

AUSTRALIAN WOUND & SKIN ALLIANCE

Summer **20**
SCHOOL 25

A residential learning experience

14-15 February 2025

Novotel Geelong, Victoria



www.AWSAlliance.au

Summer 20 SCHOOL 25

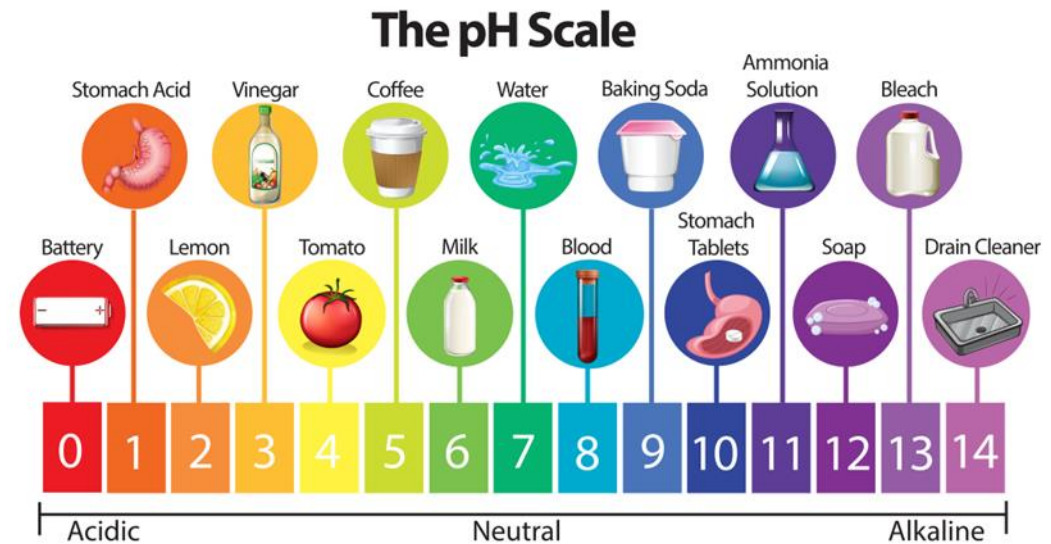
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Diagnostic investigations

Wound pH



Skin and Wound pH

Skin

- pH measures the concentration of hydrogen ions (H^+) and reflects the acidity ($pH < 7$) or alkalinity ($pH > 7$) of a solution
- Healthy skin maintains a mildly acidic pH between 4.5 and 5.5, essential for epidermal barrier function and antimicrobial defense
- Acidic condition is one of the ways to protect skin from exogenous microorganisms
 - Acidic environment is desirable for *S epidermidis* to preserve and attach to the skin
 - Unfavorable for skin pathogens such as *S. aureus* and *P. acne*
 - Most skin pathogens prefer an alkaline environment

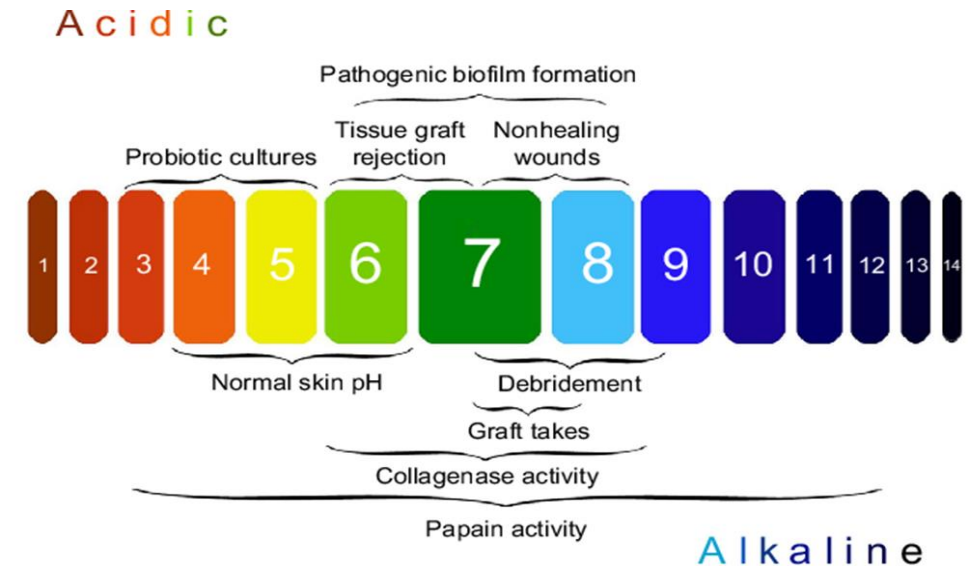
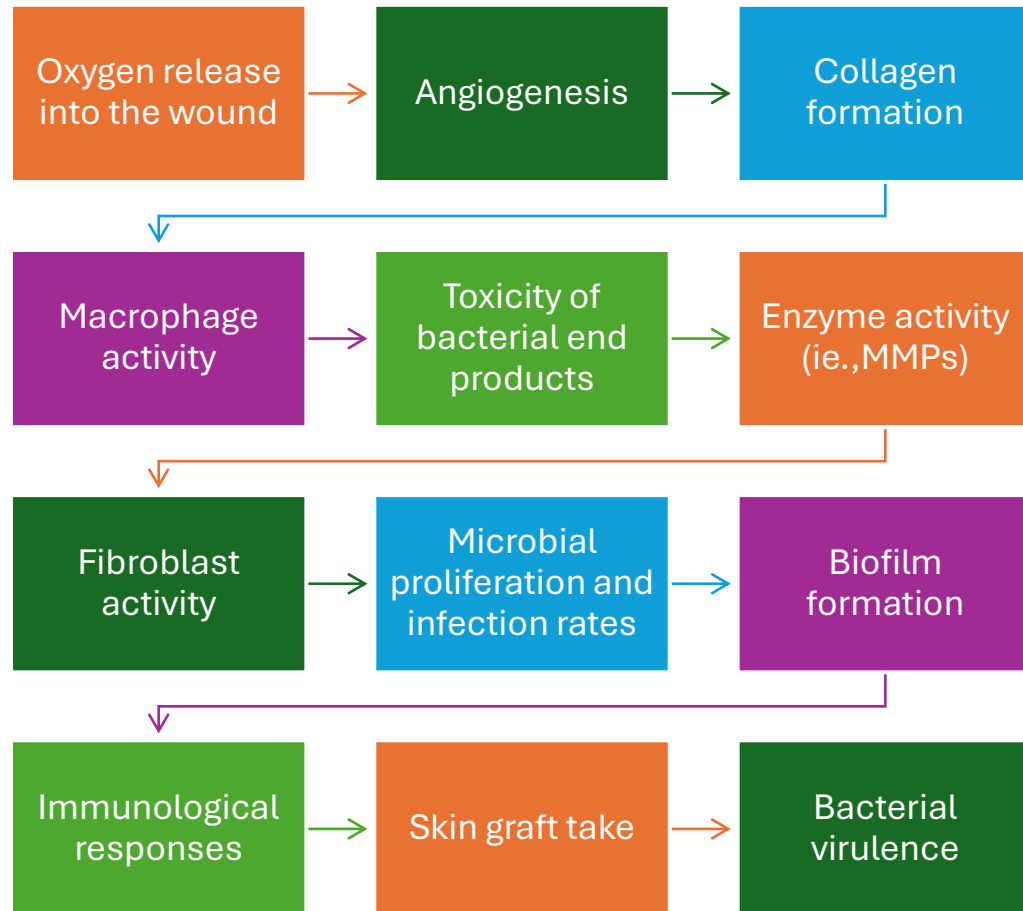
Skin and Wound pH

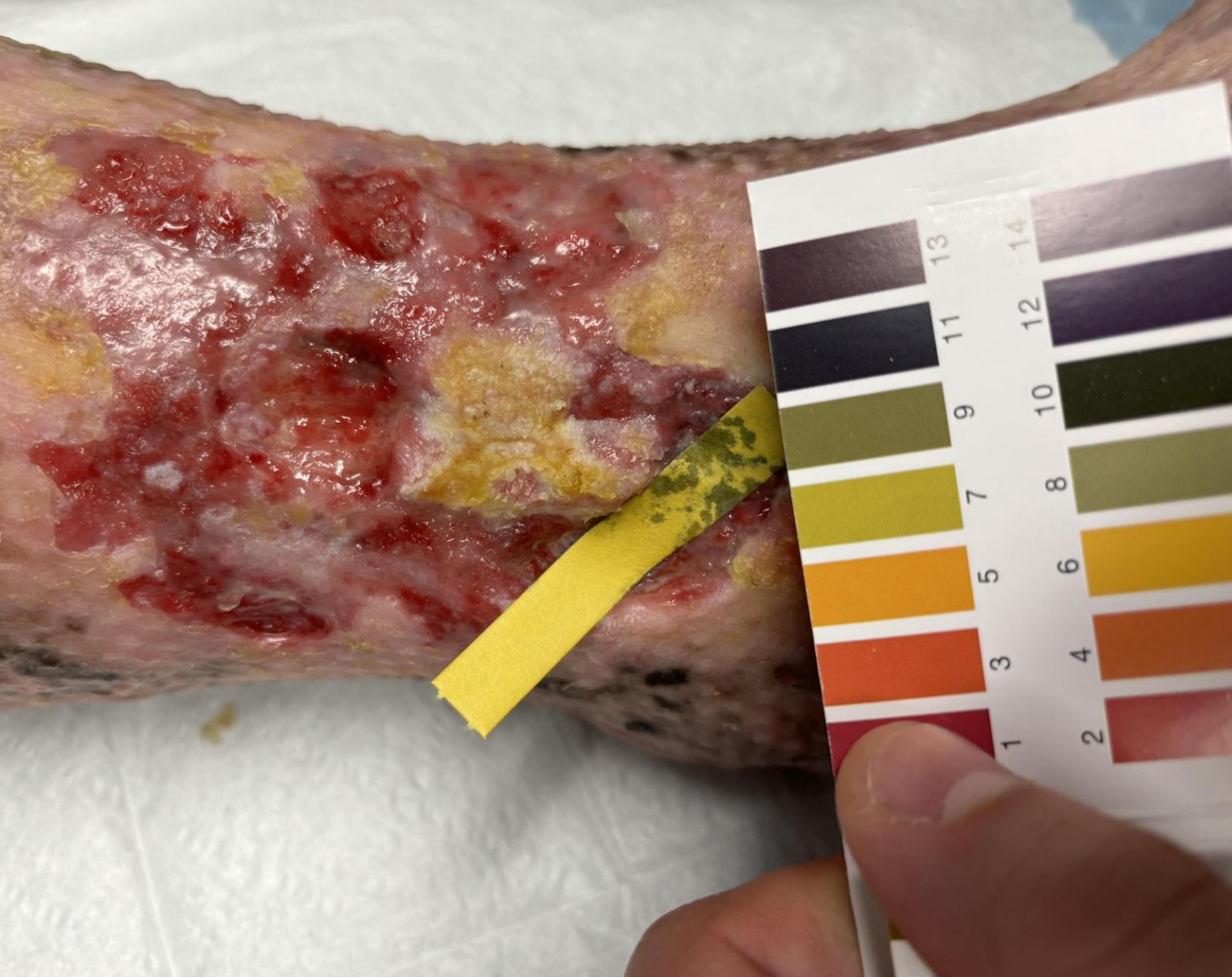
Wound

- pH of wounds is naturally more alkaline as trauma disturbs acidic milieu exposes underlying tissues with pH of 7.4
- Acute wounds are reported to have a mean pH of 7.44
- Studies report the pH of a chronic wound in a range of 7.15-8.9
- As a wound heals, physiological mechanisms begin to naturally restore an acidic milieu

Healing processes affected by changes in pH

The pH value within the wound directly and indirectly influences all biochemical reactions





Wound Healing Foundation : Wound Infection Consensus Document *In development*

- ESR, WBC, CRP ? pH
- Levine technique if wound culturing
- Tissue samples are still gold standard
- IWII WIC clinical signs and symptoms
- New table aligning IWII and ISDA