, when measured after one and three months' wear time, limb measurements had either maintained or reduced, indicating that Adore facilitated effective oedema containment.

CONCLUSION

Adore European Class graduated compression hosiery is a valuable addition to the range of hosiery available for the prevention and management of venous and lymphatic disorders. It is effective in containing chronic oedema and, due to its sheen, will potentially facilitate concordance for those wishing to wear a more attractive garment.

Community nurses need to understand the importance of giving clear guidance as to why compression therapy is necessary and to offer patients choice, which, in turn, will involve them in their treatment regimen and promote concordance and self-care. JCN

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Revalidation Alert

Having read this article, reflect on:

- Your knowledge of British Standard and European Class compression garments
- How choice of compression therapy can help to improve patient concordance
- The advantages of a more cosmetically acceptable compression hosiery range.

Then, upload the article to the free JCN revalidation e-portfolio as evidence of your continued learning: www.jcn.co.uk/revalidation

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European Class compression hosiery: a new range of garments

Rebecca Elwell

Compression hosiery is the mainstay of maintenance therapy to prevent recurrence of symptoms for those with venous and lymphatic disorders. Choosing the right type of hosiery is essential to ensure that the garment meets the patient's needs and to facilitate concordance. Resources such as the CHROSS checker tool can be valuable in the selection process. Adore® (L&R) is a European Class range of compression hosiery which is suitable for those with oedema and mild–moderate symptoms of venous disease. It was evaluated in University Hospital of North Midlands NHS Trust, yielding positive outcomes for all patients. It is effective in containing chronic oedema and, due to its sheen, will potentially facilitate concordance for those wishing to wear a more attractive garment.

KEYWORDS:
■ Venous and lymphatic disorders ■ Disease progression
■ Compression hosiery ■ Adore® range

Venous and lymphatic disorders are prevalent conditions, which can have a significant impact on an individual's quality of life in terms of anxiety, sleep disturbance and social isolation (Briggs and Flemming, 2007). It has recently been estimated that 730,000 people in the UK suffer with a leg ulcer (Guest et al, 2017), while the prevalence of chronic oedema is reported to be a major and growing healthcare problem in the UK (Moffatt and Keeley, 2017). The Legs Matter campaign, which was launched in April 2018, recognises the need to improve awareness, understanding and treatment of lower leg and foot conditions (Geraghty and Biasi, 2018). Early intervention for patients with venous and lymphatic disease is essential to prevent further disease progression, which can have negative implications for the individual and the NHS (Atkin and Tickle, 2016).

'... compression hosiery can play a vital role in managing symptoms, in particular containing oedema and preventing ulcer occurrence and recurrence.'

Compression therapy is the mainstay of treatment for those with venous disease and chronic oedema (Todd, 2014). Although there is no cure for these conditions, compression hosiery can play a vital role in managing symptoms, in particular containing oedema and preventing ulcer occurrence and recurrence (Nelson and Bell-Syer, 2014; Wounds UK, 2015; Ashby et al, 2014; Elwell, 2016).

Compression hosiery varies in relation to classification, style and fabric stiffness and it is important that clinicians are aware of the range of products that are available and how their properties impact on the performance of the product and, ultimately, patient outcome.

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TYPES OF COMPRESSION

In the UK, two types of compression hosiery are commonly used, British Standard and European Class. The levels of compression vary between these types of hosiery and it is important that clinicians are aware of the differences to influence selection (*Table 1*). British Standard compression hosiery is recommended where there is little or no oedema present, while European Class hosiery is commonly used where oedema is present.

Generally, as severity of symptoms increases, the level of compression required to manage the condition rises. The CHROSS checker assessment tool assists with selection of compression therapy based upon the severity of presenting symptoms (*Figure 1*; Timmons and Bianchi, 2008).

HOLISTIC ASSESSMENT

Full, holistic assessment is required before using compression therapy (Wounds UK, 2016). This should involve vascular assessment to help determine suitability for compression (Vowden and Vowden, 2001; Guest et al, 2015; Wounds UK, 2016). When selecting compression, it is important that both the patient's clinical and

Practice point

It is vital that clinicians are competent in interpreting ankle brachial pressure index (ABPI) results and understand the importance of compression therapy to facilitate healing and provide high quality evidence-based care (Atkin and Shirlow, 2014).

Patient name _____ Date: _____

The CHROSS checker form

NB: Please retain this form in the patient's notes for future reference of previous assessment(s)

It is important to check for the signs and symptoms of venous and lymphovenous disease, which are listed in the chart below.
1. The chart should be used as a prompt to check for skin and limb changes as part of holistic patient assessment.
2. The compression products recommended should be used as part of an overall management plan, which includes medical management of underlying disease(s), skin and wound care, and patient education.
3. Vascular status must be determined before applying compression. If in doubt, do not use and refer for specialist advice.
4. If no ticks are recorded, the limb is healthy and no action is needed, other than a good skin care regimen.
5. In the 'early/medium intervention' and 'intensive management' phases, before managing with hosiery, a period of treatment with compression bandaging (e.g. Actico®) may be required.
6. For further information on the signs/symptoms listed below, including photographs and description, please refer to the hosiery selector app or the CHROSS checker images.

	1. Tick the box below if the sign/ symptom is reported, or present on the limb of the patient	2. Is oedema also present? Tick 'YES' or 'NO' (in the colour band of the lowest tick in step 1)	3. Consider application of the compression below, depending on disease severity (mild, moderate or severe) as part of management
Prevention	Tired, aching, heavy legs ☐	NO ☐	Activa® British Standard hosiery†
	Spider veins ☐		Mild: Class 1 (14–17mmHg) ☐
	Ankle flare ☐		Moderate: Class 2 (18–24mmHg) ☐
	Mild/moderate hyperkeratosis ☐	YES ☐	ActiLymph®/Adore® European Class hosiery††
	Mild/moderate varicose veins ☐		Mild: Class 1 (18–21mmHg) ☐
	Hyperpigmentation ☐		Moderate: Class 2 (23–32mmHg) ☐
	Venous dermatitis ☐		
Early/medium intervention	Varicose eczema ☐	NO ☐	Activa® British Standard hosiery†
	Atrophie blanche ☐		Moderate: Class 2 (18–24mmHg) ☐
	Induration ☐		Severe: Class 3 (25–35mmHg) ☐
	Moderate/severe varicose veins ☐		Activa® Leg Ulcer Hosiery Kit ☐
	Moderate/severe hyperkeratosis ☐	YES ☐	ActiLymph®/Adore® European Class hosiery††
	Healed ulcer*/** ☐		Moderate: Class 2 (23–32mmHg) ☐
	Recurring ulcer/open ulcer*/** ☐		Severe: ActiLymph® Class 3 (34–46mmHg) ☐
	Cellulitis*** ☐		ActiLymph® Hosiery Kit ☐
Before hosiery can be effectively used in the intensive management phase, the use of compression bandaging may be required			
Intensive management	Lipodermatosclerosis (acute or chronic) ☐	NO ☐	Activa® British Standard hosiery†
	Chronic oedema/lymphoedema ☐		Severe: Class 3 (25–35mmHg) ☐
	Severe hyperkeratosis ☐	YES ☐	ActiLymph® European Class hosiery††
	Skin folds ☐		Moderate: Class 2 (23–32mmHg) ☐
	Papillomatosis ☐		Severe: Class 3 (34–46mmHg) ☐
	Lymphangiomata ☐		ActiLymph® Hosiery Kit ☐
	Lymphorrhoea (wet legs) ☐		ActiLymph® MTM Ease or MTM Dura
			Moderate: Class 2 (23–32mmHg) ☐
			Severe: Class 3 (34–46mmHg) ☐

* Activa® Leg Ulcer Hosiery Kit (40mmHg)
**ActiLymph® Hosiery Kit
***Acute cellulitis should be treated before using compression

Once the correct Class of hosiery has been selected for disease severity, if limb measurements do not match stock sizes, use either ActiLymph® Made to Measure flat knit hosiery or Credalast® Velvet Made to Measure hosiery

Figure 1.
CHROSS checker toolkit.

Table 1: An overview of compression levels delivered by hosiery

	British Standard	European Class
Class 1	14–17mmHg	18–21mmHg
Class 2	18–24mmHg	23–32mmHg
Class 3	25–35mmHg	34–46mmHg

psychosocial needs are taken into account, as product choice can have a significant impact on concordance and long-term outcomes (Atkin, 2015). Consideration should always be given to the patient's ability to apply and remove the garment independently or with assistance.

PATIENT EDUCATION AND CHOICE

Patient involvement in hosiery selection can also impact on concordance (Elwell, 2016). To make well-informed choices, patients should have an understanding of the disease process and the role that compression plays in managing symptoms (Wounds UK, 2016). However, as hosiery ranges continue to improve, the look and feel of the garments should also now be considered to further improve concordance, which, in turn, will influence long-term outcomes. Community nurses are ideally placed to support patients with education relating to the disease process and also the suitable hosiery choices that are available (Atkin, 2015).

ADORE®

Adore® (L&R) is a European Class range of compression hosiery which is suitable for those with oedema and mild–moderate symptoms of venous disease. It complements Activa® and Actilymph® (L&R) to provide a full range of solutions for all stages of disease progression (*Table 2*).

Adore has been developed using advanced knitting technology to give a sheer and soft feel, while delivering European Class 1 or 2 graduated compression (*Table 3*). The range is available in black (*Figure 2*) and natural tan colours. The below-knee garments come in two lengths, and the thigh-length garment has an attractive patterned grip top (*Figure 3*).

To give clinicians and patients confidence in the product's wear time, Adore hosiery has been independently tested by Surgical Materials Testing Laboratory (SMTL). It performed highly to deliver consistent graduated compression for 100 washes. The range has also been tested by RAL and carries RAL-GZ 387 – Medical Compression Hosiery certification. This testing process uses a measuring device called the HOSY, to measure the compression delivered by the garment. Other product characteristics, such as the yarn count and extensibility are also tested (data on file).

Patient evaluation

Adore was evaluated by the author and patients at the lymphoedema clinic and red leg service at University Hospitals of North Midlands NHS Trust. Five patients with a range of venous and lymphatic disorders evaluated the product following a full holistic assessment to determine suitability for compression. The patient evaluators were asked to rate the product on initial application and post three-month wear (one patient evaluated after one month's wear time).

Table 2: Adore — indications for use

European Class	Indications
Class 1: 18–21mmHg	Provides light compression for early/mild chronic oedema, lymphoedema, where the oedema is light to moderate with little shape distortion. Also suitable for prophylaxis, palliative use and for patients who are pressure sensitive
Class 2: 23–32mmHg	Provides medium compression and should be used in cases of moderate chronic oedema or lymphoedema with little shape distortion

Figure 2.
Adore compression hosiery

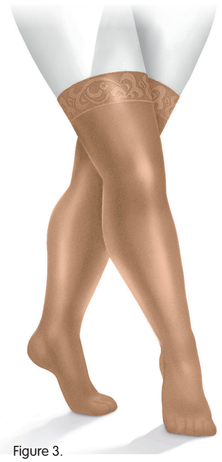

Figure 3.
Patterned grip top on thigh-length Adore garment.