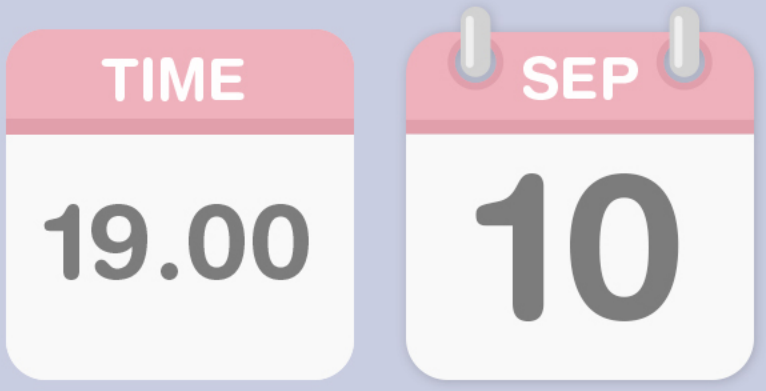
Using best practice to manage chronic oedema in primary care



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Learning objectives

1. To understand and highlight the underestimated prevalence of chronic oedema hidden within your nursing workload
2. Why and how does chronic oedema develop?
3. Using best practice to ensure that this patient group is assessed and treated appropriately
4. When and where should I apply compression, below knee is not always enough?
5. What compression should I consider and how do I measure for compression garments?

New Chronic Oedema Best Practice Statement

Introducing the NEW Chronic Oedema Best Practice Statement

Using evidence-based research to support clinicians working in primary care to effectively identify, assess and manage patients with chronic oedema

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Extent of the problem

An increasing healthcare problem for UK health services

- Chronic oedema is a progressive and debilitating condition that requires long-term management
- The prevalence of chronic oedema is currently equal to, or greater than, that of other long-term conditions, such as stroke
- The number of people with chronic oedema is set to increase, as the older population and associated poly-morbidity grows over the coming years

So, what is the prevalence?

3.99 in 1000

Over 85 12 in 1000

52–69% patients in community

73% Had leg ulceration

By 2039, 3.5 million over 85 years

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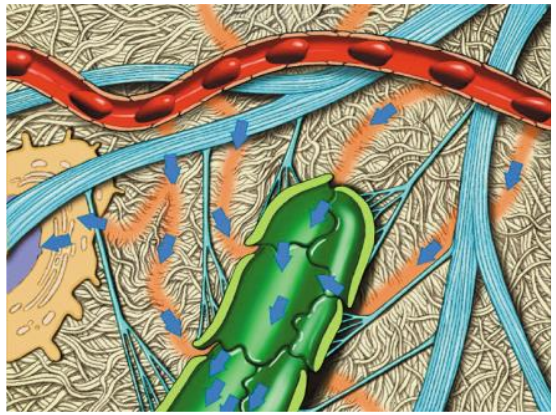
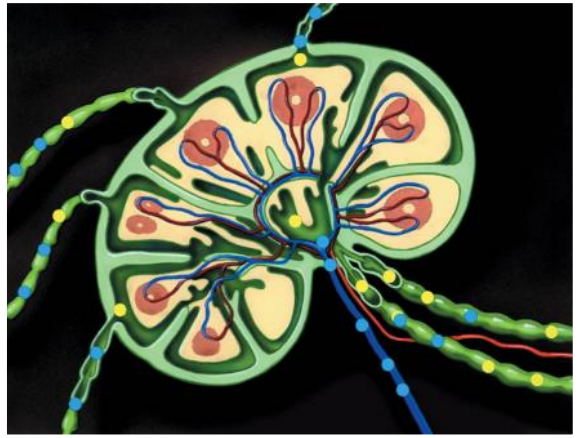
Chronic oedema

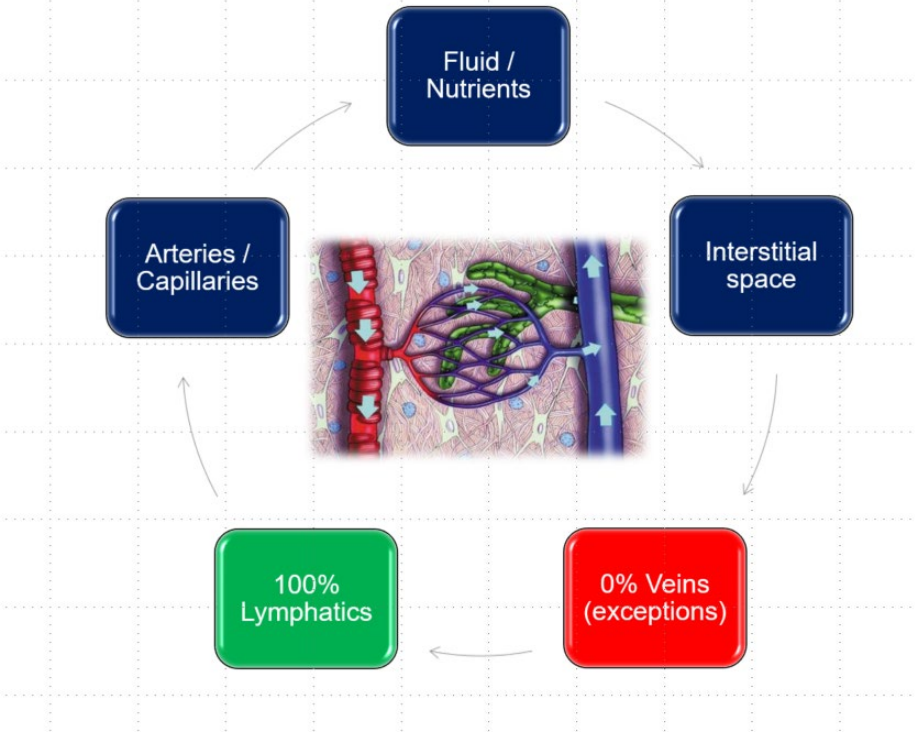
- Broad term used to describe oedema that:
  - Has been present for three months or more
  - Does not respond to diuretics
  - Commonly affects one or more limbs, but also adjacent areas, such as trunk, breast, head, neck or genitalia

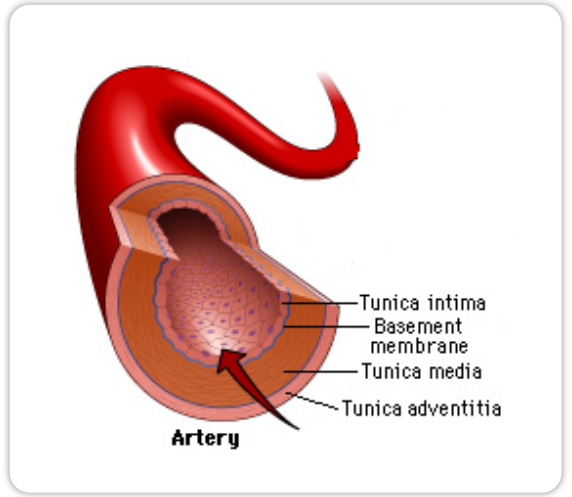
Anatomy and physiology

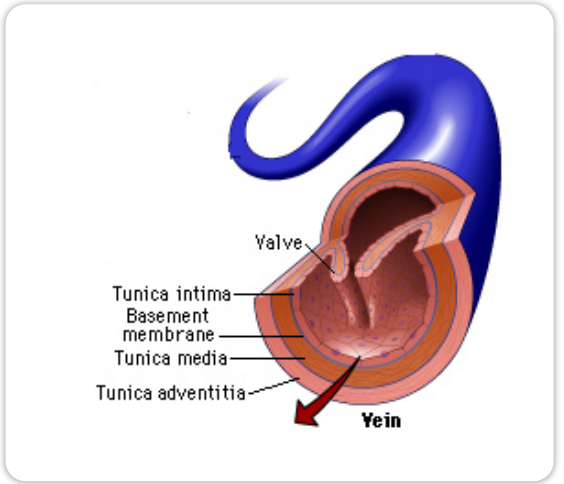




Fluid exchange







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Causes of chronic oedema

- Dependency
- Heart failure
- Venous oedema
- Obesity
- Cancer treatment/reoccurrence
- Renal failure
- Trauma/surgery
- Infection

Principles of assessment

Assessment is crucial to identify the underlying cause(s) of chronic oedema so that they can be addressed where possible.

Assessment can be approached using six **S**':

Story

- It is essential to obtain the patient's background 'story' or history in order to identify the possible cause(s) of chronic oedema
- Thorough history-taking can help to identify the known risk factors for the development of chronic oedema, including underlying medical conditions, medication or lifestyle choices
- Where possible, contributing issues should be addressed or the management optimised, to ensure any care plan is successful

Self-care

- For patients with chronic oedema, it is crucial, where possible, that they engage in their care. Self-management can offer a means to maintain or even improve the capacity to live well over time
- The self-management of long-term conditions is also a key component of the *NHS Long Term Plan* to improve efficiency, and free up value resources

Self-care

- Remember, self-management is not abandoning the patient to care for themselves and support should be available if needed
- Self-care is a dynamic and empowering method of long-term management. However, to engage with their own care, the patient must be:
  - Willing
  - Health literate
  - Central to decision-making
  - Central to care delivery.

Self-care support with application

2.
Self care

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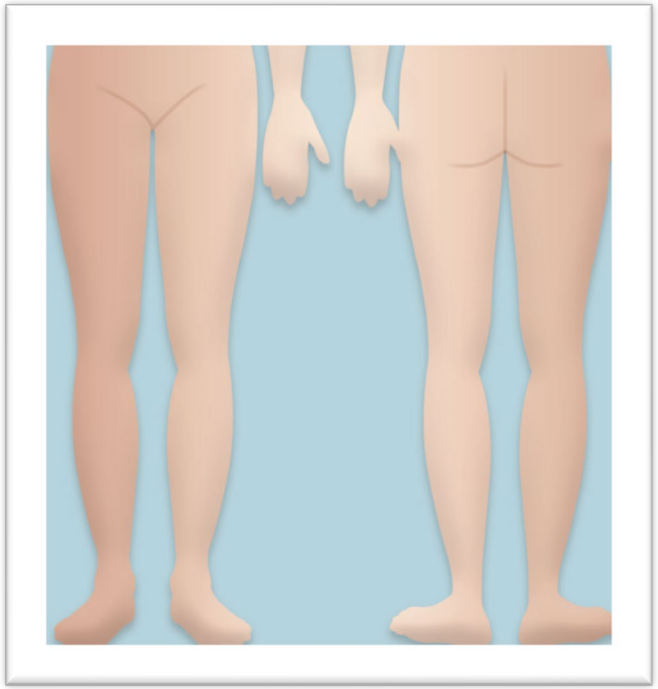
Site

- The location of chronic oedema gives clues to the possible underlying causes and informs where compression should be applied
- Identify the full extent of the swelling; failure to examine the limb fully can create problems with management
- Remember, the limb starts at the groin and ends at the feet



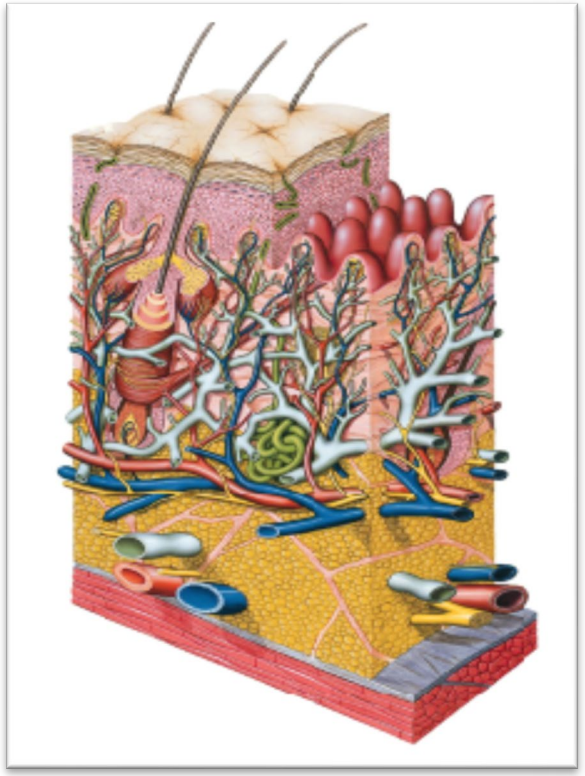
Site

Both lower limbs should be examined for the presence of oedema and compared to each other

- Assessment of the site should include:
  - Is the swelling acute or chronic?
  - Does the swelling affect one limb (unilateral) or both (bilateral)?
  - Is swelling localised or more generalised?

Skin

- Chronic oedema can have a detrimental effect on the skin
- Failure of the lymphatics to clear fluid from the tissues can lead to the accumulation of waste products and a lack of nutrients to the area. With time, the skin undergoes changes and can thicken and harden as a result
- The skin in patients with chronic oedema is vulnerable to damage and may breakdown and/or become infected



Skin

The following should be noted while assessing the skin:

4. Skin

Pigmentation

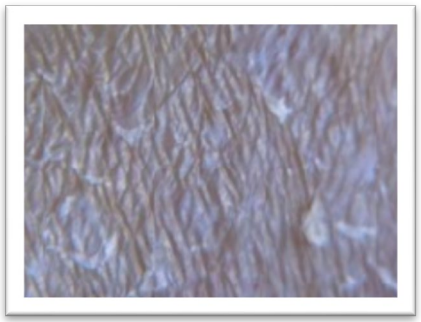
Cellulitis

Leaking of lymph (lymphorrhoea)

Hyperkeratosis

Wounds present

Fungal infections



Dryness

Other considerations:

- Sensitivities to topical treatment
- Colour/circulation of the skin
- General appearance of the skin

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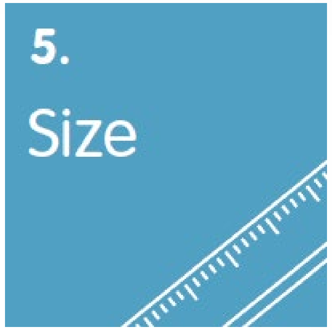
Size

The size of the limb should be evaluated at initial assessment, to obtain a baseline set of measurements to refer to throughout the patient's journey to chart their progress.

Simple measurements taken from set points above the malleolus, mid-calf and at mid-thigh can be enough to assess progress with treatment.

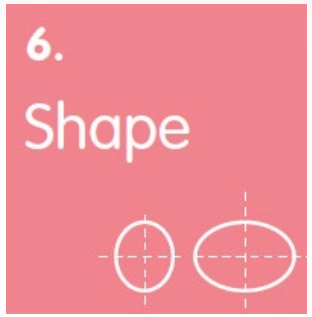
The size of the limb can influence compression choice and can indicate the need for intensive therapy to reduce swelling before maintenance therapy.

Size

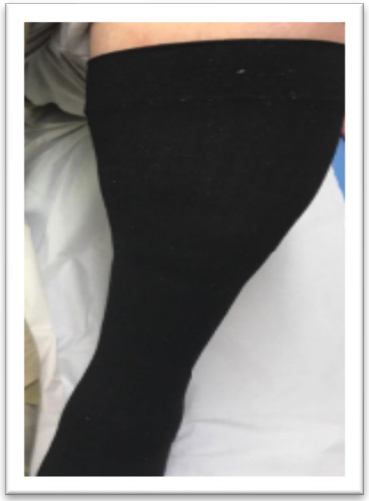


An increase in limb size may indicate the need for a period of intensive therapy in order to reduce limb volume.

Shape



It is important to note the shape of the patient's limb since it will influence product choice when selecting compression therapy for the management of chronic oedema.



Regular or irregular shape? eg: inverted bottle shape

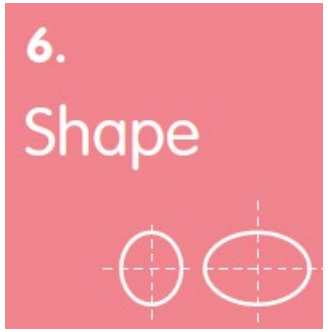
Are skin folds present?

Does swelling extend to the feet/foot?

Does swelling extend to the thigh(s)?

Are the toes affected?

Shape



- Poor or irregular shape, or the presence of skin folds may need padding to restore a regular limb shape for graduated compression to be applied
- If swelling extends into the feet and toes, compression will need to be applied to these areas too. Toe bandaging or toe caps will be needed

Where to compress to?

Always consider if compression is required above the knee and also into the feet.

We traditionally only compress between ankle and knee and this can sometimes cause further complications!

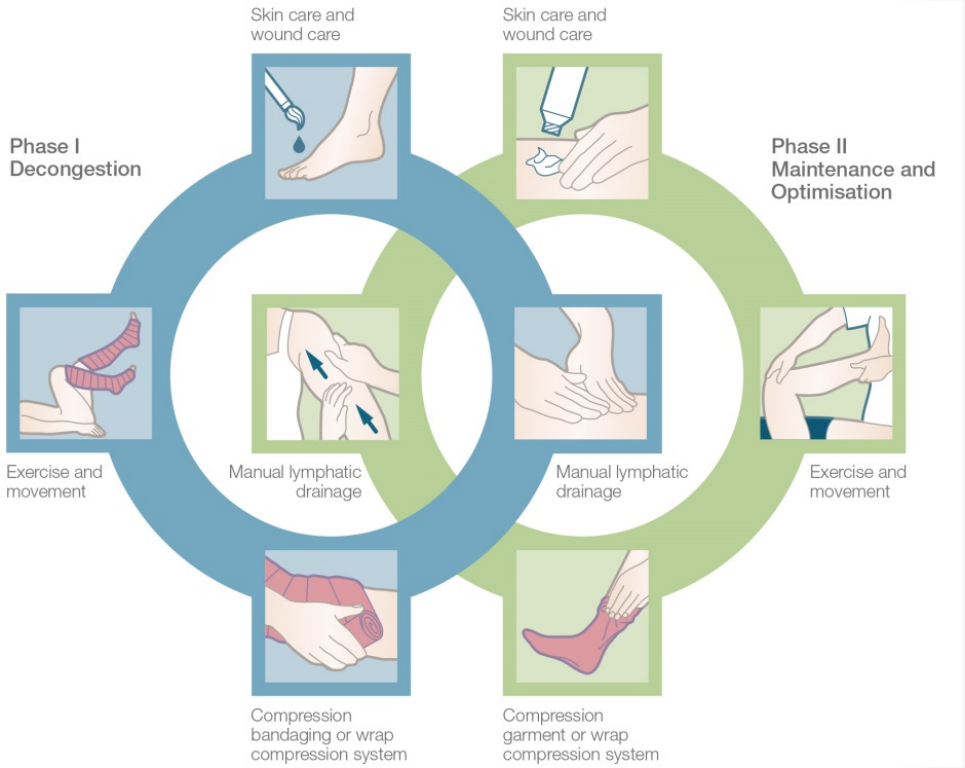
Management — four cornerstones of care

Phase 1 — intensive

- Intensive treatment to improve the condition and to educate patient
- Multi-layer lymphoedema bandaging (MLLB)

Phase 2 — maintenance

- Aim to maintain oedema reduction and to ensure that the patient is able to self-manage their condition
- Compression garments



Patient case study using best practice

Mr Oliver Jones aged 78 years

(names changed NMC, 2018)

History

- **Presenting complaint**
  - Unilateral venous leg ulceration and bilateral lower leg and foot oedema

- **History of presenting complaint**
  - Swelling present for past 15–18 years, ulceration reoccurring and remitting, right leg. Has never fully healed in this time
  - Being seen thrice weekly for dressings by practice nurse/HCA
  - **Very unhappy to trial compression — has had bandages in the past and they exacerbated the ulcers**

What is the patient story?

Past medical history and drug history (NKDA)

1. Story

Condition	Dug information
Morbid obesity BMI 38.2	
Type 2 diabetes mellitus for past 20 years	Metformin SR 1g po bd
Hypertension	Calcium channel blockers, thiazide diuretics, Amlodipine 10mg po od and bendroflumethiazide 2.5mg po od
Mild chronic obstructive pulmonary disease — no exacerbations in 18 months	Salbutamol two puffs prn, tiotropioum 1 puff od, prednisolone 40mg po od for 5/7, doxycycline 100mg po od: 200mg day one, 100mg thereafter 7/7
Generalised osteoarthritis of multiple joints	Co-codamol 8/500, topical ibuprofen 5% gel
Benign prostatic hypertrophy	Tamsulosin 400mcg po od

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Patient story

- **Social history**
  - Lives alone, widower
  - Worked in steel industry until forced retirement aged 58 years
  - Has two adult children, five grandchildren — good family support
  - Ex-smoker
  - Trivial alcohol intake
  - Remains active, mobile and currently independent of all activities of daily living, except for his wound care
  - Sleeps in a bed or chair — depends on lower back arthritis
  - Lives in a house with stairs — upstairs toilet and bath
  - Refuses carers/help/meals, etc

3.

Site

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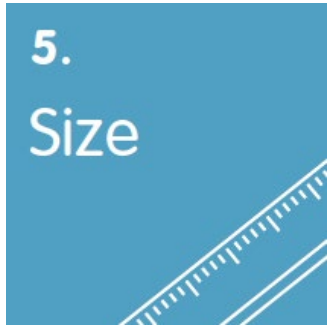
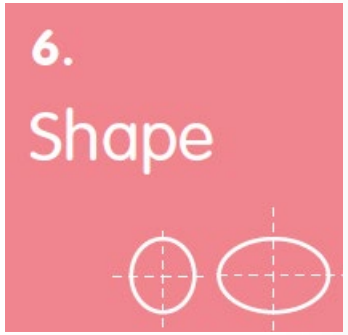
Patient examination/assessment

- Stemmer's sign positive bilaterally
- Firm woody oedema bilaterally
- Champagne bottle-shaped legs
- Good capillary refill <2 s in right great toe
- Pulse oximetry in right great toe 96% and in finger 97%
- No blanching on elevation of both legs
- No overt signs of arterial disease
- ABPI Doppler assessments were 0.9 and 1
- Need for wound care and compression





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Care plan

Needed to review all treatment plans to date

- Three nurses all doing their own thing
- Formulation of a care plan for all to follow**, including Mr Oliver**
  - Wash leg in tap water and apply emollients (in this case generic cream emollient)
  - Apply non-adhesive dressing
  - Discuss compression … MANY TIMES !

- **Concordance and partnership**
  - Achieved with patience and realistic goals
  - Regular review and explanation of the wrap system — he finally agreed
  - Also measured for a class one compression sock for his left leg

Continuous re-evaluation of patient

Long-term management

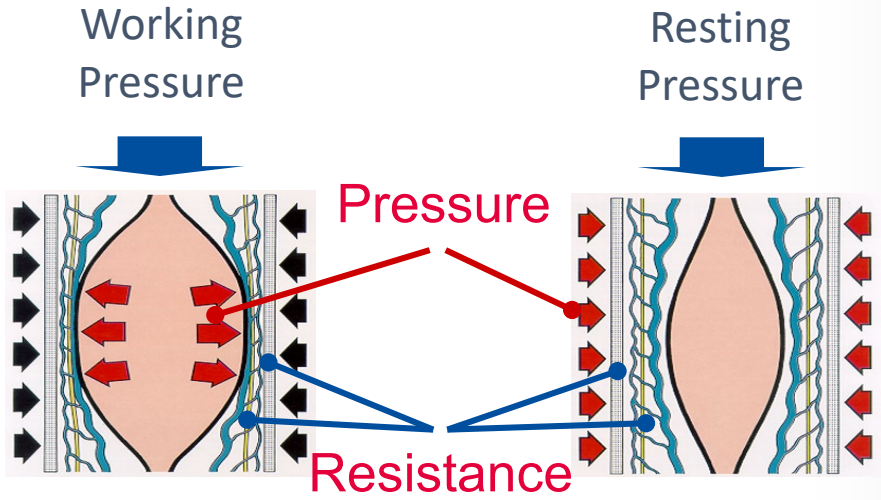
2.
Self care

- Mr Oliver was fully healed after 12 months of treatment using the JOBST ® FarrowWrap® Strong compression system
- We issued him with made-to-measure flat-knit, below-knee garments that he wears to formal or family functions

BUT: He loves his wraps — it only took five years !

Compression therapy

- Enhances the pumping action of the muscles (high working pressure/low resting pressure)
- Acts as a counterforce, limiting filtration of fluid into the tissues
- Increases the uptake of fluid by the lymphatics
- Reduces formation of excess interstitial fluid
- Due to the graduated effects, directs lymph towards the limb



Selection of compression for phase I

- Aim of phase is to help:
  - Reduce the oedematous limb to a more normal, acceptable shape and size for the individual
  - Venous and lymphatic return
  - Support and enhance the pumping action of the calf muscle pump
- This is normally achieved by applying:
  - Multi-layer lymphoedema bandaging (short-stretch)
  - Wrap compression systems

Selection of compression for phase I

- Desired outcomes of treatment are to:
  - Reduce oedema
  - Improve condition of the skin
  - Reduce/heal any ulceration
  - Improve quality of life

Successful phase 1 decongestion

Selection of compression for phase 2

- Aim of phase 2 is to help:
  - Maintain the limb shape after phase 1 is complete
  - Venous and lymphatic return
  - Support and enhance the pumping action of the calf muscle pump

Compression garments

Compression classifications

Class	RAL	British Standard	French	US
Class 1	18–21mmHg	14–17mmHg	10–15mmHg	15–20mmHg
Class 2	23–32mmHg	18–24 mmHg	15–20mmHg	20–30mmHg
Class 3	34–46mmHg	25–35 mmHg	20–36mmHg	30–40mmHg
Class 3 Forte	34–46mmHg	X	X	X
Class 4	49–70mmHg	X	>36mmHg	40+mmHg
Class 4 Super	60–90mmHg	X	X	X

Choosing the right compression

An elastic garment (circular-knit) is like a water balloon.

An inelastic garment (flat-knit), or one with a higher static stiffness, is like a paper cup.

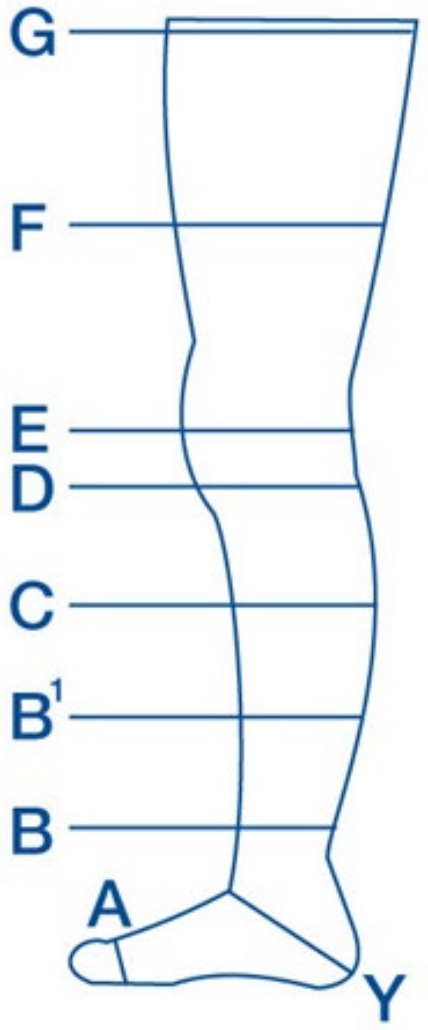
Choosing the right compression

Note

An elastic garment will always try and revert to its original shape, so any areas of abnormality, skin folds or flexure points can cause pain due to the garment digging in.

Measuring for compression

G: Circumference at widest part of upper thigh, below gluteal fold
F: Middle of thigh
E: Middle of patella / back of knee
D: Fibula head (two finger-widths below patella)
C: Maximum circumference of calf
B1:Transition to calf (Achilles tendon)
B: Narrowest circumference at ankle
Y: Heel / ankle flex with maximum dorsiflexion
A: Metatarsal joint of toe



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Summary

Using the NEW Chronic Oedema Best Practice Statement to help you achieve clinical outcomes for your patient.

The new best practice statement aims to:

- Ensure that this patient group is assessed appropriately by using the six S's
- That patients are managed effectively and provided the appropriate therapy solution for their condition and lifestyle

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Essity education

- Free education and training is available via Essity's academies

- 31 modules available including:
  - Anatomy and physiology of skin
  - Factors affecting wound healing
  - Infection management
  - Litigation and the law and the NHS
  - Leg ulcer management
  - Improving the assessment of wounds

Call to action

- Request a copy of the new best practice statement following this seminar
- **The first 50** delegates will be given a chance to obtain their own measuring pack

- Why not book a training session for your base on the principles of measuring for a compression garment?
- Simply download your certificate and contact Essity for more details on 01482 670177 or email concierge.uk@Essity.com

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