
WHAT ELSE DO WE NEED TO LOOK AT AND CONSIDER?

WE NEED TO CONSIDER...

- Allergies/intolerances
- Medication
- Patient beliefs and psychosocial factors
- Bloods
- Pain

ALLERGIES TO BE AWARE OF

- Do you ask your patients if they suffer from hayfever? Hay fever affects 26% of adults in the UK (Scadding et al 2017).

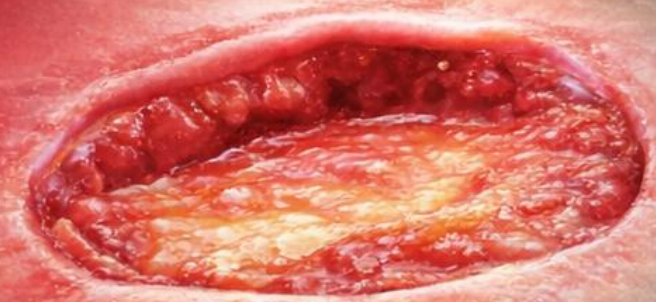
- Gelatine in ichthopaste and ActivHeal Hydrogel.
- Iodine allergy – no iodosorb or iodoflex (thyroid disorders, advanced CKD)
- Latex – latex-free gloves, latex-free compression bandaging.
- Adhesive dressing allergy (plasters) – Acrylates – Kliniderm Foam Silicone Border and RespoSorb Silione Border

CAN YOU NAME ANY MEDIATIONS THAT MAY IMPACT WOUND HEALING?

How Medications Affect Wound Healing:
Delay vs. Acceleration

Delay

- Corticosteroids
- NSAIDs
- COX-2 Inhibitors
- Chemotherapy Agents
- Immunosuppressive Agents
- Antipsychotics
- Cytotoxic Agents
- Anticoagulants



Acceleration

- Growth Factor-Based Treatments
- Vitamin C
- Zinc Supplements
- Arginine & Glutamine
- Certain Antibiotics
- Statins
- Pentoxifylline

Medications That Increase Oedema vs. Cause Leg Ulceration

Increase Oedema

- Amlodipine (Calcium Channel Blocker)
- NSAIDs (e.g., Ibuprofen)
- Diabetics (e.g, Pioglitazone)
- Pregabalin and Gabapentin (Antiepileptics)
- Parkinson's Medication

Cause Leg Ulceration

- Nicorandil (Potassium Channel Blocker)
- Hydroxycarbamide (Cytotoxic Agent)

"BEYOND THE BANDAGE" UNDERSTANDING PSYCHOSOCIAL FACTORS IN WOUND HEALING

- Learning objective – by the end of this activity, you will be able to identify psychosocial factors the delay or promoted wound healing and describe one nursing intervention to address them.
- Time – 5-10 mins

CASE SNAPSHOT

- Mr J is a 68-year-old patient with a diabetic leg ulcer. The wound shows minimal improvement after 4 weeks. He lives alone, reports poor sleep, appears withdrawn and has missed two follow-up appointments. He says, “it doesn’t really matter anymore”

ACTIVITY:

1. One person shouts out a psychosocial factor that might be affecting this patient's wound healing
2. Another person then shouts out how this factor could physiologically impact healing
3. Another person shouts out one realistic nursing intervention that you could apply

Let's see how many we can name!

ACTIVITY: DISCUSS HOW WE COULD ADDRESS PAT'S CONCERNS

PSYCHOSOCIAL FACTORS - HOW CAN WE HELP?

Engage

Engage patients by talking openly about their concerns relating to wound care

Encourage

Encourage patients to actively participate in their assessment and treatment plan.

Empathise

Empathize with the individual living with a chronic wound.

Educate

Educate patients by explaining procedures and how they are performed, helping to dispel any myths and misconceptions that may cause anxiety

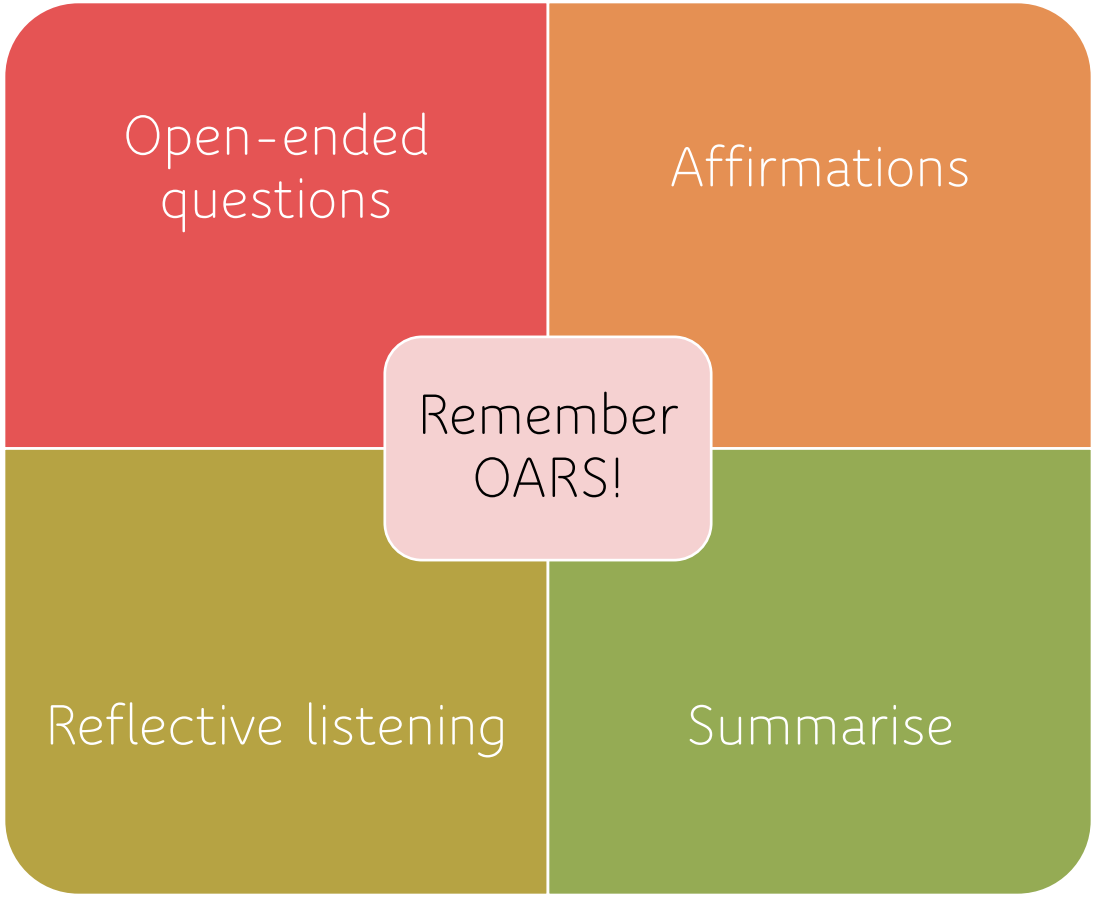
THE FOUR E'S

WHO WATCHED THE PRE-LEARNING VIDEO ON MOTIVATIONAL INTERVIEWING?

YouTube - OARS - Introduction to Motivational Interviewing - Bill Matulich

ACTIVITY: MOTIVATIONAL INTERVIEWING

- Scenario: You've explained wound care perfectly, but the patient still isn't following the plan. Motivational interviewing helps us move from telling to partnering…



RAPID ROLE PLAY (5 MINUTES)

- Work in pairs – one is the nurse, one is the patient
- Patient – you have a chronic leg wound. You're tired of dressing changes. You don't think they help and sometimes skip them.
- Nurse – Use at least 2 MI skills, avoid fixing, lecturing, or warning. Focus on understanding the patient's perspective

Helpful MI prompts:

- "What's been hardest caring for this wound?"
- "What do you already know about how it's healing?"
- "On a scale of 0-10, how important is wound care right now?"
- "What would make it easier for you"

MI SUMMARY

- MI isn't about convincing patients to care, it's about helping them discover why they already might
- Think about one MI question you'll try during your next wound assessment.

IMPORTANT BLOODS

Blood Test	Abnormal Result	What This Indicates	Why This Matters for Wound Healing	Nursing Actions
Haemoglobin (Hb)	< 130 g/L	Anaemia	· Reduced oxygen delivery to tissues · Impaired collagen formation · Slower wound healing	· Check iron studies if available · Encourage iron-rich diet (red meat, fish, poultry, pulses, suggests, dark green veg) · Iron supplementation (e.g. ferrous fumarate) as prescribed
eGFR	< 80 < 15	Chronic Kidney Disease (CKD) Stage 5 = kidney failure	· Increased oedema · Higher risk of arterial disease · Poor toxin clearance affects healing · CKD stage 5 **not suitable** for compression or iodine dressings	· Escalate concerns early · Refer CKD stage 4+ with wounds to dietitian (protein balance) · CKD stage 5 + oedema → nephrology referral · Avoid iodine dressings
Albumin	< 32 g/L	Poor nutritional status / poor overall health	· Delayed wound healing · Reduced tissue repair capacity	· Manage expectations around healing time · Encourage nutritional support · Consider dietitian referral
HbA1c	> 6.5%	Poorly controlled diabetes	· Reduced blood flow (microvascular disease) · Impaired immune response · Increased infection risk · Delayed healing	· Refer to GP / diabetes nurse · Encourage diabetic-friendly, low-sugar diet · Monitor wounds closely for infection
CRP	> 5 mg/L	Infection or inflammation	· Prolonged inflammation delays healing · May indicate cellulitis or sepsis · Often raised with varicose eczema	· Assess for local/systemic infection · Escalate for antibiotics if indicated · If varicose eczema present, commence eczema pathway
NT-proBNP	> 400 pg/mL	Heart failure	· Pitting oedema to lower limbs · Fluid overload impairs healing · Compression contraindicated if HF unstable	· Assess oedema and breathlessness · Use staged compression only if stable · Refer to GP / HF nurse · Follow Lower Limb Care Pathway

PAIN

'PAIN IS WHATEVER THE EXPERIENCING PERSON SAYS IT IS, EXISTING WHENEVER THE EXPERIENCING PERSON SAYS IT DOES.'

(MCCAFFERY, 1989)

Wound Pain Pathway

For assessment and management of wound-related and lymphoedema-related pain

NHS Oxford Health NHS Foundation Trust

Screen for wound-related pain

Ask every patient:

Do you have pain related to your wound?

- At rest?
- With movement?
- Overnight?
- During dressing cha

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Pain context: *(us* *neomic or equivalent)*

- **Onset** (sudden / gradual)
- **Location** (localised / radiating / diffuse)
- **Duration** (acute / chronic)
- **Timing** (constant / intermittent / procedur / background)
- **Triggers** (touch / pressure / temperature / movement)
- **Impact** (sleep / mobility / QoL / wound tolerance)
- **Previous treatments and response**

***NB** Remember to complete the Wound Quali of Life checklist (Link here).*

See guidance 1 overleaf for further information

Characterise the pain

Ask the patient to describe the pain to guide treatment:

It is important to determine which type of pain the patient is experi *uire different treatmen*

A.

pain if:

- hrobbing
- ound
- ovement
- to tiss

Identify wound-related contributors

Assess for the following contributors:

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- F

Management

For all patients (all pain types):

- Explain procedure and set exp

prev

pe

Sensory modulation: ***(see guidance 5 overleaf for further non-pharmacological management methods)***

- Relaxation breathing
- Distraction (e.g. music, conversation)
- Calm, quiet environment

Reassess and evaluate

In wound care, pain is not just a symptom, it is a diagnostic signal. Any pain that is severe, worsening, neuropathic, function-limiting, or dispoportionate should trigger prompt reassessment and escalation, as it may indicate complications that are not yet visually apparent.

Red flag, escalatiom and referral triggers ***(see Guidance 6 overleaf)***

- If pain is severe (>7/10), despite appropriate analgesia or worsening over 48 hours.
- Neuropathic pain features predominate
- Pain limits wound care or mobility
- If pain is disproportionate to wound appearance or worsens rapidly, suspect ischaemia or infection and escalate urgently
- Increasing pain at rest or at night (including hanging legs out of bed for alleviation)
- If pain causing a significant impact on the patient's quality of life, treatable disease has been excluded or treatment completed and irst line therapies have failed, consider referral to OUH Pain Management Centre ***(See Guidance 3 overleaf)***

COMING SOON

WHY DO WE NEED TO DETERMINE THE TYPE OF PAIN PRESENT?

- It is important to determine which type of pain the patient is experiencing as they require different treatments (Brown, 2015).

TYPES OF PAIN

Nociceptive (somatic / visceral)

- Usually arising from the direct damage to tissue. Signals are picked up by sensory receptors (nociceptors) which are transmitted to the spinal cord and then the brain where they are interpreted as pain.
- Suspect nociceptive pain if:
- Pain is aching, throbbing, sharp, tender or dull
- Localised to wound
- Worse with movement, pressure, inflammation
- Proportionate to tissue damage
- Management focus: reduce tissue injury and inflammation

Neuropathic (Non-nociceptive/sensory)

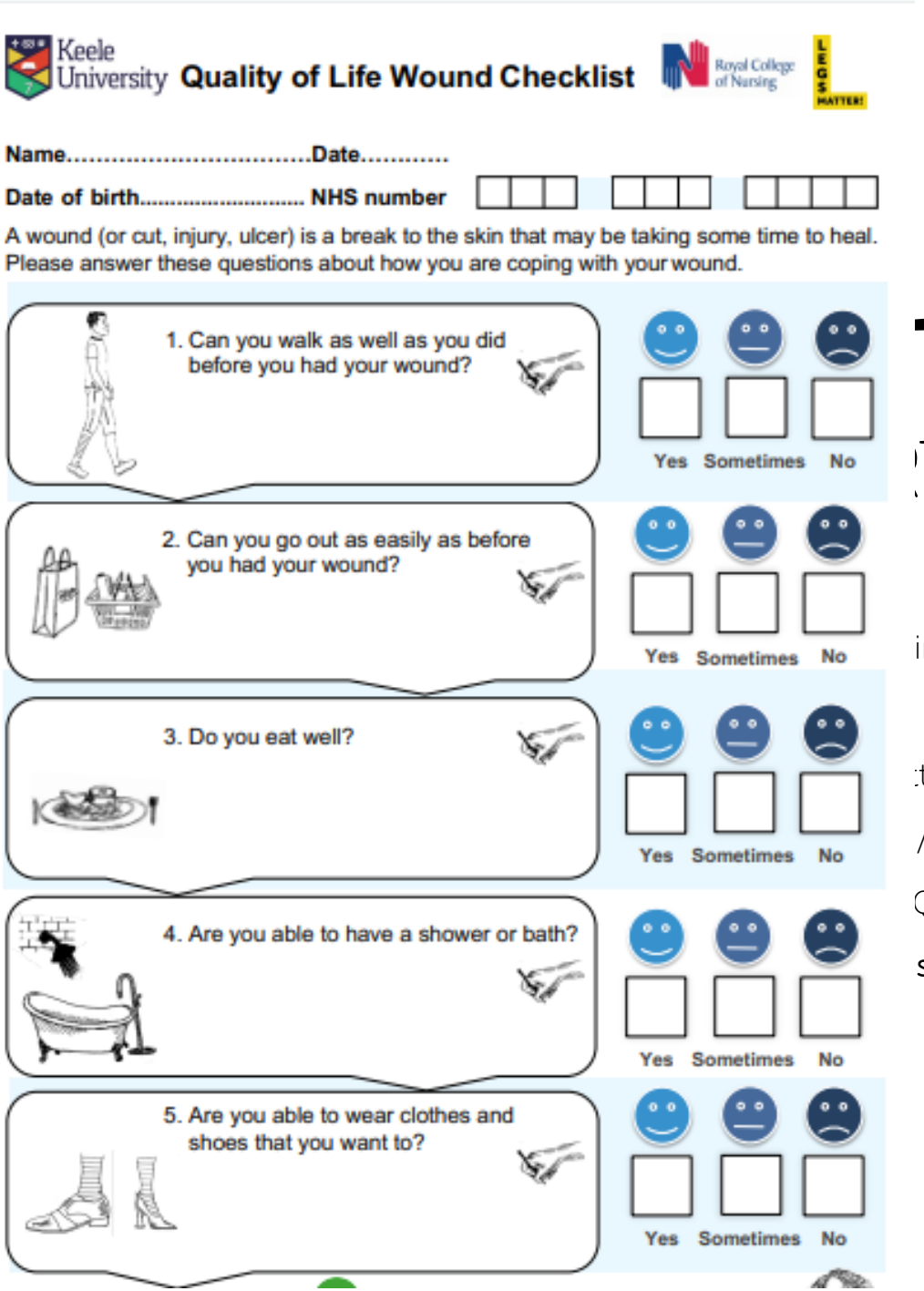
- Caused by lesions, damage to or dysfunction of the nervous system which causes an abnormally strong response. Normally chronic (long term).
- Suspect neuropathic pain if:
- Pain is burning, shooting, electric, stabbing, tingling, numbness, pins and needles
- Pain from light touch - allodynia
- History of diabetes, nerve injury, stroke, shingles
- Management focus: minimise nerve stimulation and escalate for adjuvant therapy

WHAT CAN WE

Pain intensity

- If adult can communicate verba
  Scale
- If communication difficulty - Bc
- If child or cognitive impairment
  Scale

NB Remember to complete the Wc
of Life checklist



Keele University **Quality of Life Wound Checklist** Royal College of Nursing LEGS MATTER!

Name.....**Date**.....

Date of birth..... **NHS number**

A wound (or cut, injury, ulcer) is a break to the skin that may be taking some time to heal. Please answer these questions about how you are coping with your wound.

1. Can you walk as well as you did before you had your wound?
2. Can you go out as easily as before you had your wound?
3. Do you eat well?
4. Are you able to have a shower or bath?
5. Are you able to wear clothes and shoes that you want to?

Yes Sometimes No

TS mnemonic or equivalent)

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tent / procedural / background)

/ temperature / movement)

QoL / wound care tolerance)

sponse

ARE THEY REALLY IN THAT MUCH PAIN?

This is Allodynia, a type of neuropathic pain when there is issue between how the nerves send and receive messages.

ARE THEY REALLY IN THAT MUCH PAIN?

This is Hyperalgesia, a type of neuropathic pain that arises when nociceptive pain and psychological impact is not managed. This leads to a prolonged inflammatory response and a heightened sensitivity to pain where the pain is disproportionate to the injury.

WOUND-RELATED CONTRIBUTORS

Infection/inflammation	· Refer to AMBL2 tool and Biofilm Pathway
Suspected Ischaemia	· Urgent referral to Vascular · Refer to Lower Limb Care Pathway · Do NOT apply compression therapy
Chronic oedema/lymphoedema	· Refer to Lower Limb Care Pathway · Apply compression bandaging where clinically indicated · Encourage leg elevation, exercise, good skin care and emollient therapy
Moisture imbalance	· Refer to Exudate Management and Skin Care Barrier Pathways · If lymphorrhoea is present, refer to Lower Limb Care Pathway and commence compression therapy where clinically indicated
Dressing trauma/adherence	· Review dressing choice and dressing change frequency
Friction/mechanical irritation	· Stabilise dressing, reduce movement

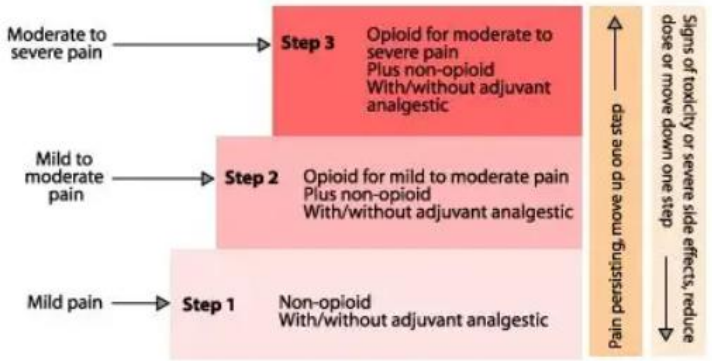
PAIN MANAGEMENT

- **For all patients (all pain types)**:
- Explain procedure and set expectations
- Offer patient choice and control
- Validate pain experience
- Address anticipatory pain and anxiety (e.g. fear from previous painful dressings, loss of control in chronic wounds, sleep disturbances amplifying pain perception)

PHARMACOLOGICAL MANAGEMENT

Nociceptive Pain

- The WHO analgesic ladder (link here) provides a general guide to pain management e.g. non-opioids/NSAIDs (Paracetamol, Naproxen), low-dose opioids (Codeine), strong opioids (Morphine, Tramadol)



Neuropathic Pain

- Unlike nociceptive pain, neuropathic pain does not usually get better with common analgesia, such as Paracetamol. Adjuvant analgesic (or co-analgesics) are drugs with a primary indication other than pain, that have analgesic properties e.g. tricyclic antidepressants (Amitriptyline, Duloxetine), anti-convulsants (Gabapentin, Pregabalin).

Non-pharmacological therapies are often not explored but can be very effective when used alongside pharmacological methods (Brown, 2014)

2-MINUTE ACTIVITY: LIST AS MANY NON-PHARMACOLOGICAL MANAGEMENT METHODS FOR PAIN AS YOU CAN

Reduce anxiety	Distraction therapy	Aromatherapy	Transcutaneous electrical nerve stimulation (TENS)	Massage	Mild exercise
Acupuncture	Mindfulness	Meditation	Talking therapy	Pet/animal therapy	Physiotherapy
Gentle exercise	Osteopathy	Positioning	Hypnosis	Guided imagery	Breathing techniques
Companionship	Heat/cold application	Aquatherapy	Music	Occupational therapy	Therapeutic ultrasound
Yoga	Pilates	Tai Chi	Chiropractic	Relaxation techniques	Stress ball

NON-PHARMACOLOGICAL MANAGEMENT

Nursing Interventions

- Select a wound cleansing solution that the individual finds comfortable and consider temperature of irrigants.. If using tap water, use boiled, cooled lukewarm water. Do NOT microwave
- Maintain moisture balance in the wound bed and peri-wound skin
- Select non-adherent dressings where possible to reduce pain associated with dressing removal
- Offload pressure and support positioning
- Elevate limb / manage oedema if indicated
- Consider contacting patient to administer analgesia prior to dressing change
- Avoid unnecessary touching or probing and prevent wound from friction
- Use silicone based-dressing for comfort where appropriate (e.g. Silicone Wound Contact Layer,Kliniderm Foam Silicone Border or RespoSorb Silicone Border)
- Reduce dressing change frequency where safe to do so (consider infection, exudate levels etc)

Procedural Comfort

- Soak dressings before removal (in line with wound cleansing guidelines)
- When required (e.g. for procedural pain), topical anaesthetic can be applied to the wound while the surrounding skin and/or peri-wound is cleansed (liaise with Tissue Viability for further information)
- If thorough cleansing and mechanical debridement is not tolerated, sterile gauze can be soaked in antisurfactant solution and left on the wound to commence loosening of debris and nonviable tissue while cleansing and debriding the peri-wound and surrounding skin.
- Pat the wound dry if required, starting proximally and working down.
- Slow, atraumatic technique – "low and slow" - use one hand to anchor the surrounding skin, gently peel dressing back at a low, horizontal angle in the direction of hair growth (pulling upwards increases trauma to the skin), stabilise skin while slowly removing dressing
- Consider scheduling care at patient's most comfortable time
- Use adhesive remover for adhesive dressings

NOW LET'S FOCUS ON THE ACTUAL WOUND - THINK TIMES FRAMEWORK!

Venous Leg Ulcers

Typical location:
Medial malleolus
Gaiter area (lower 1/3 of lge
Pre-tibial area
Around or near malleoli

Size and depth:
Variable size, commonly shallow
Irregular, sloping margins

Typical location:
Medial malleolus
Gaiter area (lower 1/3 of leg)
Pre-tibial area
Around or near malleoli

Surrounding skin and associated features:
Oedema
Haemosiderin staining
Varicose eczema
Warm limb

Pain:
Mild to moderate
Relieved by leg elevation

Exudate:
High levels

Compression therapy:
Indicated

Pedal pulses:
Normal

Arterial Leg Ulcers

Typical location:
Toes
Lateral foot
Heel
Pressure points

Size and depth:
Small, deep wound bed
May involve muscle or tendon

Wound bed and tissue type:
Pale or deep base
Necrosis may be present

Surrounding skin and associated features:
Thin, shiny skin
Hairless
Cool limb
Pallor upon elevation

Pain:
Severe
May occur at rest
Worse with elevation
Relieved by dependency (hanging leg down)

Exudate:
Dry or minimal

Pedal pulses:
Decreased or absent

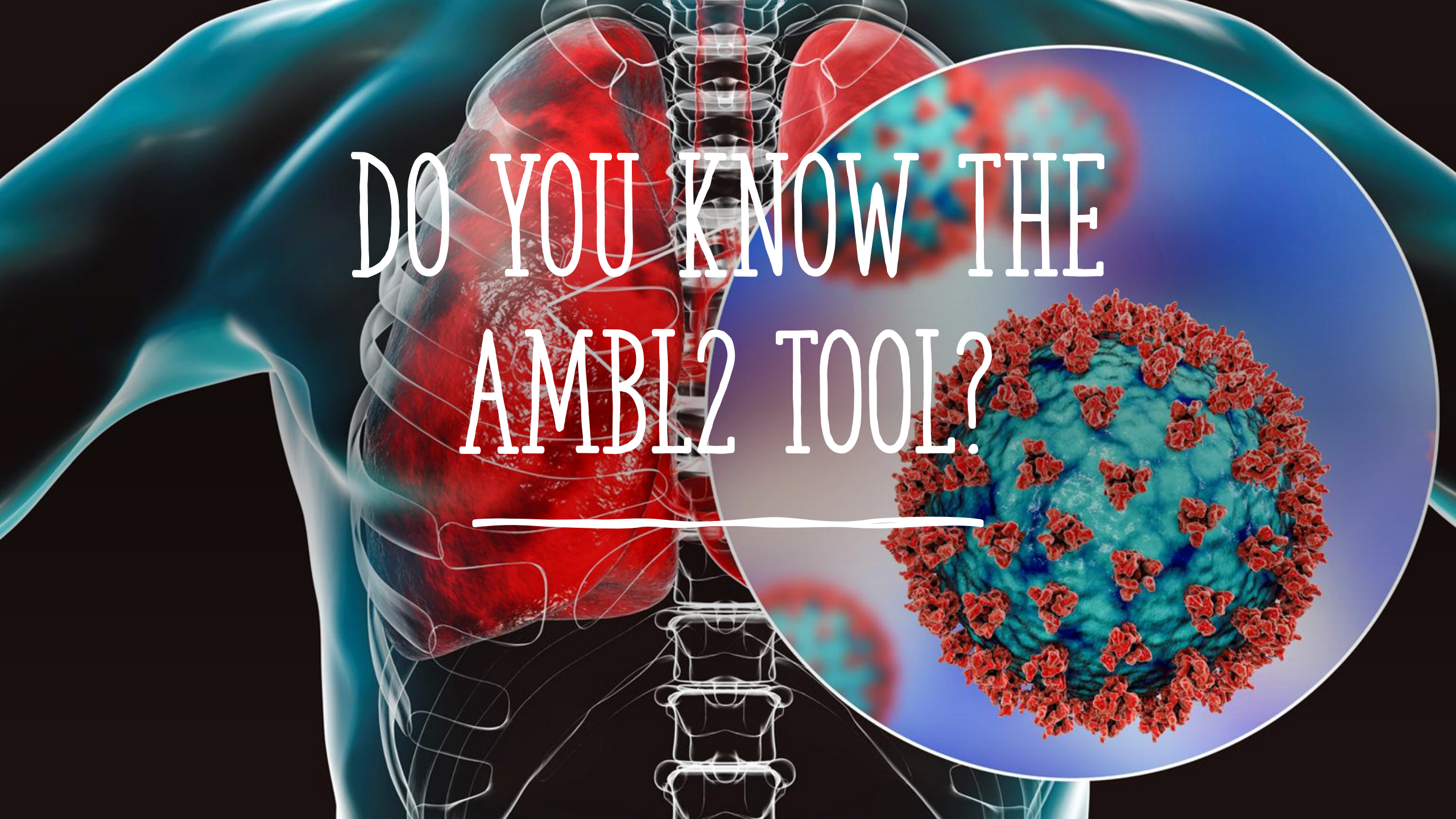
Compression therapy:
Contraindicated

(Wounds UK, 2011; Moffatt, 2001; Nurses Network, 2015)

WHAT DO WE MEAN BY PUNCHED OUT, SHARPLY DEMARCATED EDGES?

WHAT IS THE DIFFERENCE BETWEEN NECROSIS/ESCHAR AND ANAEROBE INFECTION?

WHICH OF THESE LEG ULCERS WOULD YOU APPLY A DEBRIDEMENT OR MOISTURE-DONATING DRESSING ON?


DO YOU KNOW THE
AMBL2 TOOL?

	Treat Topically (See Overleaf)		Treat Topically + Systemically (See Overleaf)		
	Local Wound Bed Infection *Microorganisms present and multiplying.* *Patient immune response compromised with delayed healing*		***+ Spreading Infection (Cellulitis)***	***+ Systemic Patient Infection***	***STAY ALERT to: Wound Biofilm***
	Primary (Covert) Symptoms	***Progressive (Overt) Symptoms***			
Tissue	• **Friable Hyper/granulation tissue** • **Pocketing in granulation** • **Wound Static (<40cm^2 reduction in 6 weeks)**	• **Necrosis/Slough may be present** • **Wound deterioration**	• **Wound breakdown/ dehiscence**	• **Assess for SEPSIS** • **Malaise** • **General deterioration** • **Loss of appetite** • **Fever/Pyrexia**	Wound not responding as expected with two or more cycles of the AMBL2 treatment plan (overleaf). Progress to **Biofilm Wound Management Pathway.**
Moisture	• **Increasing exudate**	• **Purulent exudate** • **Increasing malodour**			
Peri-wound edges	• **[1]Erythema associated with inflammation may or may not be present**	• **[1]Erythema <2cm around wound margin** • **Swelling** • **Warmth**	• **[1]Spreading erythema >2cm peri wound margins**		
Pain/Systemic Factors	• **New or increasing Pain**	• **New or increasing Pain**	• **Swollen lymph glands** • **Skin blistering/ breakdown** • **Oedema**		

...NT'S CHRONIC LEG ...ON?

The next time you have a patient with a static, non-healing leg ulcer, consider treating localised wound bed infection using topical antimicrobial dressings, thorough cleansing, mechanical debridement and frequent dressing changes as per the AMBL2 tool!

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DOES MARY NEED ANTIBIOTICS?

Mary has a leg ulcer which is deteriorating, there is slough and necrosis, purulent exudate, erythema <2cm to the wound margin and is malodorous. You take a set of observations and Mary has a NEWS2 score of 0 and reports she is feeling well.

BIOFILM

A complex, slime-encased community of microbes.

A survival mechanism of microorganisms.

Antibiotics are ineffective as unable to penetrate the biofilm

Mechanical debridement, thorough cleansing, topical antimicrobial and regulare dressings are required for treatment

EXUDATE MANAGEMENT

If a patient's exudate levels are not managed effectively then the following may occur:

- Leakage and soiling
- Peri-wound skin changes, maceration, skin stripping, contact dermatitis
- Delayed healing
- Odour
- Pain and discomfort
- Infection
- Protein loss as well as fluid and electrolyte imbalance
- Need for frequent dressing changes
- Psychosocial problems – excessive exudate may distress patients resulting in social isolation

EXUDATE MANAGEMENT

How would you manage this highly exuding leg?

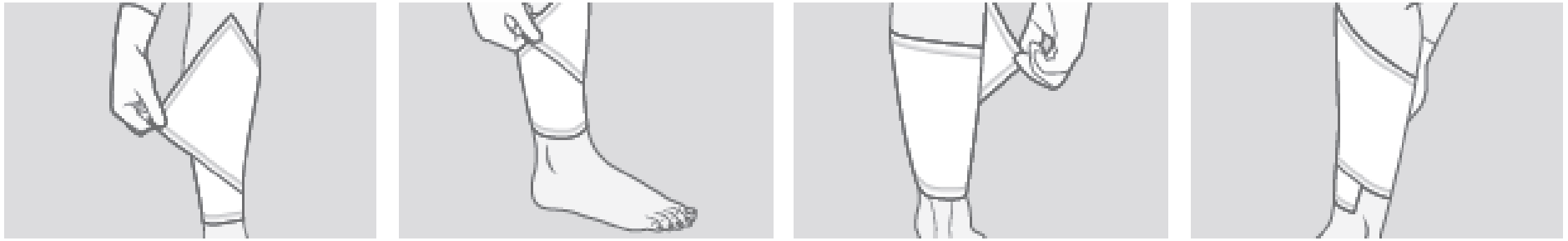
- A common myth is that all that is needed to manage exudate effectively is extra padding on the leg ulcer (WUWHS, 2007; Wounds UK, 2013).
- The first factor to consider is the reduction of anything that may be contributing to increase fluid levels.
- For example, the use of diuretics to treat heart failure or elevation of limbs to reduce dependent oedema may help to reduce exudate.
- Once these factors have been addressed, local management of the exudate with dressing products or therapies may be considered.

EXUDATE & ABSORBENT DRESSINGS

Xupad

1. Fold a 10cm x 20cm dressing in half
2. Fold each corner inwards
3. Place tape to hold folded corners in place
4. Open out folded dressing
5. Place on heel

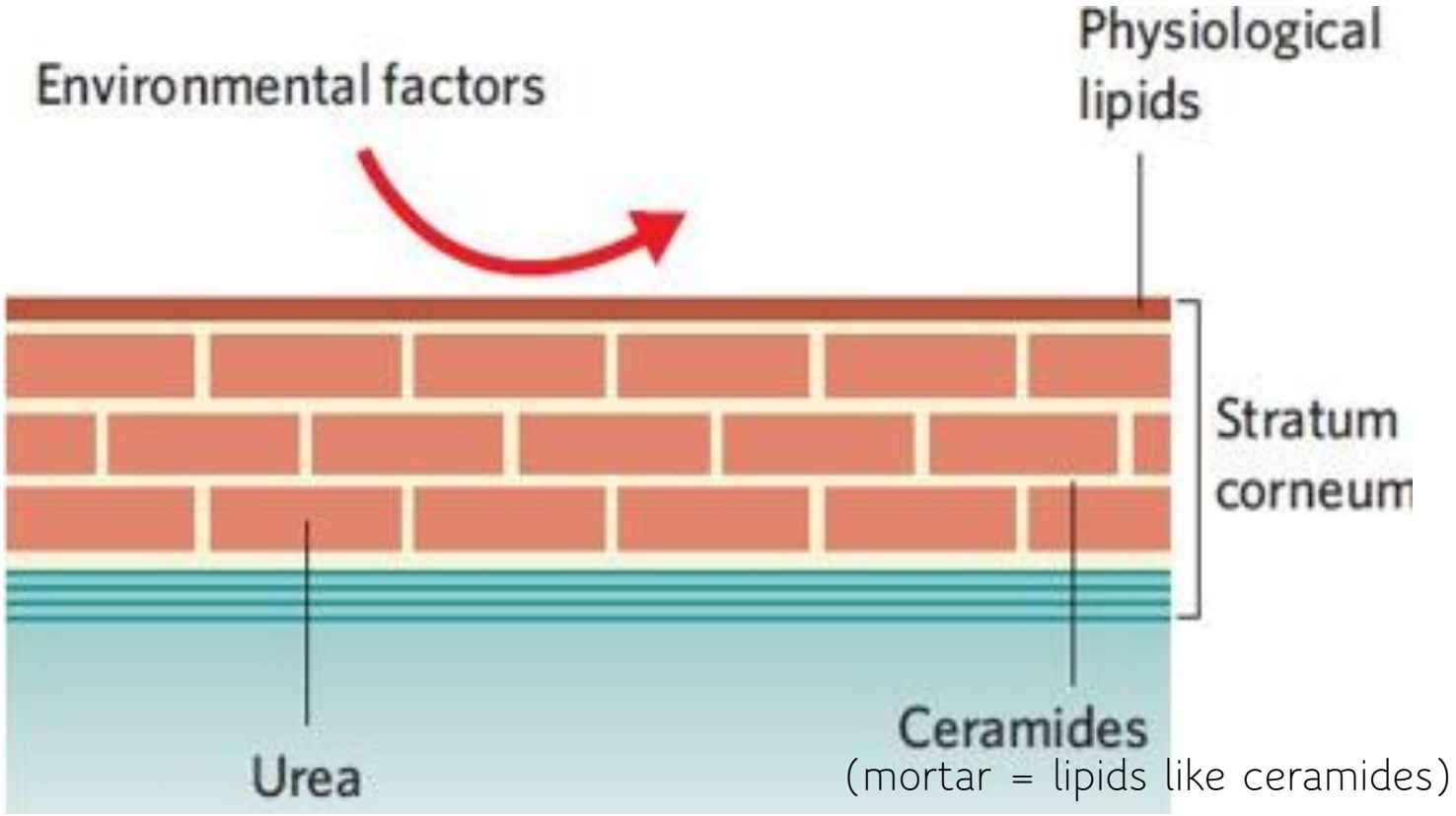
Kliniderm Superabsorbent



1. Place 20cm x 40cm dressing on the base of the leg
2. Wrap the dressing around the leg at an angle
3. Overlap the dressing to ensure there are no gaps
4. Secure dressing with sub-bandage wadding (e.g. K-Soft0

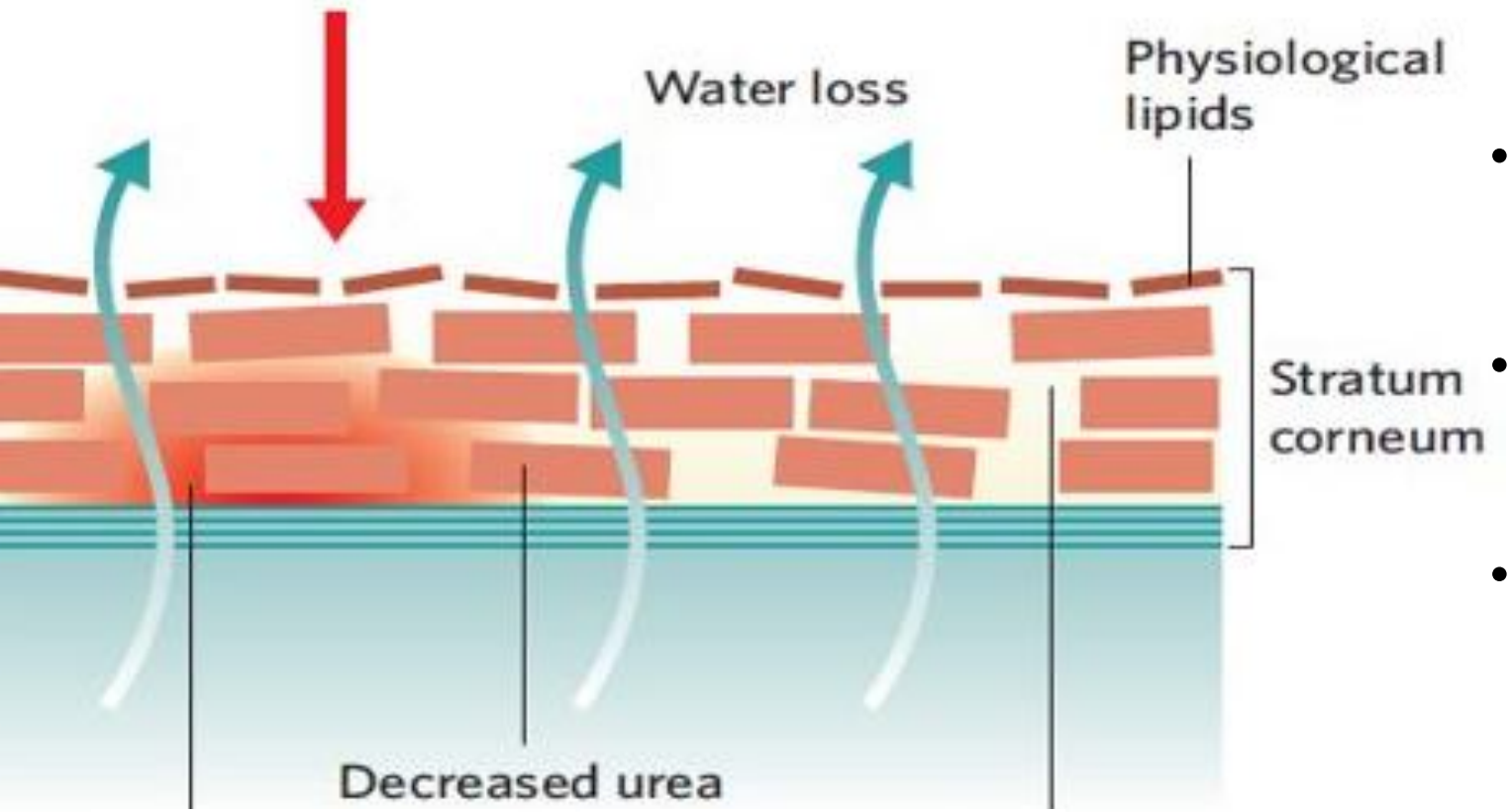
Sorbion

SKIN BARRIER FUNCTION



(bricks = cells containing urea, keratin and other natural moisturisers)

- Skin = largest organ of the body.
- Physically protects against external threads (pathogens, chemicals, allergens, irritants) which might cause an immune response if permitted to pass through.
- Helps to maintain homeostasis (balance) within the body by preventing water from escaping and evaporating, leading to dehydration.
- The skin barrier is essential for overall health and needs to be protected to help the body function properly.



IMPAIRED SKIN BARRIER FUNCTION

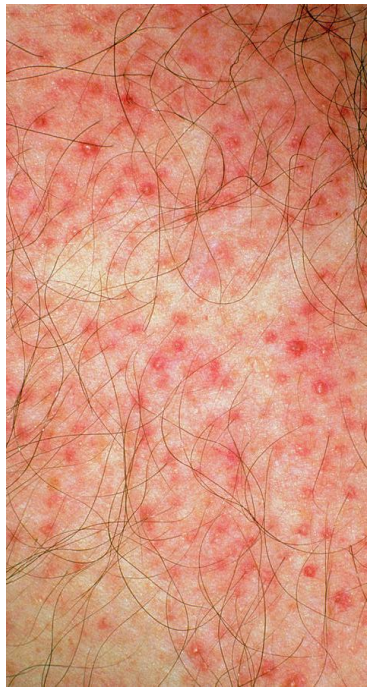
- When the skin is dehydrated, the cells within the skin shrivel so there are gaps in-between.
- This leads to an impaired skin barrier and increase in skin permeability of the stratum corneum
- This results in external environmental factors entering the body through the skin and water loss through the epidermis.
- Transepidermal water loss = TEWL.

WASHING AND SKIN CARE

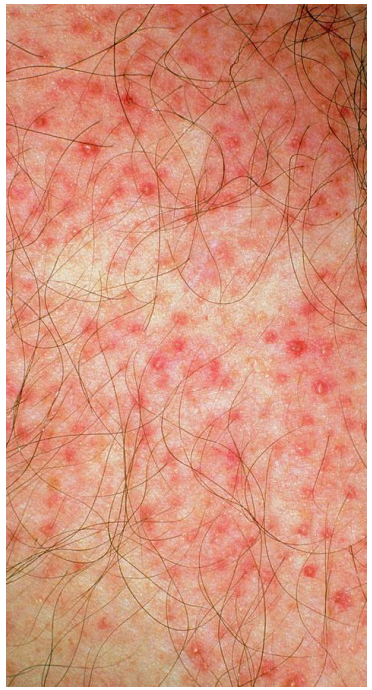
- Legs should be washed at **EVERY** dressing change. Use a bowl lined with a clean bin liner (one bin liner and clean water per leg).
- Epimax Ointment should be used as a first-line soap substitute (**NOT** soap).
- Apply the Epimax Ointment to the entire lower limb and foot before placing in water and allow it to soak off.
- Use a clean flannel to cleanse surrounding in-tact skin. Use circular motions to remove hyperkeratosis. Do not 'double-dip' the flannel as this increases infection risk
- Do not submerge wounds in the water and avoid splashing.
- Dry surrounding skin with a clean towel or gauze - thoroughly into skin folds & between toes.
- Cleanse wound bed and peri-wound skin separately once the leg is removed
- Apply a leave-on emollient in downward strokes (direction of hair growth), not in between toes).

WOULD YOU BOWL WASH THESE ARTERIAL WOUNDS?

WOULD YOU BOWL WASH THESE ARTERIAL WOUNDS?



WHAT IS THIS SKIN CONDITION?



FOLICULITIS

- A common skin condition that occurs when hair follicles become inflamed and infected by bacteria.
- Presents a small pimples/spots around the fair follicles that can be itchy or sore.
- Prevention/Treatment – applying a leave-on emollient in long/downward strokes in the direction of hair growth

FUNGAL INFECTIONS TO TOES

- **Prevention** – soak feet in warm water with 2 drops of tea tree oil – (LSN factsheet- Skincare for People with Lymphoedema).
- **Treatment** - Terbinafine cream daily for 2 weeks.
- **Maintenance** – if skin is unbroken, use alcohol wipes daily (BLS Cellulitis document)

OXFORD HEALTH FORMULARY EMOLLIENTS

1

Epimax Ointment

- First-line soap substitute
- 30% yellow soft paraffin, 40% liquid paraffin, 30% emulsifying wax
- Can be used on broken skin
- Too greasy/occlusive to be used under hosiery
- Suitable for children 1 month +
- £3.19 per 500g

2

Epimax Cream

- First-line leave-on emollient under hosiery
- 6% liquid paraffin, 15% white soft paraffin.
- Does not contain urea.
- Suitable for children 1 month +
- £3.80 per 500g

3

Imuderm

- 5% urea, 5% glycerol
- First-line leave-on emollient for those over 40 years old
- Do not use on broken skin
- Not suitable for children
- Cheaper than Balneum Intensiv
- £6.89 per 500g

4

Balneum Intensiv

- 5% urea, 0.1% ceramide
- Particularly indicated for aging, dry problem skin with hyperkeratosis
- Does not contin Paraffin
- Do not use on broken skin
- Suitable for children over the age of 12
- £9.97 per 500g

5

Hydromol Intensive

- 10% urea
- For very problematic dry skin with hard, stubborn keratotic plaques (e.g. heels)
- Not to be used on broken skin
- Can take 2-4 weeks to take effect
- Suitable for children over the age of 1 month
- £4.66 per 100g

Remember to familiarise yourself with the MHRA guidance on emollient use and fire risk!

Before emollient use

Ongoing emollient use - 2 weeks later!

THE PROOF!


BREAK TIME!!!!