

Dispelling the myth of chronic oedema / lymphoedema





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Journal of Community Nursing

JCN

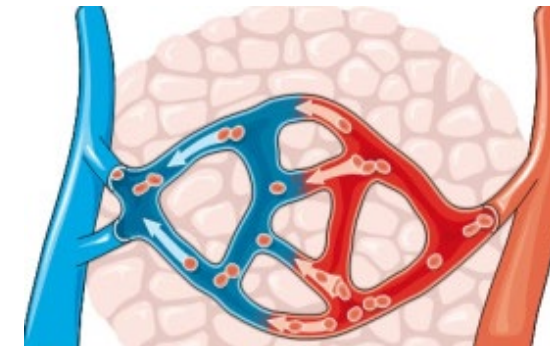
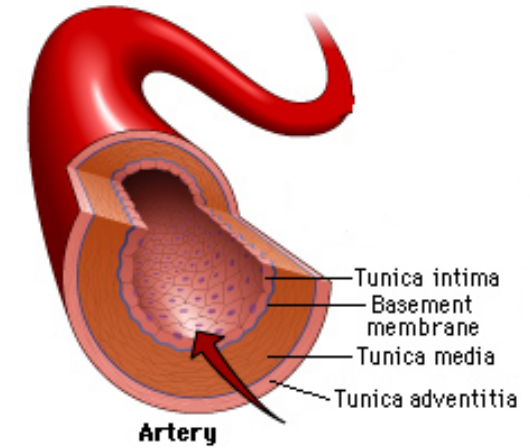
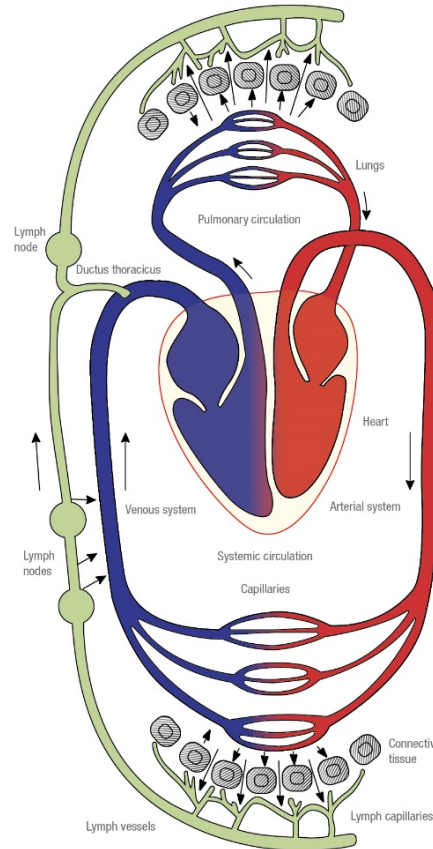
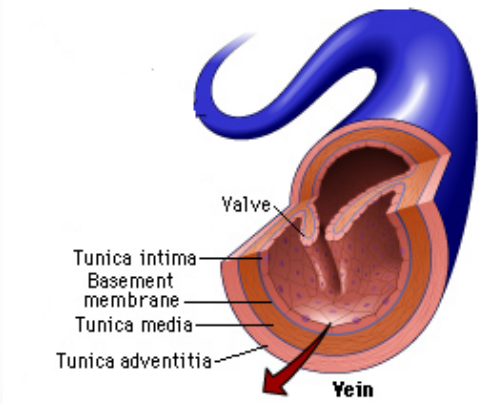
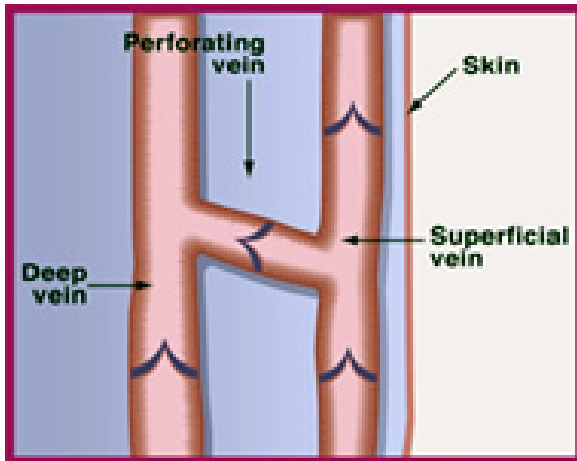


Dispelling the myths of chronic oedema versus lymphoedema

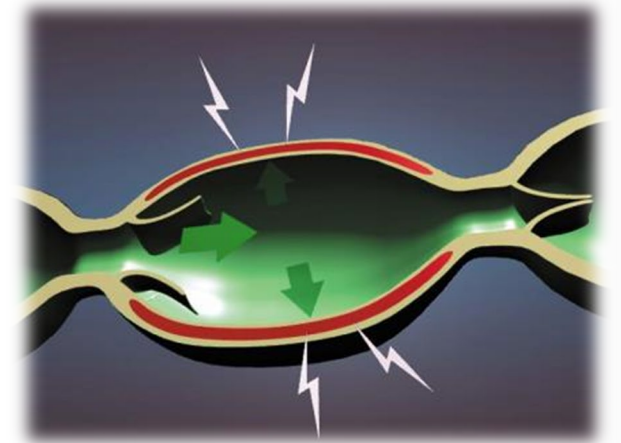
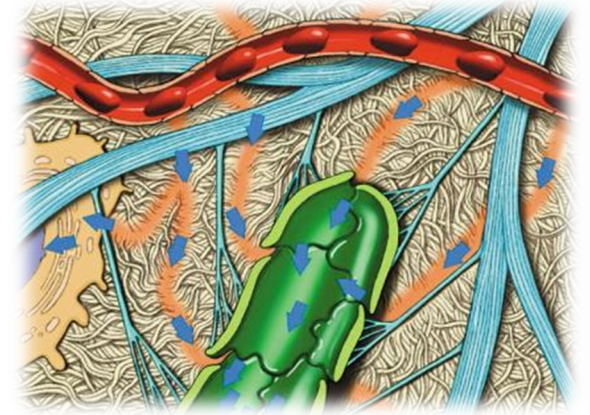
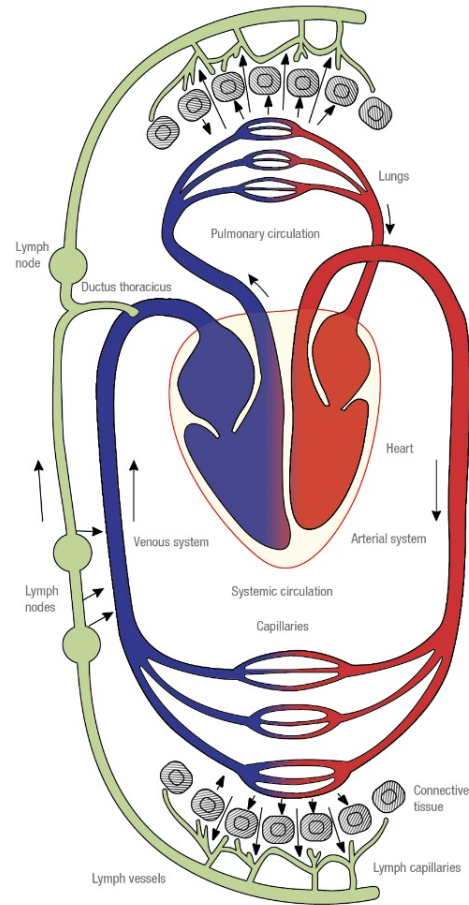
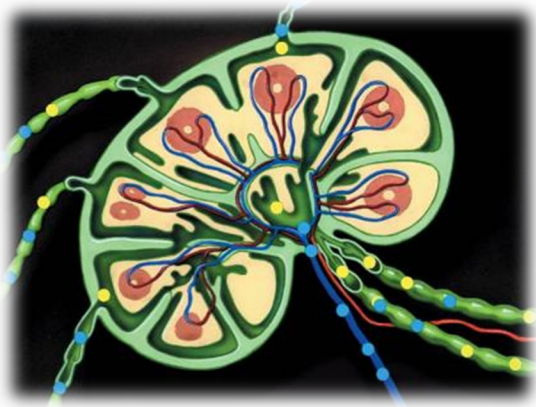
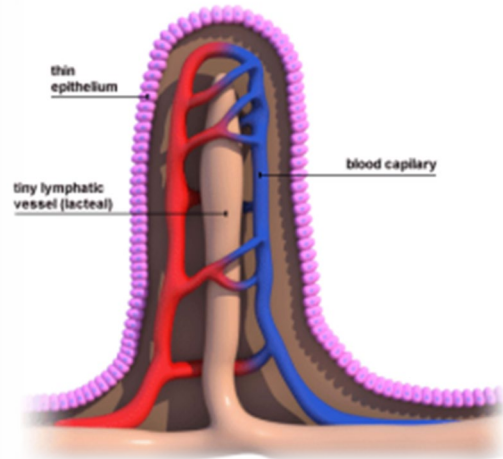
Learning objectives

1. To understand the function of the lymphatic and vascular systems
2. To define what constitutes chronic oedema and lymphoedema
3. To improve the assessment and management of patients with chronic oedema using CASE

Anatomy and physiology of the vascular system

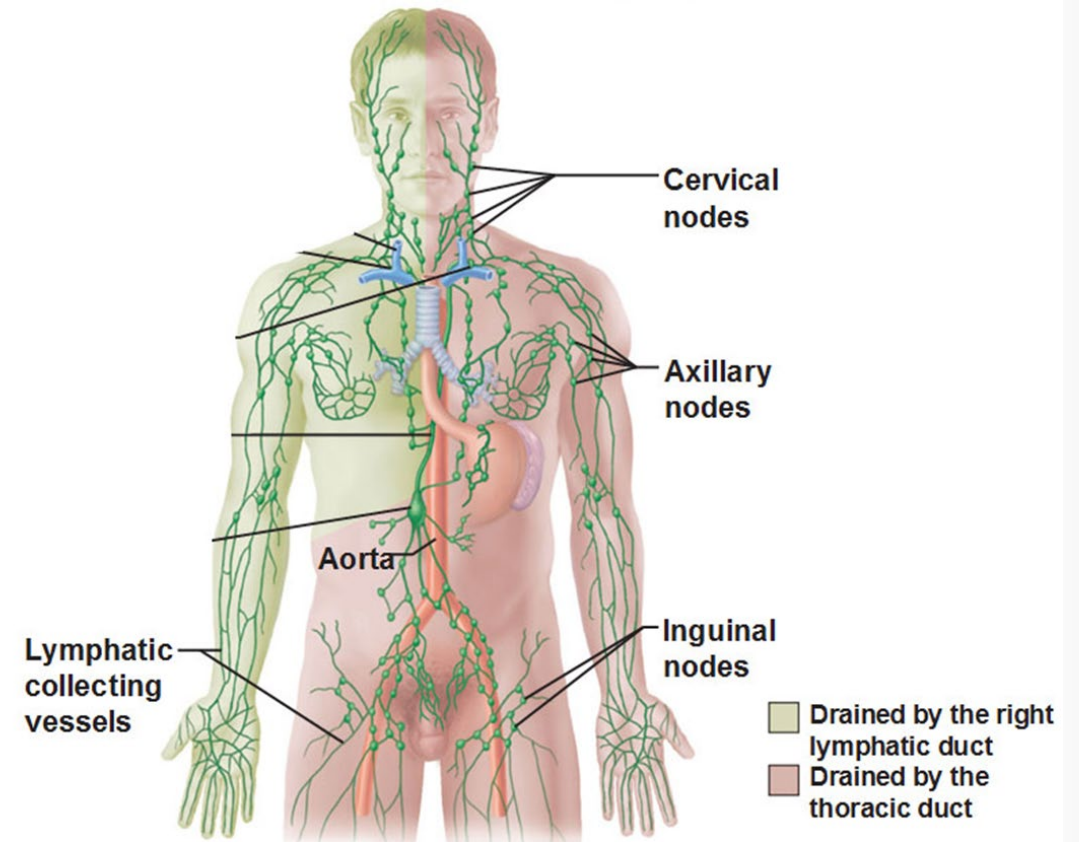


Anatomy and physiology of the lymphatic system

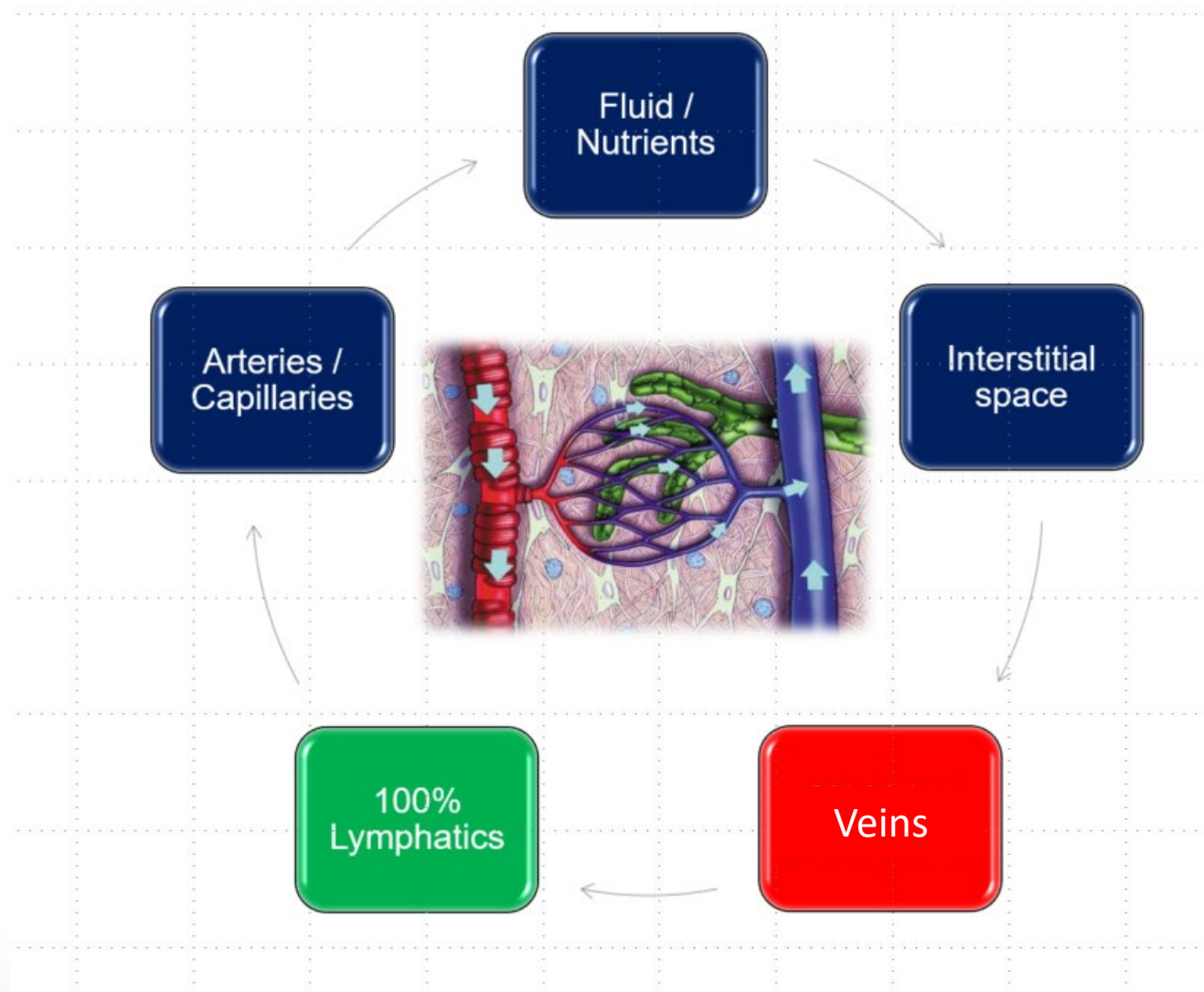


The lymphatic system

- Resembles a river flowing from the source, through streams and tributaries, then out to the sea
- Is very closely intertwined with the circulatory system
- Makes cells called lymphocytes which help the body fight infection, and forms part of the body's defence mechanism



Fluid exchange



Chronic oedema versus lymphoedema

Chronic oedema:

- Broad term used to describe swelling 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

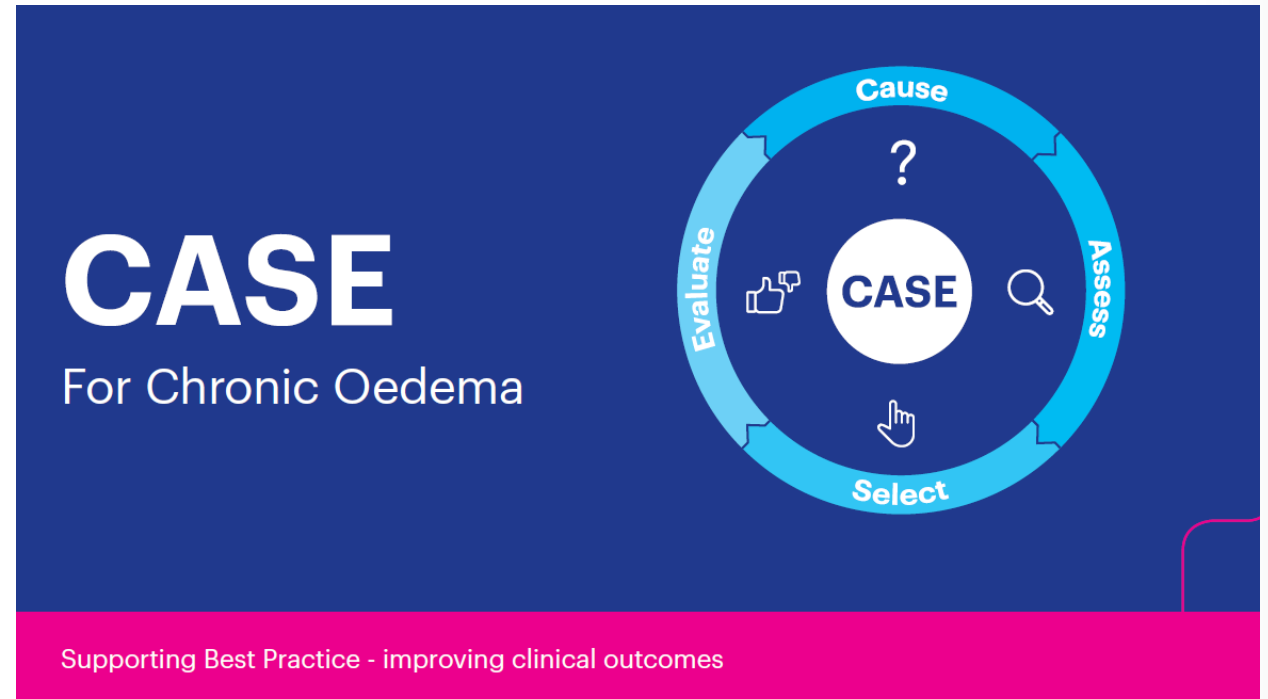
Lymphoedema:

- Long-term condition caused by an accumulation of protein-rich fluid in the tissues as a result of an impaired lymphatic system
- Can affect any part of the body, such as arms, legs, face and genitals

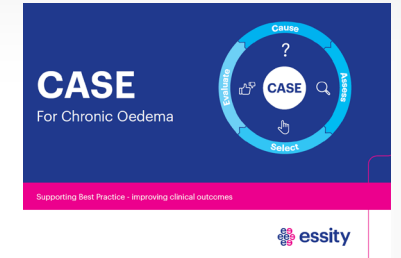
Chronic oedema management using CASE

CASE is an acronym designed to support effective management of chronic oedema. It consists of four principles:

- C** Cause of the oedema
- A** Assessment of the patient
- S** Selection of the most appropriate treatment or management option
- E** Evaluation of care



CASE — causes of chronic oedema



- Heart failure
- Obesity
- Dependency
- Venous oedema
- Advanced cancer
- Renal failure
- Low albumin



CASE — causes of lymphoedema

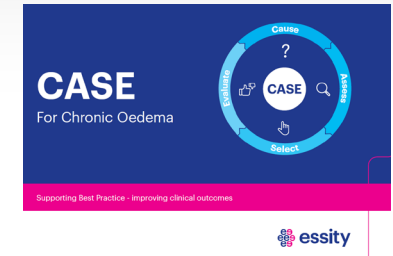
Secondary lymphoedema

- Venous disease
- Malignant disease
- Dependency or immobility
- Trauma or tissue damage
- Infection
- Endocrine system
- Surgery

- **Primary lymphoedema**

A result of a genetic predisposition, e.g. Milroy's disease

CASE — assessment



A full holistic assessment should be included for any patient presenting with oedema, this should include:

- Past medical history
- Current medical history
- Medication
- Oedema history
- Pain
- Nutritional status
- Physical/functional ability
- Psychosocial status
- Circulatory function

CASE — assess physical signs and symptoms



CASE — assess physical signs and symptoms using ISL staging*

Stage 0 (no different):

- A sub-clinical state where swelling is not evident, despite impaired lymphatic drainage

Stage I (10–20%):

- Early onset, with accumulation of tissue fluid that responds to elevation. Oedema may be pitting

* International Society of Lymphology

CASE — assess physical signs and symptoms using ISL staging

Stage II (20–40%):

- Elevation rarely helps; pitting oedema is more difficult. Swelling exacerbated by infection

Stage III (40%):

- Tissues become hard and fibrous, with creases and folds. Skin changes take place, fat deposits and warty overgrowths develop. Hyperkeratosis and papillomatosis evident

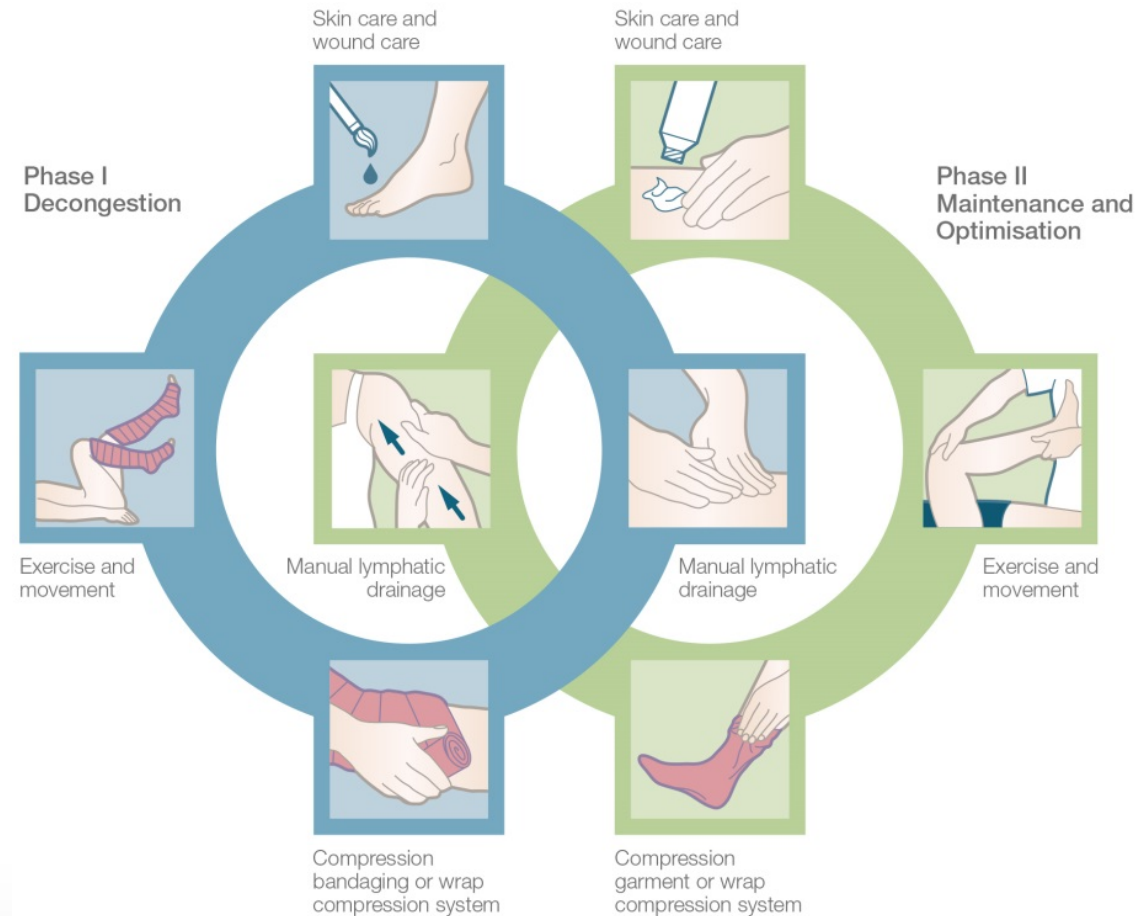
CASE — assessment: ankle brachial pressure index

Measuring ankle brachial pressure index (ABPI) is one method of assessing for arterial insufficiency. Other methods can be considered, such as toe brachial pressure index (TBPI) and pulse oximetry.

These should be completed alongside full vascular assessment as per the holistic assessment.

CASE —treatment objectives

Four cornerstones of care



Chronic oedema treatment: four cornerstones of care

Phase 1 — intensive

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

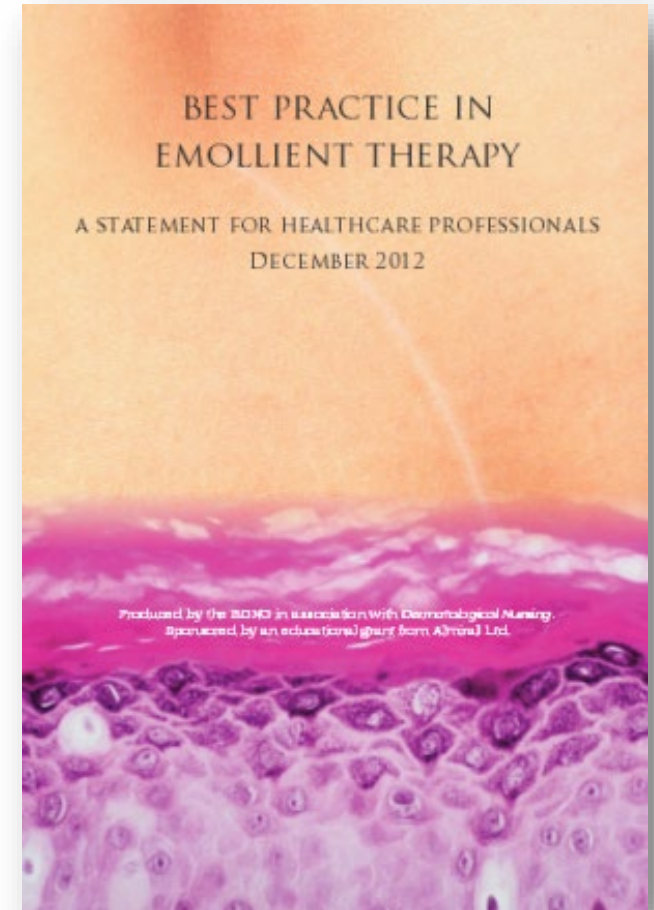
Phase 2 — maintenance

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

Four cornerstones of care

Appropriate skin care

- Dryness and dehydration of skin is observed in old age
 - Moisturisers help to retain moisture, which helps to make the skin soft and supple, retaining natural barrier function
- Wash and dry area daily
- Pay attention to awkward areas!



Four cornerstones of care

Appropriate skin care



Four cornerstones of care

Associated skin complications: cellulitis

- Patients with chronic oedema are at high risk of cellulitis
- Antibiotics as per Consensus Document for cellulitis:
www.thebls.com/consensus.php



Four cornerstones of care

Associated skin complications: cellulitis

- Guidance for managing cellulitis:
 - Seek medical advice immediately - antibiotics
 - Remove all garments and cease active treatment
 - Rest and elevate limb
 - Drink plenty of fluids
 - Painkillers
 - Maintain skin care regime
 - Sometimes admission to hospital for IV antibiotics
 - **SEPSIS**
- Patients with recurrent episodes of cellulitis may require prophylactic treatment with antibiotics

Four cornerstones of care

Red legs vs cellulitis

- Can often be misdiagnosed as cellulitis
- Presents as redness, typically of the lower limb and will affect both limbs
- Can be accompanied by warmth and tenderness, but no systemic symptoms or malaise



Four cornerstones of care

Red legs vs cellulitis

- Symptoms are usually caused by chronic inflammatory changes:
 - Vascular eczema
 - Lipodermatosclerosis
 - Fungal infections
 - Dermatitis



Four cornerstones of care

Lymphorrhoea

- Lymphorrhoea is the leakage of lymph fluid through the skin's surface
- Large beads of fluid appear on the skin and trickle down from affected areas
- It is often cold to touch
- Leads to maceration of the skin
- Possible source of infection



Four cornerstones of care

Lymphorrhoea

Treatment should include:

- The Wet Leg Pathway
- Emollient
- Appropriate medication
- Appropriate absorbent dressing to leaking area
- Compression

Four cornerstones of care

Exercise

Exercise is beneficial to overall health and wellbeing and will assist a patient with chronic oedema in the following ways:

- Stimulates circulation of blood and lymph
- Reduces joint/muscle stiffness
- Helps keep weight within normal limits



Four cornerstones of care

Manual lymphatic drainage (MLD)

This is a massage technique to encourage fluid to drain away from congested areas and will:

- Stimulate lymphatic drainage
- Encourage removal of protein/waste products
- Move fluid from the root of the limb
- Relieve discomfort

Patients/carers can be taught how to apply simple lymphatic drainage (SLD) to support self-care.

Four cornerstones of care

Compression therapy

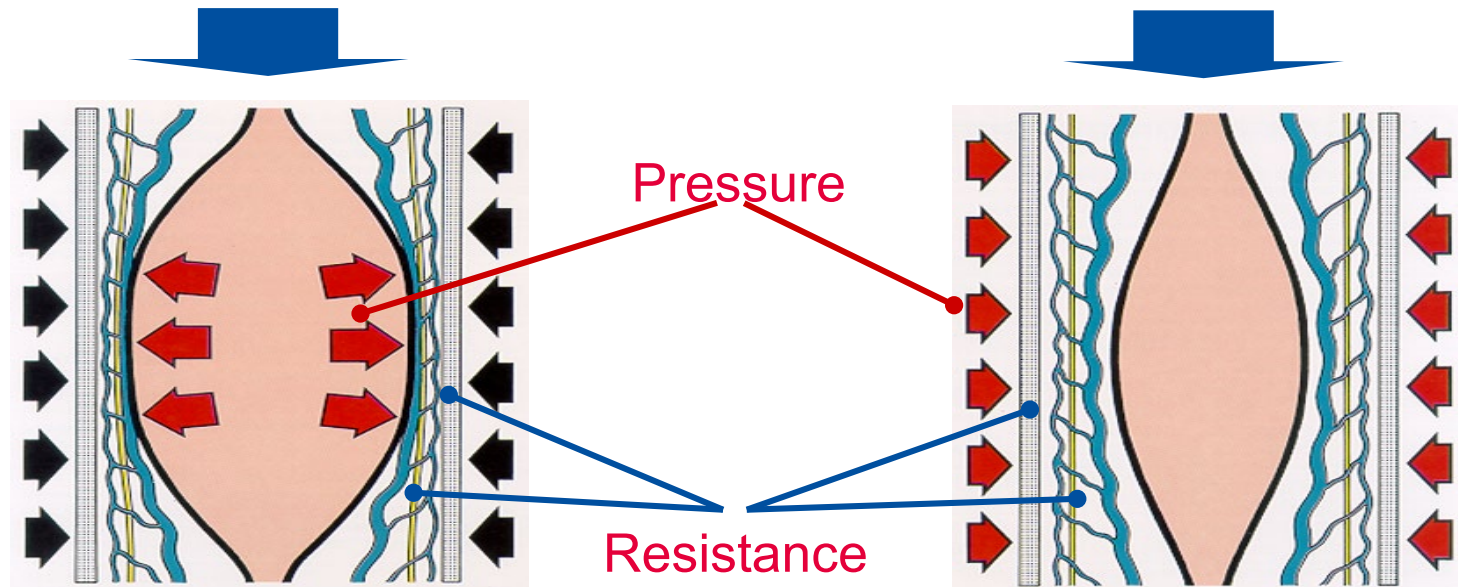
What does compression therapy do?

- 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
- Due to the graduated effect, directs lymph towards the heart

Compression therapy

Working Pressure

Resting Pressure



Four cornerstones of care

Compression: contraindications/precautions

- Ischaemia, e.g. advanced arterial disease
 - Restriction of blood supply to tissues
- Uncontrolled congestive heart failure
 - Failure of the heart to pump efficiently
 - Coronary artery disease
- Untreated septic phlebitis
 - Inflamed veins that have become infected
- Neuropathy



CASE — selection of compression

Phase 1 — aims:

- Reduce and reshape the limb
- Improved venous and lymphatic return
- Improve skin condition
- 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



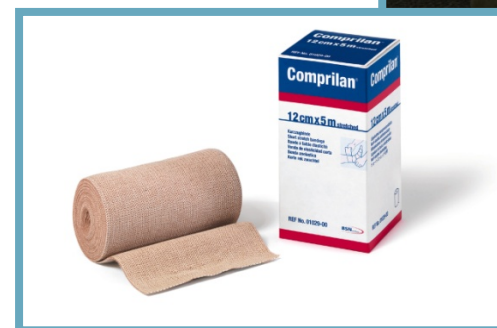
Images provided courtesy of Kendal Lymphology centre

CASE — selection of compression

Multi-layer lymphoedema bandaging

Application:

- Fingers and toes are bandaged using a retention bandage, e.g. Easifix®
- Stockinette and paddings are applied to the limb
- Limb is then bandaged with a short-stretch bandage, e.g. Comprilan®



Images provided courtesy of Kendal Lymphology centre

CASE — selection of compression

Wrap compression systems

- To manage lymphoedema, chronic oedema and venous conditions
- Wrap compression systems can be used as an alternative to:
 - Multi-layer lymphoedema bandaging during phase 1, decongestive lymphatic therapy
 - Bandaging for vascular conditions to support self-management or non-compliance
 - Bandaging/compression garments to address fluctuating oedema



CASE — selection of compression

Phase 2 aims:

- Maintain the limb shape after phase 1 is complete
- Maintain venous and lymphatic return by enhancing the pumping action of the calf muscle
- Maintain skin integrity
- Improve Quality of Life



Images provided courtesy of Kendal Lymphology centre

Compression garments

Compression classifications

What are the compression classifications?

- There are a number of different compression classifications used globally
- In the UK, compression is measured in mmHg
- RAL is the compression system we should all be using according to the International Lymphoedema Framework

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

Compression garments

Factors influencing choice and suitability

- Ability to manage and tolerate garments
- Shape, size and function of limb

Patient factors

- Lifestyle/mobility/manual dexterity, age and psychosocial status
- Patient choice
- Partnership



Compression garments

Indications for ready-to-wear circular-knit hosiery (for example JOBST®):

- Limb shape is regular and not distorted
- Skin is intact and resilient
- Patient/carer is able to apply and remove the garments
- Generally used for early/mild-to-moderate oedema
- Range of brands in various styles, CCLs and colours
- Aesthetically pleasing



Compression garments

Indications for custom-fit flat-knit hosiery (for example, JOBST® Elvarex®):

- Suitable for all levels of oedema, particularly moderate-to-severe
- Patients prone to rebound oedema
- Lays flat against the skin and does not cut in at skin folds
- Wide range of styles and options to create a bespoke garment for the patient



Choosing the right compression

An elastic garment (circular-knit) is like a water balloon — the more fluid you fill it with, the more it expands.

The resultant effect is that the garment may not contain the oedema (depending on severity) and the limb will continue to swell, and the leg may potentially break down due to a tourniquet effect.



Choosing the right compression

An inelastic garment (flat-knit), or one with a higher static stiffness is like a paper cup — as you fill it with fluid it remains the same shape, and more stubborn oedema is contained, preventing rebound and potential tourniquet effect to parts of the limb.



Choosing the right compression

Note

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

CASE —evaluating progress

Pre Treatment	Post Treatment
Swelling	Reduced swelling
Immobility	Increased mobility
Pain /discomfort	Reduced pain / discomfort
Lymphorrhoea	Lymphorrhoea stemmed
Poor body image perception	Body image perception improved
No / low self-esteem	Improved self-esteem
Negative effect on quality of life	Positive effect on quality of life

Case report one

Susan is 50 years old with bilateral chronic oedema and unable to wear off-the-shelf garments.



Case report one – measuring Susan

Circumference Measurements (cms)

Left Leg (Waist Circumference) **Right Leg**

Left Leg Length Measurements (cms)

a-K (crotch length for AT and all Top Functional Zone orders) _____

a-G _____

a-F _____

a-E _____

a-D 31 46 D

(Knee high) a-C 28.5 43 C

a-B' 15 35.5 B'

a-B 18 28.5 B

32 Y

22 A

Right Leg Length Measurements (cms)

a-K (crotch length for AT and all Top Functional Zone orders) _____

a-G _____

a-F _____

a-E _____

a-D 31 48 D

(Knee high) a-C 24 47 C

a-B' 15 37 B'

a-B 8.5 28 B

32 Y

22 A

*a = floor/base of measuring board

Foot Styles

☒ Open toe ☐ Closed toe

☐ Slant foot ☒ Straight foot (applicable length measurements required)

Foot Length

For open toe 14cm.

For closed toe _____ (longest toe)

Lengths for slant foot

Length medial _____

Length lateral _____

JOBST Elvarex Soft

Compression Class:

☒ CCL1 (18-21mmHg)

☐ CCL2 (23-32mmHg)

☐ CCL3 (34-46mmHg)

Colour:

☐ Beige ☒ Black

Style:

☒ AD Knee high

☐ AG Thigh high (with slip form)

☐ AGTL Waist attachment left

☐ AGTR Waist attachment right

☐ AG-T Waist attachment pair

☐ AT Tights (with slip form)

Quantity:

☒ Left ☒ Right

☐ AT Tights

Options:

☐ Adjustable waistband

☐ Open pubis

☐ Silicone dotted band

☐ 2.5cm on top (A-D only)

☐ 5.0cm on top

☐ Silk Pocket†

☐ T-Heel

Remarks:

†State position/length

EITHER JOBST Elvarex or JOBST Elvarex Soft. 2. Select garment style required. 3. Complete ALL applicable measurement boxes. 4. Fax order.

Case report one — JOBST® Elvarex®



Case report two

Duncan is 79 years old with ulceration and venous hypertension.



Case report two



Case report two — JOBST® FarrowWrap®



Getting further support and information

There are many organisations that can offer support, raise awareness and education in relation to lower limb conditions:

- LymphConnect®
- Essity Academies
- British Lymphology Society
- LSN
- Legs Matter



What is LymphConnect®? LymphConnect®

by JOBST

- Web-based platform to increase awareness, provide education and support for patients, caregivers and healthcare professionals
- Open site containing educational content, blogs, inspirational patient videos and much more
- Closed site to access lymphoedema community — communicate with others, share information and get support in the open forums



Education: Essity Academies



- 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

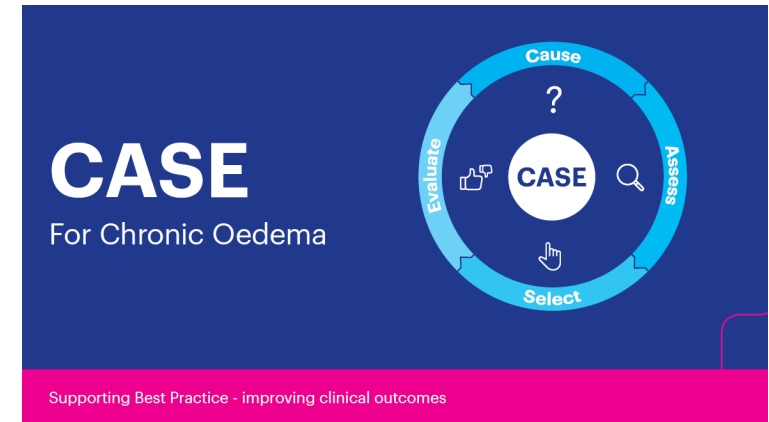


Summary

- The prevalence of chronic oedema (lymphoedema) is underestimated and misunderstood. It is a growing problem that we must tackle
- It can affect the integrity of the skin causing complications such as wounds, lymphorrhoea and cellulitis, and so should be treated and managed with compression therapy to prevent further deterioration
- Essity (formerly BSN medical) has many educational tools, and JOBST compression therapy solutions can help you manage your patients with chronic oedema

Summary

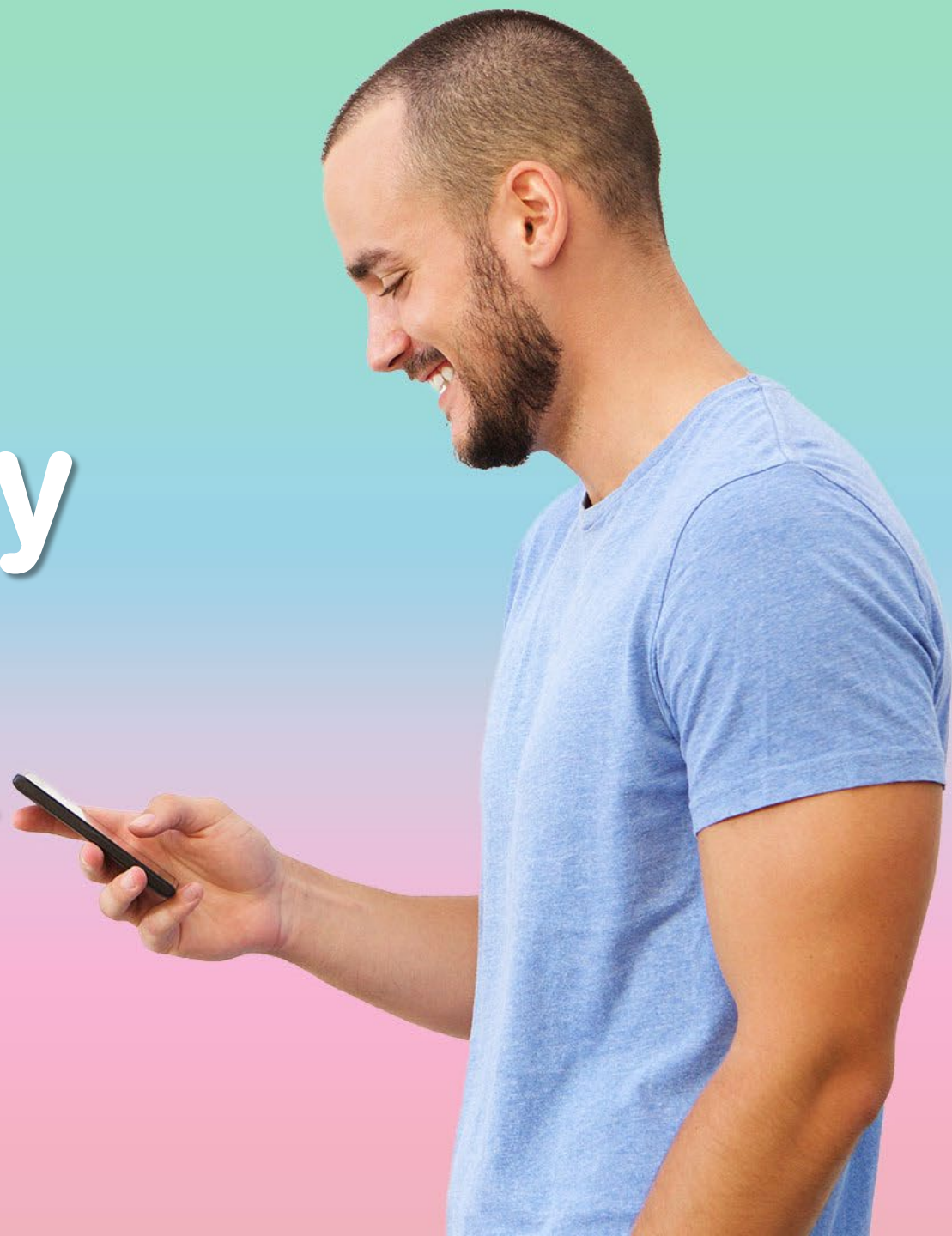
- Email concierge.service@Essity.com for further information and to receive your free copy of our chronic oedema assessment and treatment guide — CASE, which helps you:
- Establish **C**ause
- Conduct a full, holistic **A**ssessment
- **S**elect suitable treatment
- **E**valuate your treatment regimen



Contact Essity

Call: 01482 670 177

Email: concierge.service@essity.com





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