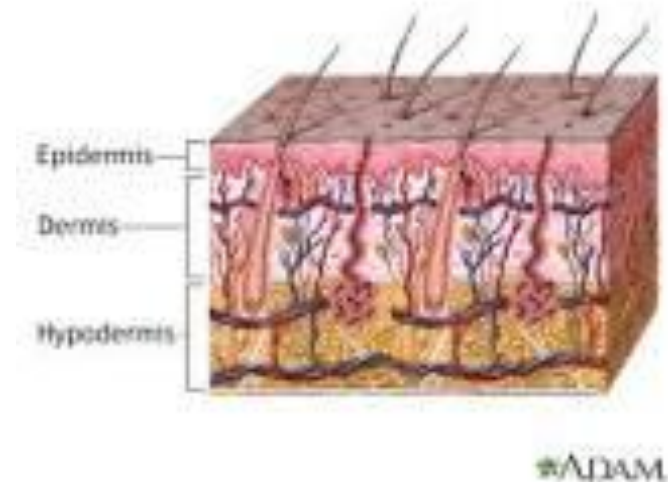




# The Skin

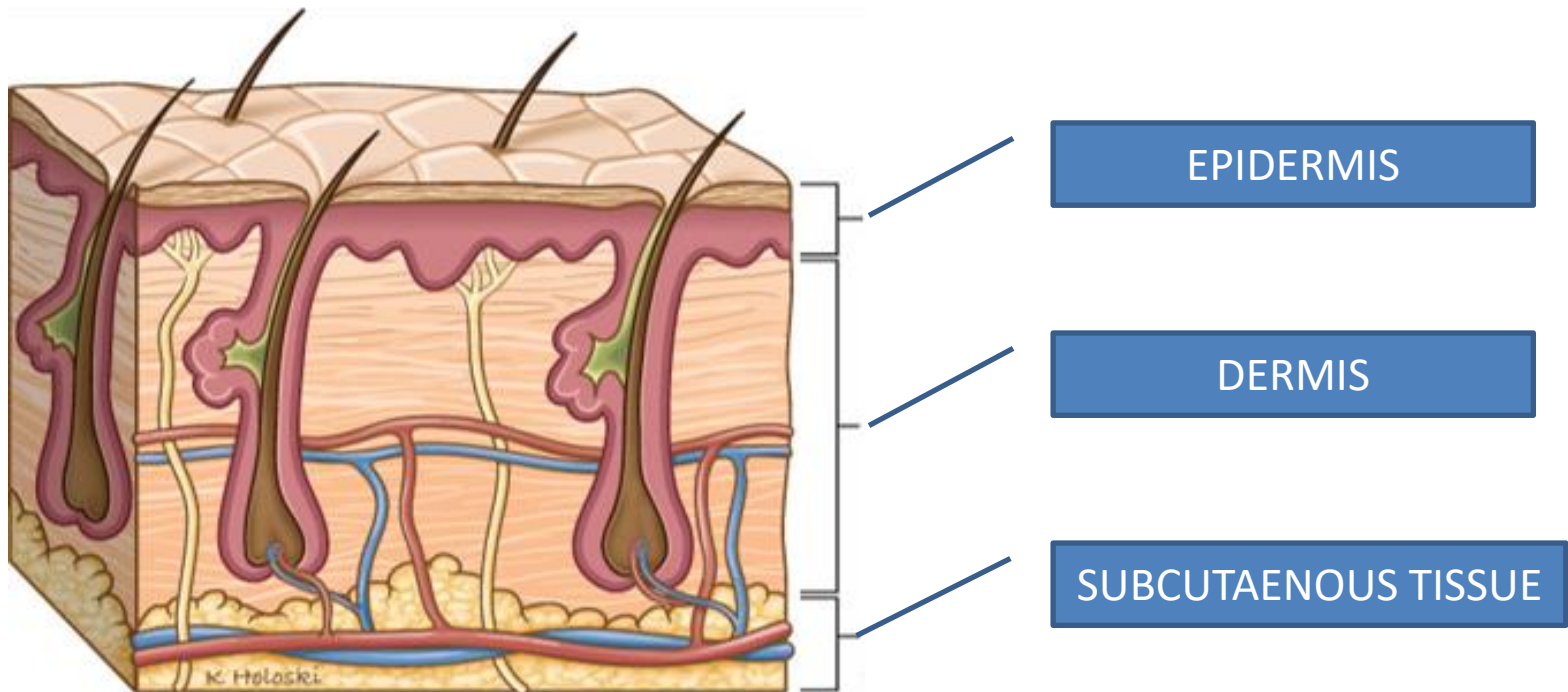
Else Randall Guntert, Tissue Viability Nurse  
Community Tissue Viability Team

# Skin Factoids

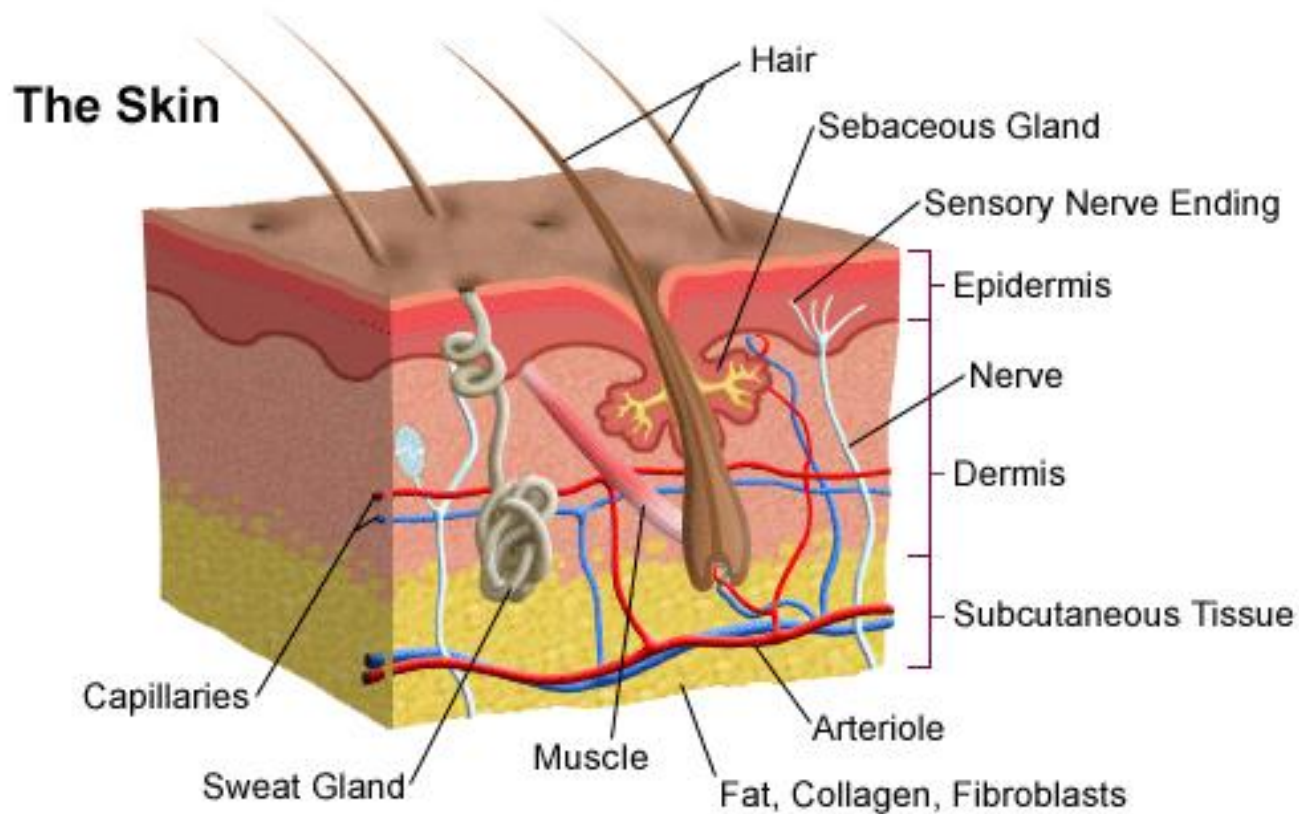


- Largest Organ in the Body
- Accounts for 15% of overall body weight
- Receives 1/3 of the bodies blood circulation.
- Total surface area: 1.5-2.0 meters squared

# Skin – 3 layers



# Skin Structure



# Primary Functions



*The primary function of healthy skin is to act as a barrier against chemical, physical and mechanical hazards, and invasion from micro-organisms*

(Proksch et al, 2008).



# Function



Protection



Barrier to infection



Sensory Perception



Temperature Regulation

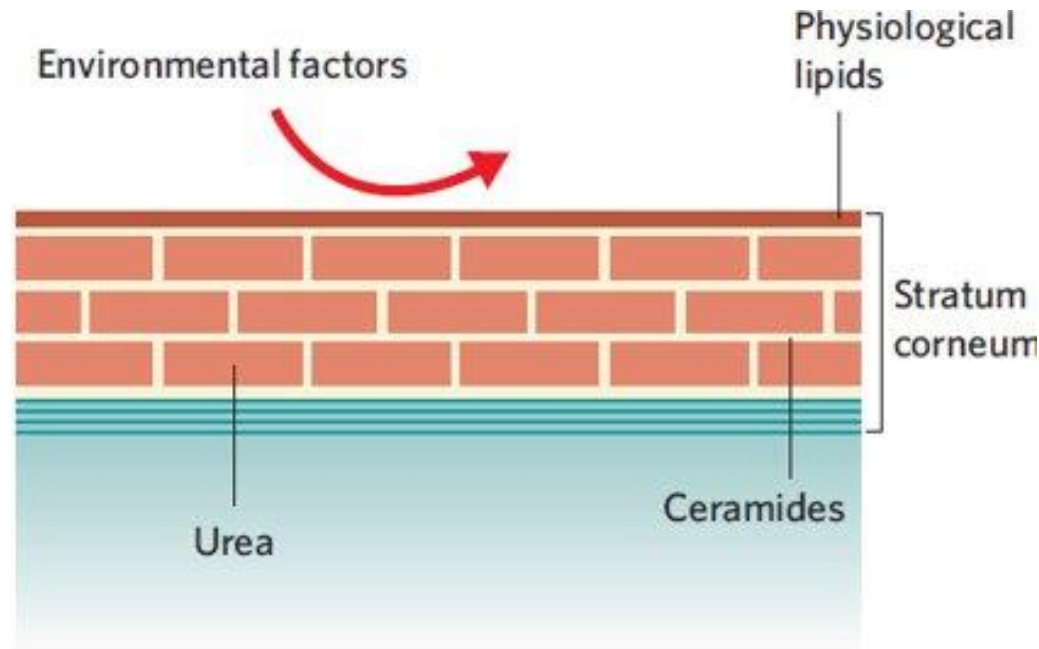


Production of Vit D

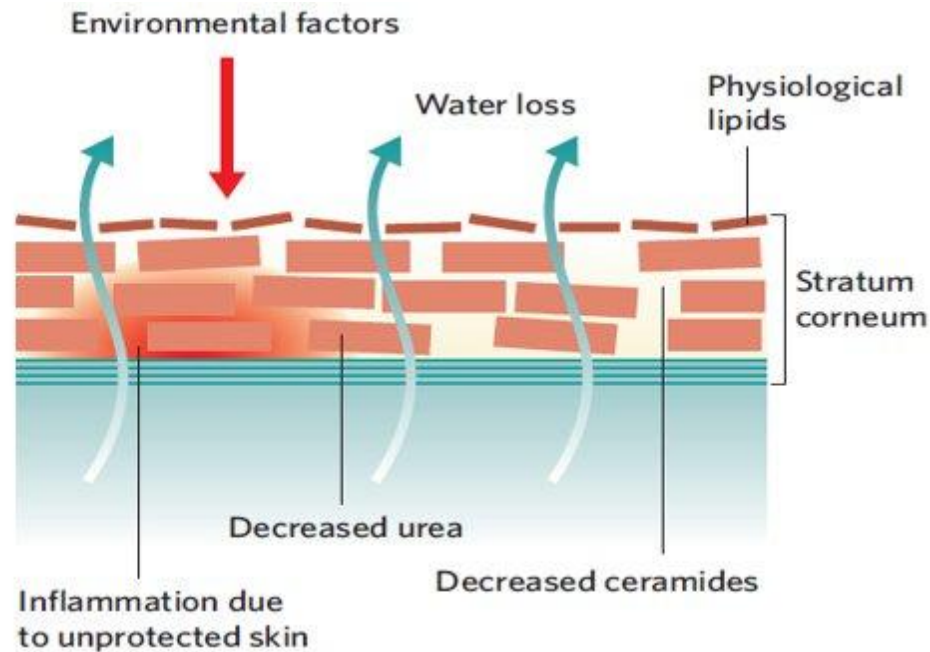


Communication: Physical appearance/  
touch

# Barrier Function



# Impaired Barrier

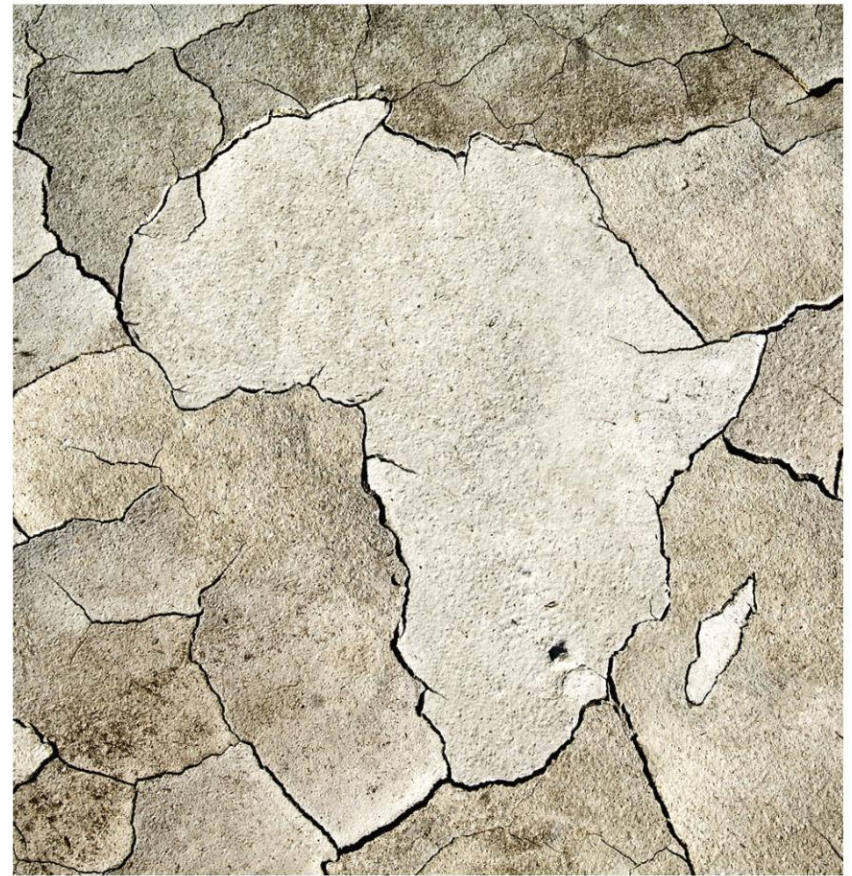




# Impaired Skin Integrity

*Impaired skin integrity is defined as an 'altered epidermis and/or dermis... destruction of skin layers (dermis) and disruption of skin surface (epidermis)'.*

(Wounds UK, 2018)



# Changes in the Skin Barrier

Ageing

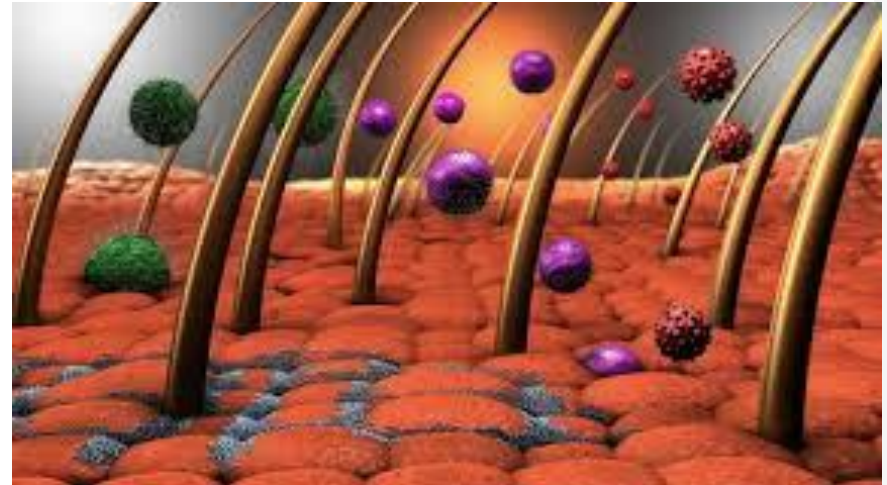
Ultraviolet  
Radiation  
Damage

Genetic  
Diseases

Inflammation  
and Infection

Irritants

Mechanical  
Injury



# Ageing Skin



Flattening out of dermo-epidermal junction = more fragile and more susceptible to shearing forces

Stretching of the skin and damage to blood vessels

Estimated 20% reduction in the thickness of the dermis, which results in the paper-thin appearance

Thinning of the dermis sees a reduction in the blood vessels, nerve endings and collagen, leading to decreased sensation, temperature control, rigidity & moisture retention

Reduction in sweat glands and in sebum production can make it difficult to keep the skin well hydrated and can lead to dryness and itching

Reduced ability to detect temperature changes readily, exposing to the cold and hypothermia.

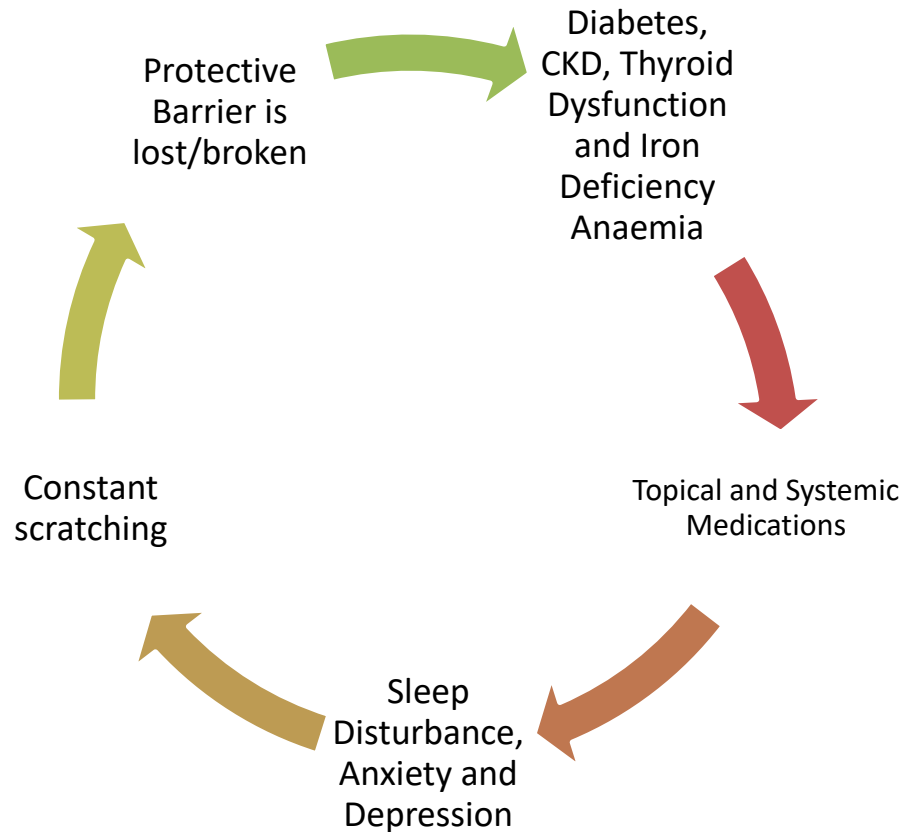
# Xerosis/Pruritis

- Xerosis – dry skin
- Pruritis – itchy skin





# The Pruritis Cycle



# Role of Emollients



Emollients help to restore the barrier function of the skin, increase the level of hydration and reduce itching.

Oily layer helps repel irritants, bacteria and keep water in - reducing transepidermal water loss (TEWL)

There are many formulations ranging from those less greasy with higher water content to greasier emollients high in lipids.

Urea – for older skin – replaces natural moisturising factors – ‘sultanas to grapes’



# Emollient Therapy



- Epimax ointment - First line. Provides a lipid layer on the skin to prevent water evaporation. Can be used as a soap substitute and a leave on emollient. When used as a soap substitute it aids in the removal of skin plaques by gentle washing with a flannel. Usually too greasy to be used under hosiery. Apply up to twice a day. Suitable for children over the age of one month.
- Epimax cream - May be preferred if Epimax ointment is too greasy or occlusive. More suitable under compression hosiery. Cream base which forms an occlusive film, although less thick than an ointment, which reduces transepidermal water loss. Requires more frequent application - up to 4 times a day. Suitable for children over the age of one month.

# Emollient Therapy – Continued

- Imuderm cream - Step-up emollient if Epimax ointment/cream are inadequate. Contains urea 5% and glycerine 5% which help to replace natural moisturising factors in the skin barrier that decline with age. Apply twice daily. Not to be used on broken skin, as the urea can sting.
- Balneum Intensiv cream - Contains 5% urea but also 0.1% ceramide. Ceramide is a lipid lamella mimicking agent which, along with the urea, helps repair the skin's barrier. Step-up emollient from Imuderm indicated for aging, dry, problem skin including varicose eczema and hyperkeratosis. Can be applied daily. Not to be used on broken skin, as the urea can sting. Suitable for children over the age of 12 years.
- Hydromol Intensive – Step-up emollient from Imuderm or Balneum, for very problematic dry skin conditions such as hard, stubborn keratotic plaques. Contains 10% urea which is a keratin softener, and white soft paraffin, which forms an occlusive layer over the skin preventing evaporation of water. Can sting due to the urea content. Apply thinly twice daily. Can take 2-4 weeks to take effect. Suitable for 1 month old and above.

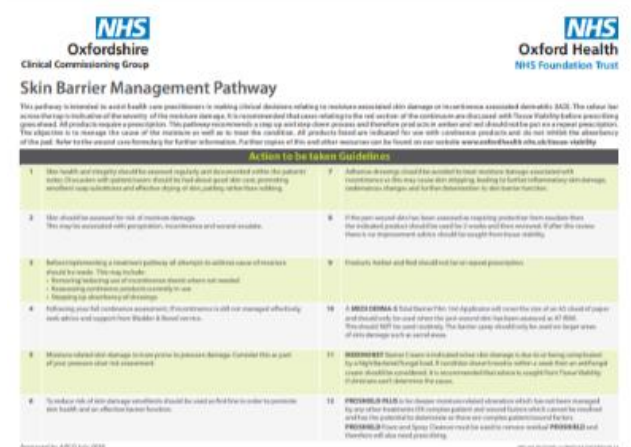
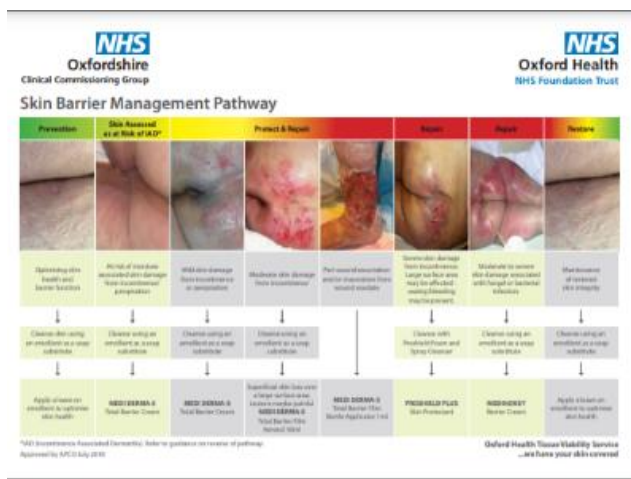
# Gold Standard Skin Care

Damage can be prevented and managed by implementing good skin care.

Avoid soaps which effect the natural pH of the skin and effectively 'strip' it.

Wash using an emollient as a soap substitute (Epimax) and then apply an emollient after drying.

If there is risk/presence of moisture associated damage, ensure a barrier is being applied. Refer to the barrier pathway for guidance.



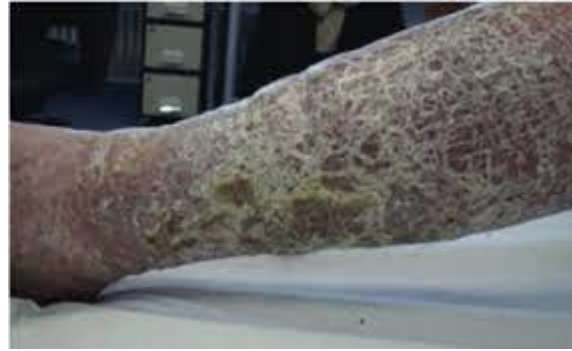
# Risks to Skin Integrity

- Rash
- Dermatitis/Eczema
- Psoriasis
- Pruritis
- Cellulitis
- Malignant melanoma, basal cell carcinoma, squamous cell carcinoma and secondary deposits
- Lipodermatosclerosis





# Practice Threats



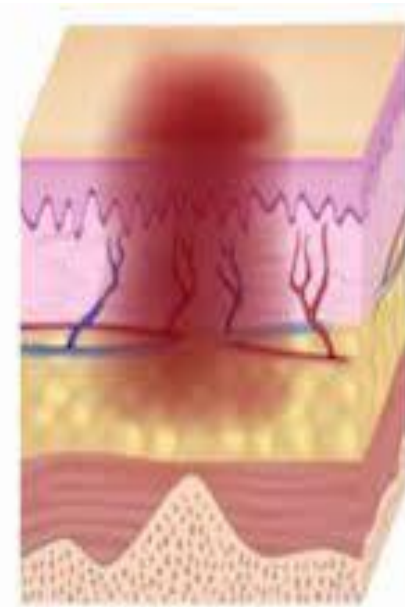
# SCALE – Skin Changes at Life End





# How Do Wounds Heal?

The normal healing process is a well orchestrated, complex and interlinked series of 4 well recognised overlapping phases



## 4 Phases of Healing:

1. Vascular Response (or coagulation)
2. Inflammation
3. Proliferation
4. Maturation/Remodelling



# Phases of Healing Game

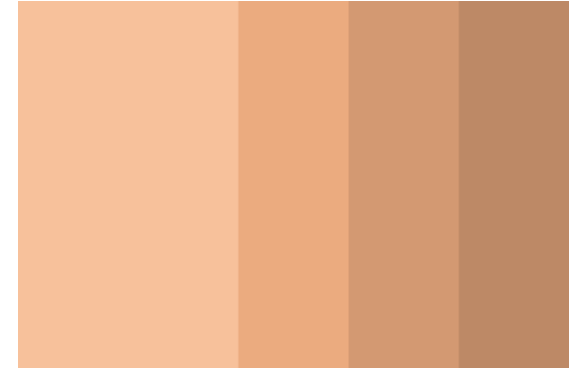


# Skin Assessment: Prevention - Early Intervention - Treatment

- Assessment & reassessment
- History
- Intervention
- Involve other services
- Documentation
- Treatment
- Education



# Skin Tone



- The senses, particularly touch, should be considered as part of the skin assessment
- Look – colour changes, inflammation/swelling
- Feel – skin texture, temperature
- Consider similar anatomical locations (e.g. compare both heels)

# Erythema





# General Tips for Skin Assessment



## General tips for skin assessment

- Good lighting is needed to assess a patient's skin properly and to ensure that nothing is missed – ideally skin assessment should be carried out in bright daylight; if this is not possible, a torch or pen light can be used when necessary
- The senses should be used when assessing the skin, especially touch
- It is vital to listen to the patient's perspective, and to understand their choices, needs and preferences relating to their care
- Ask about any history of skin changes and how they presented
- Awareness of skin tone should be incorporated into existing assessment frameworks and pathways.

# Summary

- Early recognition of those at risk of developing skin breakdown
- All patients should have a thorough holistic skin assessment
- Preventions should be implemented to reduce risk before injury occurs
- Emollient therapy should be a preventative measure to protect dry and vulnerable skin
- Holistic management plans should incorporate skin care as gold standard





ANY QUESTIONS?