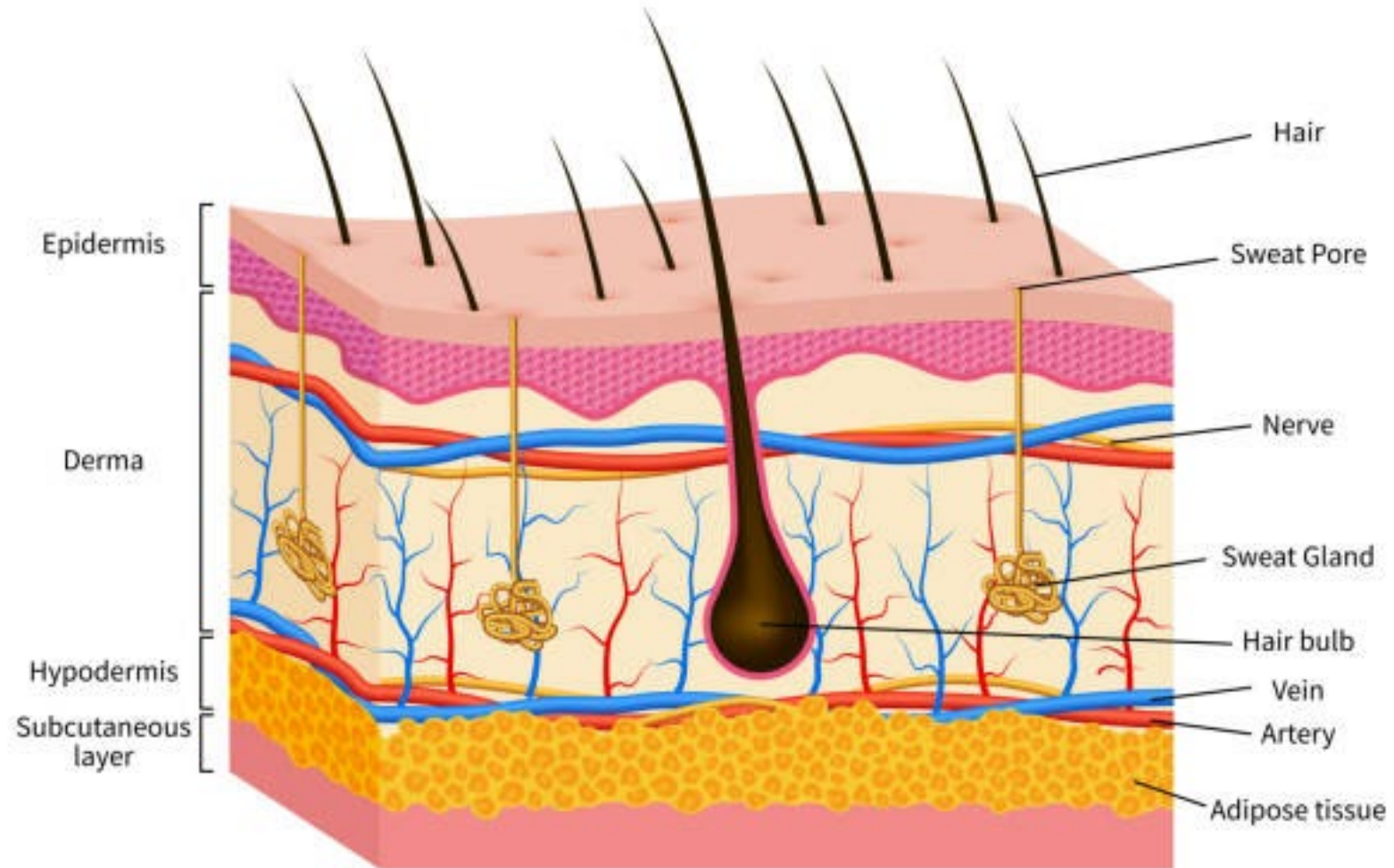




# SKIN ANATOMY



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## FACTS ABOUT THE SKIN

- The skin is the body's largest organ. It covers the entire body. It serves as a protective shield against heat, light, injury, and infection. The skin also:
  - Regulates body temperature
  - Stores water and fat
  - Is a sensory organ
  - Prevents water loss
  - Prevents entry of bacteria
  - Acts as a barrier between the organism and its environment
  - Helps to make vitamin D when exposed to the sun



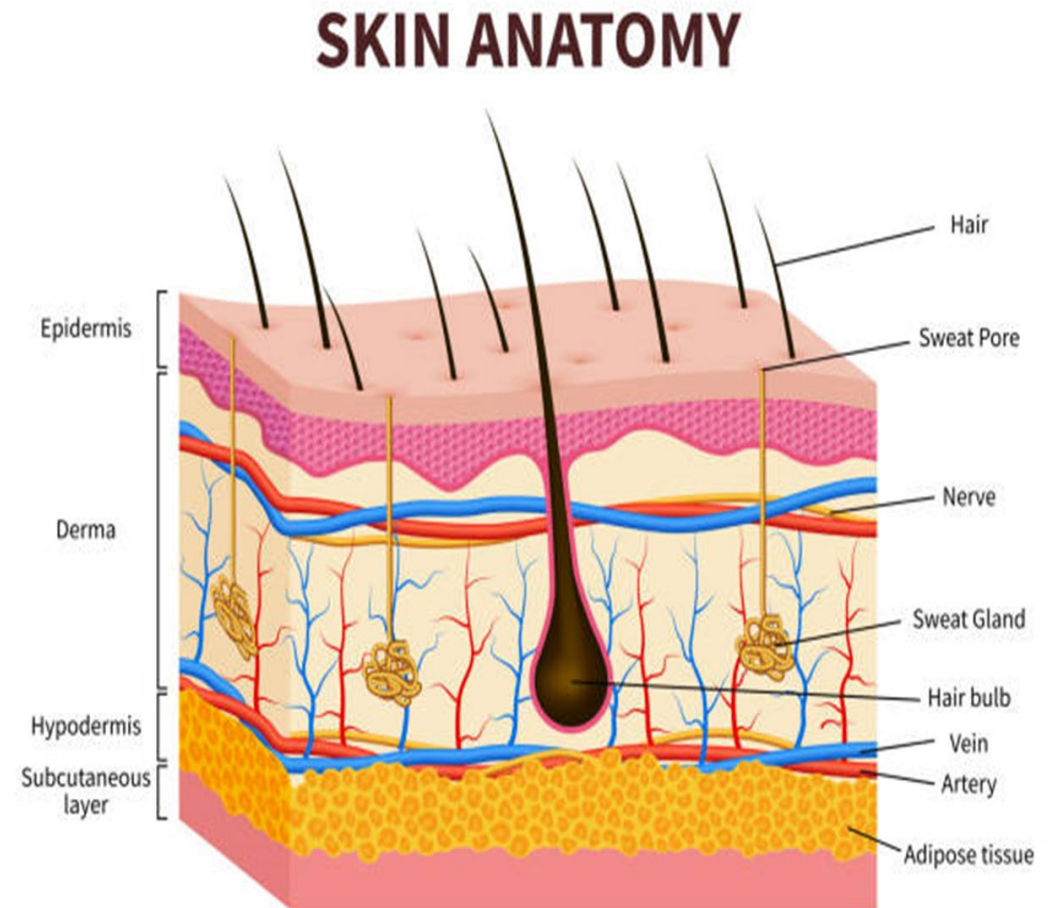


# FACTS ABOUT THE SKIN

Your skin takes on different thickness, color, and texture all over your body. For example, your head contains more hair follicles than anywhere else. But the soles of your feet have none. In addition, the soles of your feet and the palms of your hands are much thicker than skin on other areas of your body.

The skin is made up of 3 layers. Each layer has certain functions:

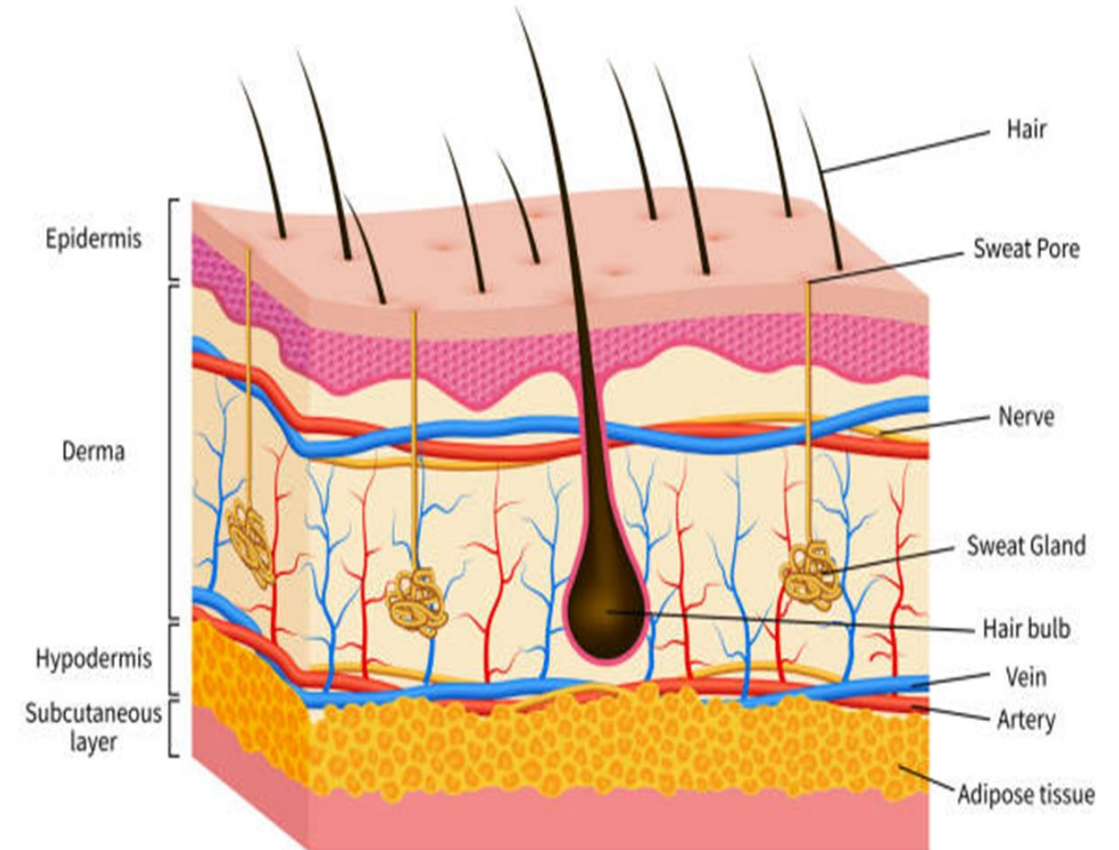
- Epidermis
- Dermis
- Subcutaneous fat layer (hypodermis)



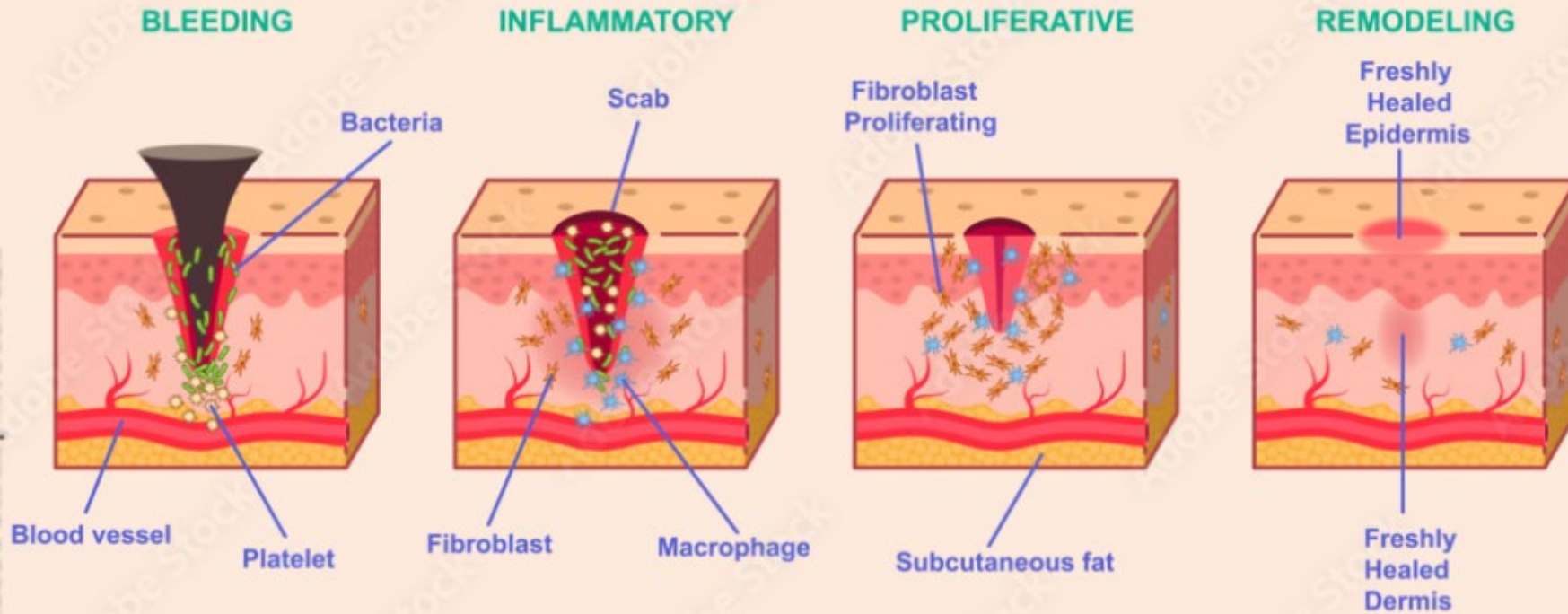
# FACTS ABOUT THE SKIN

<b>Epidermis</b>	<p>The epidermis is the thin outer layer of the skin. It consists of 3 types of cells:</p> <ul style="list-style-type: none"><li>◦ <b>Squamous cells.</b> The outermost layer is continuously shed is called the stratum corneum.</li><li>◦ <b>Basal cells.</b> Basal cells are found just under the squamous cells, at the base of the epidermis.</li><li>◦ <b>Melanocytes.</b> Melanocytes are also found at the base of the epidermis and make melanin. This gives the skin its color.</li></ul>
<b>Dermis</b>	<p>The dermis is the middle layer of the skin. The dermis contains the following:</p> <ul style="list-style-type: none"><li>◦ Blood vessels</li><li>◦ Lymph vessels</li><li>◦ Hair follicles</li><li>◦ Sweat glands</li><li>◦ Collagen bundles</li><li>◦ Fibroblasts</li><li>◦ Nerves</li><li>◦ Sebaceous glands</li></ul> <p>The dermis is held together by a protein called collagen. This layer gives skin flexibility and strength. The dermis also contains pain and touch receptors.</p>
<b>Subcutaneous fat layer</b>	<p>The subcutaneous fat layer is the deepest layer of skin. It consists of a network of collagen and fat cells. It helps conserve the body's heat and protects the body from injury by acting as a shock absorber.</p>

## SKIN ANATOMY



# WOUND HEALING



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# DEFINITIONS



## Wound

A wound is an acute disturbance by an external force

- Closed - Bruises
- Open – Involve a break in the skin's surface
- Other – Burns, surgical, and chronic



## Ulcer

An ulcer is defined as a gradual disturbance of tissues by an underlying etiology/pathology

# TYPES OF WOUNDS

- **Burns (1<sup>st</sup> and 2<sup>nd</sup> Degree)**

- **Surgical Wounds**

- A surgical wound occurs after any type of operation that involves making a cut into your skin, including minor procedures carried out by physicians/NPPs.
- The position and size of the cut the provider makes will depend on the type of operation and surgery you have. For example, if you have keyhole (laparoscopic) surgery, your surgeon will make small cuts to your skin, which will be closed with stitches, clips or skin glue to bring the skin edges together to heal.

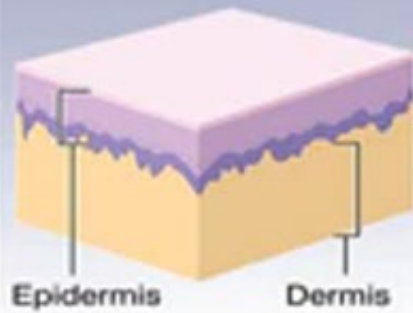
- **Traumatic Wounds**

- Traumatic wounds are typically defined as cuts, lacerations or puncture wounds which have caused damage to both the skin and underlying tissues. Acute wounds, cut wounds and penetrating wounds are the three categories that make up traumatic wounds. An acute wound occurs when the skin has been ripped or torn and has a jagged appearance. An acute wound typically contains foreign bodies such as gravel, glass, metal or sand.
- With acute traumatic wounds, it is not uncommon for layers of tissue to be easily visible along the inside of the cut. A traumatic cut wound is the result of something sharp penetrating the skin and the underlying subcutaneous tissues. Penetrating wounds, however, are considered the deepest and most severe of all traumatic wounds, because they often occur as the result of being stabbed or sustaining a gunshot wound.

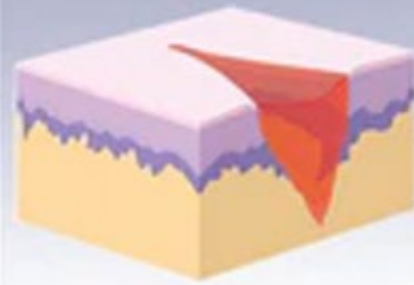


# Wound Types Illustration

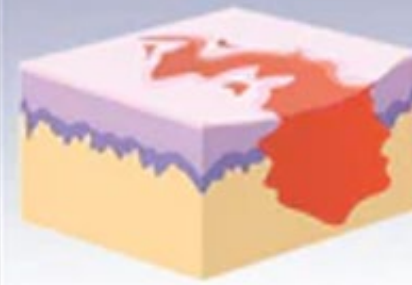
Normal skin



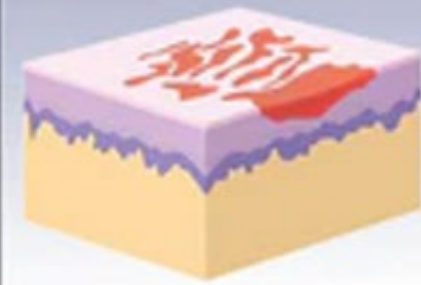
Incision wound



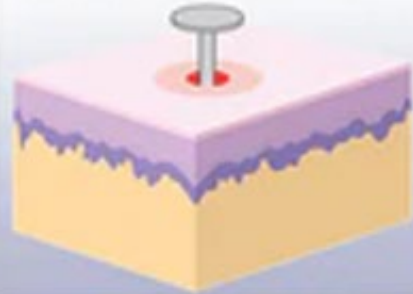
Laceration wound



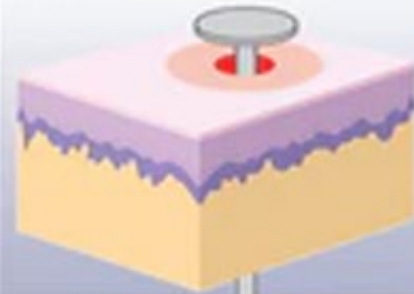
Abrasion



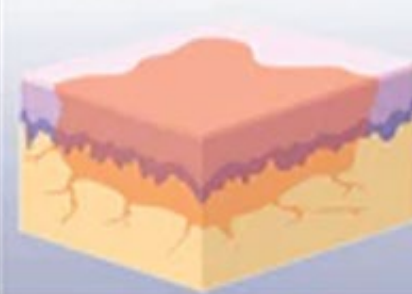
Puncture wound



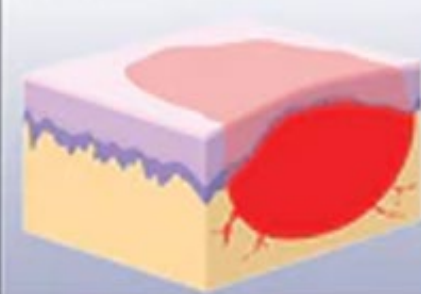
Penetration wound



Contusion



Hematoma



# TYPES OF ULCERS

## Diabetic Foot Ulcers

- Neuropathy can contribute to the formation of a diabetic foot ulcer. If left untreated, diabetic foot ulcers can progress to severe infection or gangrene that might require amputation. In fact, diabetic ulcers are one of the most common causes of foot amputation.
- As such, it is important for patients with diabetes to be fully aware of foot-related problems and the potential for long-term disability. The good news is that through good foot care, and by regulating blood glucose levels, diabetics can decrease the chance of developing diabetic foot ulcers.

## Pressure Ulcers

- A pressure ulcer, also known as a bedsore or decubitus ulcer, is a wound of the skin caused by prolonged, unrelieved pressure to that area. Pressure ulcers occur most frequently around bony prominences such as the tailbone, hips, heels, ankles and elbows.

## Venous Stasis Ulcers

- A venous stasis ulcer, also known as a venous insufficiency ulcer, means that there is an impairment or lack of venous blood flow to an area of the skin. These ulcers occur in the lower legs, between the knee and the ankle. The most common place for them to develop is around the ankle.
- In most cases, there is a change in the color of the skin before it actually opens (ulcerates), like a red spot or a black and blue bruising. Due to the lack of circulation, which provides the essential nutrients for the skin to survive, the skin begins to die in this spot and opens (ulcerates.) These wounds are typically shallow (do not get very deep.) They are often irregular in shape and tend to elongate (like a run in stockings.) Left untreated, they do not get better and will get worse.

## Vascular Disease Ulcers

- Ulcers of the lower extremities, particularly in individuals older than 65 years, are a common cause for visits to the podiatrist, wound care specialist, primary care physician, vascular surgeon, or dermatologist.
- The great majority of vascular ulcers are chronic or recurrent. They cause a considerable amount of morbidity among patients with peripheral vascular disease, including work incapacity. The care of chronic vascular ulcers places a significant burden on the patient and the health care system. Additionally, these nonhealing ulcers place the patient at much higher risk for lower extremity amputation.



# DIABETIC FOOT ULCERS

- Most common diabetic complications
  - Neuropathy – E--.4-
  - Foot Ulcers – E--.621 (use additional code to identify site of ulcer (L97.4-, L97.5-))

# DIABETIC FOOT ULCER CODING

- \*E8.- Diabetes Mellitus due to underlying conditions
- \*E9.- Drug or chemical induced diabetes mellitus
- E10.- Type 1 diabetes mellitus
- \*E11.- Type 2 diabetes mellitus
- \*E13.- Other specified diabetes mellitus (LADA, MODY)

*\*Note: Code also the type of medication used to treat the DM.*



# DIABETIC COMPLICATIONS

- .0 DM with hyperosmolarity
- .2 DM with kidney complications
- .3 DM with ophthalmic complications
- .4 DM with neurological complications
- .5 DM with circulatory complications
- .6 DM with other specified complications (code also the complication)
- .8 DM with unspecified complications
- .9 DM without complications

*Note: Code all complications that are present.*

# DIABETIC FOOT ULCERS CODING

- Code also the location of the ulcer
  - L97.1-- Thigh only
  - L97.2-- Calf
  - L97.3-- Ankle
  - L97.4-- Heel and midfoot
  - L97.5-- Other part of foot
  - L97.8-- Other part of lower leg
  - L97.9-- Unspecified part of lower leg



# DIABETIC FOOT ULCERS CODING

- Code also the severity
  - Skin only
  - Fat exposed
  - Muscle exposed
  - Bone exposed
  - Necrosis
  - Unspecified severity – recommend querying the clinician for specifics

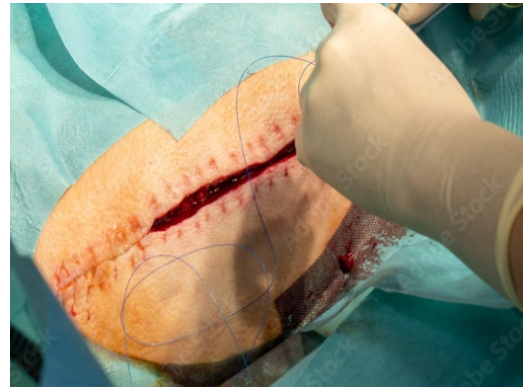
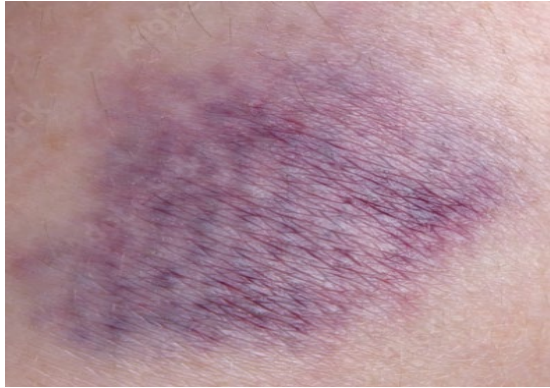
# WAGNER ULCER CLASSIFICATION SCALE

GRADE	LESION
■ 0	No open lesions; may have deformity or cellulitis
■ 1	Superficial diabetic ulcer (partial or full thickness)
■ 2	Ulcer extension to ligament, tendon, joint capsule, or deep fascia without abscess or osteomyelitis
■ 3	Deep ulcer with abscess, osteomyelitis, or joint sepsis
■ 4	Gangrene localized to portion of forefoot or heel
■ 5	Extensive gangrenous involvement of the entire foot

*Note: Grade 1-3 ulcers are termed non-gangrenous ulcers, and Grade 4 and 5 ulcers are termed gangrenous ulcers*



## WOUNDS



## ULCERS



# VENOUS LEG ULCERS

- Caused by impaired/compromised circulation
- First code the underlying etiology, then the stage
  - Chronic venous hypertension with ulceration (I87.31-)
  - Chronic venous hypertension with ulcer and inflammation (I87.33-)
  - Postphlebotic Syndrome with ulcer (I87.01-)
  - Postphlebotic Syndrome with ulcer and inflammation (I87.03-)

Note: Use additional code to specify location and severity (L97.-)



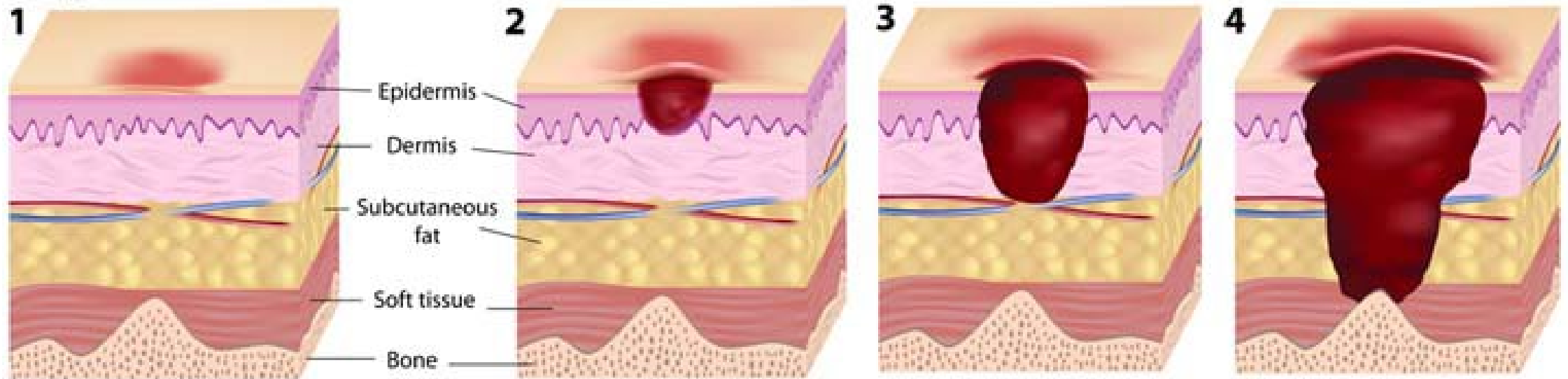


# PRESSURE ULCERS

- Per ICD-10-CM Guidelines I.C.12.a – codes in category L89, identify the site and stage of the pressure ulcer.
  - Assign as many codes from L89 as needed to identify all the pressure ulcers the patient has, if applicable.
  - Pressure ulcers classified as healing are still coded with the same stage as noted on initial presentation.

# PRESSURE ULCERS

## Stages of Pressure Sores





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# TREATMENT METHODS

- Wound Cleansing/Dressing Changes
- Compression
- Total Contact Casting
- Paring or Cutting
- Negative Pressure Wound Therapy
- MIST Therapy
- Excision (Pressure Ulcers)
- Debridement
- Grafts/Flaps
- Preparation of Site
- Skin Replacement Surgery
- Hyperbaric Oxygen Therapy

# WOUND CLEANSING/DRESSING CHANGES

## Physician Office (Place of Service 11)

- When seen by nurse, use CPT 99211
- When seen by physician/NPP, use the appropriate EM level per documentation



## Hospital Outpatient Department (Place of Service 19 or 22)

- Code the appropriate EM level for the physician/NPP for Medicare and commercial payers.
- Code the AIR for Medicare and Medicaid.
- Code the appropriate level of facility EM for commercial payers

# COMPRESSION

- Used in the treatment of venous leg ulcer or other peripheral disease where edema is problematic.
- CPT 29581 Application of multi-layer compression system; leg, below knee, ankle and foot.



# TOTAL CONTACT CASTING

- CPT 29445 Application of rigid total contact leg cast
- No NCD, or LCD for total contact casting
- Documentation tips
  - Anatomic site
  - Description of conditions/ulcers
  - Application number
    - If a subsequent application, document status - worsening, static, or improving
  - Product(s) used, lot number if applicable





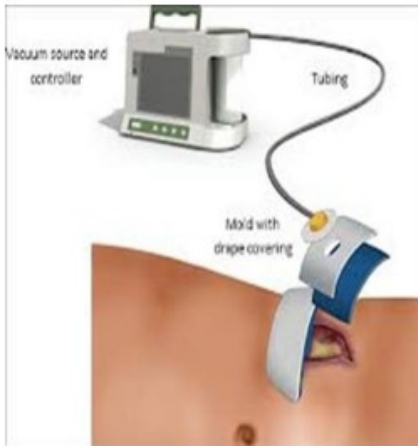
# PARING AND CUTTING



- CPT 11055 Paring or cutting of benign hyperkeratotic lesions (e.g., corn or callus); single lesion
- CPT 11056 Paring or cutting of benign hyperkeratotic lesions (e.g., corn or callus); 2-4 lesions
- CPT 11057 Paring or cutting of benign hyperkeratotic lesions (e.g., corn or callus); more than 4 lesions

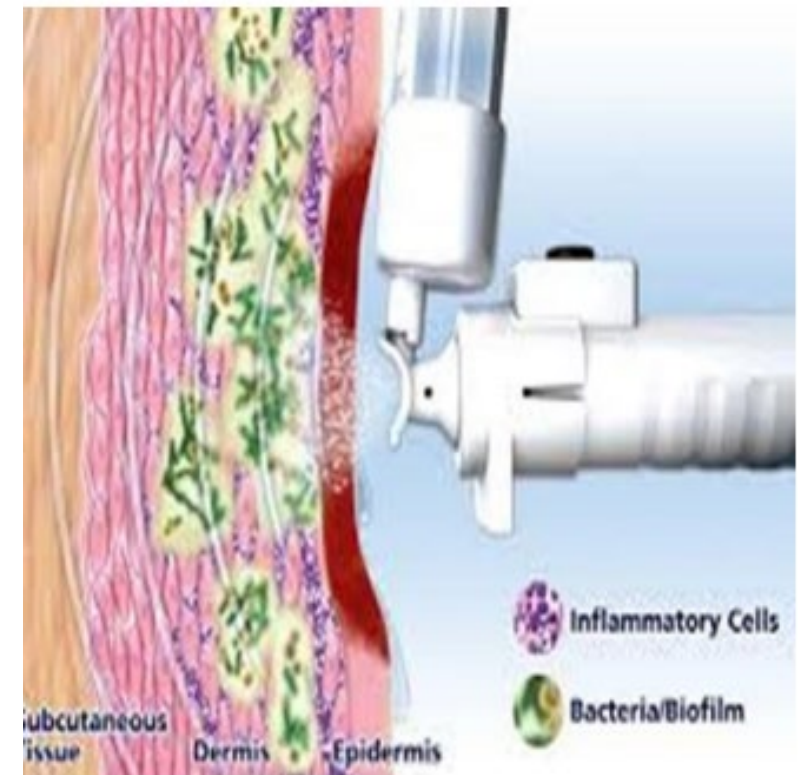
# NEGATIVE PRESSURE WOUND THERAPY

- CPT 97605 DME, total wound surface area less than or equal to 50 sq cm
- CPT 97606 DME, total wound surface area greater than 50 sq cm
- CPT 97675 Non-DME, disposable, total wound surface area less than or equal to 50 sq cm
- CPT 97608 Non-DME, disposable, total wound surface area greater than 50 sq cm



# MIST THERAPY

- CPT 97610 – Low frequency, non-contact, non-thermal ultrasound, including topical application(s), when performed, wound assessment, and instruction(s) for ongoing care, per day.
- There should be documented improvements in the wound(s) evident after six MIST treatments. Improvements include documented reduction in pain, necrotic tissue, or wound size or improved granulation tissue.
  - Continuing MIST treatments for wounds demonstrating no improvement after six treatments is considered not reasonable and necessary.
- No more than 18 services of low frequency, noncontact, non-thermal ultrasound (MIST Therapy) within a six-week period will be considered reasonable and necessary.





# DEBRIDEMENT

- Debridement is defined as the removal of foreign material and/or devitalized or contaminated tissue from or adjacent to a traumatic or infected wound until surrounding healthy tissue is exposed.
- The mere removal of secretions, cleansing of a wound, does not represent a debridement service



# DEBRIDEMENT DOCUMENTATION REQUIREMENTS

- At least one of the following conditions must be present and documented:
  - Pressure Injury, Stage II, III, IV
  - Venous insufficiency ulcers
  - Arterial insufficiency ulcers including diabetic lower extremity ulcers
  - Dehisced wounds
  - Wounds with exposed hardware
  - Neuropathic ulcers
  - Neuro-ischemic ulcers
  - Diabetic foot ulcer(s)
  - Complications of surgically created or traumatic wound where accelerated granulation therapy is necessary which cannot be achieved by other available topical wound treatment.



## DEBRIDEMENT DOCUMENTATION REQUIREMENTS (CON'T)

- Should deep tissue pressure injury or Stage II injury progress to unstageable, Stage III or Stage IV requiring debridement, the documentation supporting this must be included in the medical record.
- Evidence of improvement includes measurable changes (decrease) of some of the following:
  - Drainage (color, amount, consistency)
  - Inflammation
  - Swelling
  - Pain
  - Wound dimensions (diameter, depth, tunneling)
  - Necrotic tissue/slough

# DEBRIDEMENT DOCUMENTATION REQUIREMENTS (CON'T)

- Documentation by the wound care provider should always include:
  - Informed (written) consent
  - Appearance of the ulcer or wound
  - Anesthesia used (if none was use, why not?)
  - Instrumentation used (must be cutting, surgical instrument)
  - Type of tissue debrided, removed, cut away, excised
  - Bleeding, and its control
  - Dressing used
  - Patient tolerance to the procedure
  - Discharge instructions



# SELECTIVE VS NON-SELECTIVE DEBRIDEMENT

## Selective Debridement

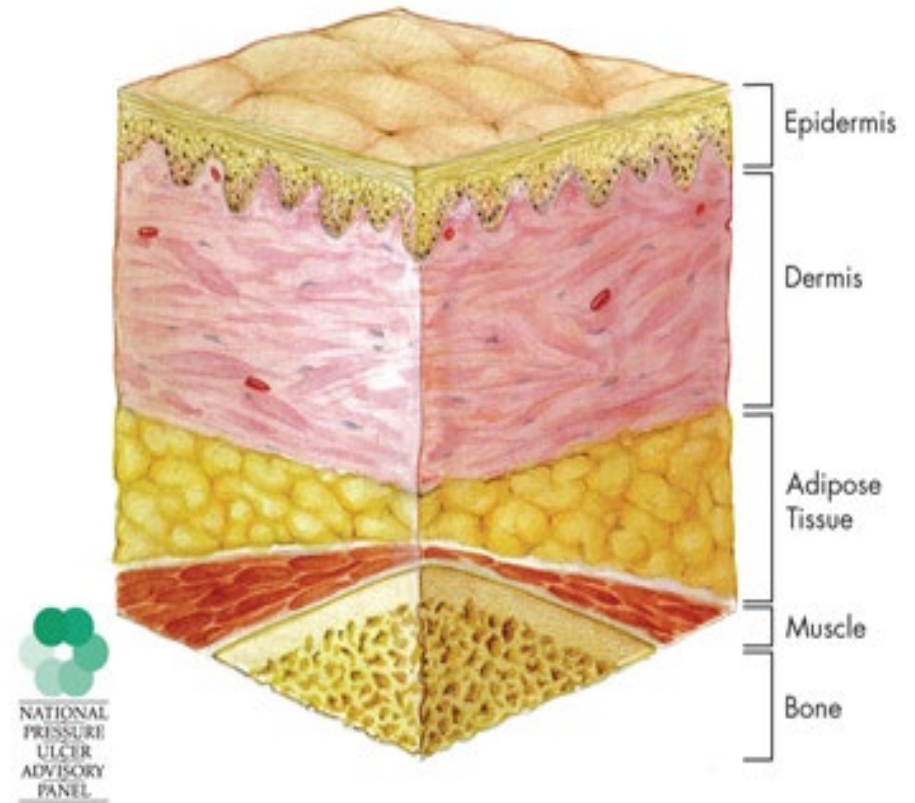
- Selective debridement refers to the removal of specific, targeted areas of devitalized or necrotic tissue from a wound along the margin of viable tissue. Occasional bleeding and pain may occur. The routine application of topical or local anesthetic does not active wound care management to surgical debridement. Removal of necrotic tissue by sharp dissection includes scissors, scalpel, and forceps and selective removal of necrotic tissue by high-pressure water jet. Selective debridement should only be done under the specific order of a physician/NPP.

## Non-Selective Debridement

- Removal of devitalized tissue from wound(s), without anesthesia, includes wet to dry dressings, enzymatic, abrasion, and larval therapy,

# DEBRIDEMENT CODING

- If a physician/NPP performs debridement on a day other than the wound closure procedure, then s/he may bill for the debridement.
- For extensive debridement of soft tissue and/or bone, not associated with open fracture(s) and/or dislocation(s) resulting from penetrating and/or blunt trauma:
  - Epidermis and Dermis only – 97597-97598
    - Non-selective debridement - 97602
  - Subcutaneous tissue – 11042, +11045
  - Muscle/fascia – 11043, +11046
  - Bone – 11044, +11047
  - Documentation must include the depth of debridement as well as the amount of tissue removed in square centimeters.
- For extensive debridement of subcutaneous tissue, muscle fascia, muscle, and/or bone associated with open fracture(s) and/or dislocation(s) - 11010 – 11012.





## EVALUATION AND MANAGEMENT WITH DEBRIDEMENT

- Patients who have chronic wounds may frequently have underlying medical conditions that require concomitant management to bring about wound closure. In addition, patients may require education, other services, an coordination of care both in the pre-operative and postoperative phases of the debridement procedure. An EM service provided and documented on the same day as a debridement service may be covered only when the documentation clearly establishes the service as a “separately identifiable service that was reasonable and necessary, as well as distinct from the debridement service(s) provided.

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## GRAFTS AND FLAPS

- Preparation of Site Documentation
  - Easily mistaken for debridement
  - Verbiage is key
  - Detailed documentation of wound description and removal of tissue is imperative

# GRAFTS/FLAPS

## ■ Preparation of Surgical Site CPT codes

- 15002 - Surgical preparation or creation of a recipient site by excision of open wounds, burn eschar, or scar (including subcutaneous tissues), or incisional release of scar contracture, trunk, arms, legs; first 100 sq cm or 1% of body area of infants and children
- +15003 - ;each additional 100 sq cm, or part thereof, or each additional 1% of body area of infants and children
- 15004 - Surgical preparation or creation of recipient site by excision of open wounds, burn eschar, or scar (including subcutaneous tissues), or incisional release of scar contracture, face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet and/or multiple digits; first 100 sq cm or 1% of body area of infants and children
- +15005 - ;each additional 100 sq cm, or part thereof, or each additional 1% of body area of infants and children

# SKIN REPLACEMENT SURGERY

- Autografts/tissue cultured autografts

- Autografts – include the harvest and/or application of an autologous skin graft. Repair of the donor site requiring skin graft or local flaps is reported separately
- Removal of current graft and/or simple cleansing of the wound is included, when performed
- Select the appropriate CPT code from 15040 – 15261 based on:
  - Type of autograft
  - Location of defect
  - Size of defect

- Skin substitute grafts

- Include non-autologous human skin (dermal or epidermal, cellular and acellular) grafts (e.g., homografts, allografts), nonhuman skin substitute grafts (i.e., xenografts), and biological products that form a sheet scaffolding for skin growth.
- Removal of current graft and/or simple cleansing of the wound is included, when performed
- Select the appropriate skin substitute application CPT code from 15271 – 15278 based on:
  - Location of defect
  - Size of defect



# GRAFTS/FLAPS

## Graft Product Codes

### HCPCS II

- Q4100
- Q4106
- Q4112
- Q4145
- Q4181
- Q4198
- Q4237
- Q4255

### DESCRIPTION

Skin Substitute, NOS

Dermagraft, per sq cm

Cymetra, injectable, 1cc

Epifix, injectable, 1mg

Amnio wound, per sq cm

Genesis amniotic membrane, per sq cm

Cryo-cord, per sq cm

Reguard, for topical use only, per sq cm



# DOCUMENTATION FOR SKIN REPLACEMENT SURGERY

- The documentation must support that the service was performed and must be included in the patient's medical record. This information is normally found in the history and physical, office/progress notes, hospital notes, and/or procedure report.
- The medical record must clearly show that the criteria listed under the Covered Indications and Limitations sections have been met, as well as the appropriate diagnosis and response to treatment.
- The documentation must support the need for skin substitute application and the product used.
- A description of the wound(s) must be documented at baseline (prior to beginning conservative treatment) relative to size, location, stage, duration, and presence of infection, in addition to type of treatment given and response.
  - This information must be updated in the medical record throughout treatment.

## DOCUMENTATION FOR SKIN REPLACEMENT SURGERY – CON'T

- Wound description must also be documented pre and post treatment with the skin substitute graft being used.
- If obvious signs of worsening or lack of treatment response is noted, continuing treatment with the skin substitute would not be considered medically reasonable and necessary without documentation of a reasonable rationale for doing so.
- Documentation of smoking history, and that the patient has received counseling on the effects of smoking on surgical outcomes and treatment for smoking cessation (if applicable) as well as outcome of counselling must be in the medical record.

# DOCUMENTATION FOR SKIN REPLACEMENT SURGERY – CON'T

- The amount of utilized and wasted skin substitute must be clearly documented in the procedure note with the following minimum information:
  - Date, time and location of ulcer treated;
  - Name of skin substitute and how product supplied;
  - Amount of product unit used;
  - Amount of product unit discarded;
  - Reason for the wastage;
  - Manufacturer's serial/lot/batch or other unit identification number of graft material. When manufacturer does not supply unit identification, record must document such.

# HYPERBARIC OXYGEN THERAPY (HBO)

## **HBO Approved Diagnoses**

- Acute carbon monoxide intoxication
- Decompression
- Gas embolism
- Gas gangrene
- Acute traumatic peripheral ischemia
- Crush injuries and suturing of severed limbs
- Progressive necrotizing infections (necrotizing fasciitis)
- Cyanide Poisoning
- Actinomycosis
- Diabetic wounds of the lower extremities in patients who meet the following criteria
  - Type I or Type II and has a lower extremity wound that is due to DM
  - Wagner classification grade III or higher
  - Patient has failed an adequate course of standard wound therapy.



## HBO – CODING AND BILLING

- Facility
  - Medicare patients billed with HCPCS G0277 for each 30-minute interval of HBO
  - Commercial claims are billed with CPT 99183
- Physician – 99183 with 1 unit for each patient (supervision only)



## TAKE HOME SUPPLIES

- When dispensing supplies for the patient to use at home, the physician's order needs to state:
  - Type of dressing
  - Size of dressing
  - Number/Amount to used at one time
  - Frequency of the dressing change
  - Expected duration of need
- A new order is needed if there is a change in the type of dressing or quantity is increased.
- Orders need to be re-written every 90 days per Medicare.
- Nursing needs to document what was dispensed, and the quantity.



# SURGICAL DRESSINGS REFERENCE CHART

[HTTPS://MED.NORIDIANMEDICARE.COM/WEB/JDDME/DMEPOS/SURGICAL-DRESSINGS](https://med.noridianmedicare.com/web/jddme/dmepos/surgical-dressings)

Type of Dressing	Minimal Exudate	Moderate Exudate	Heavy Exudate	Usual Dressing Change
Alginate	Not Covered	Full Thickness		once daily
Collagen	Full Thickness		Not Covered	up to 7 days
Composite	Not Covered	Any		up to 3 times week
Contact Layer	Any			1 time week
Foam	Not Covered	Full Thickness		up to 3 times week
Gauze Impregnated	Any			once daily
Gauze Non-Impregnated (no border)	Any			3 times day
Gauze Non-Impregnated (border)	Any			once daily



# THANK YOU!

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