



Medications and wound healing

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Each issue, *Apple Bites* brings you a tool you can apply in your daily practice. Here are examples of medications that can affect wound healing.

Assessment and care planning for wound healing should include a thorough review of the individual's current medications to identify those

that may affect healing outcomes. Clinicians must then weigh the risks and benefits of continuing or discontinuing the medications. In some cases, the risk of discontinuing the medication outweighs the importance of wound healing, so the goal of the care plan should be adjusted to “maintain a wound” instead of “healing.” ■

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Selected reference

Guo S, DiPietro LA. Factors affecting wound healing. *J Dent Res.* 2010;89(3):219-29.

Medication

Effects on wound healing

Corticosteroids

Examples: cortisone, hydrocortisone, and prednisone

- Inhibition of epithelial proliferation
- Impairment of inflammatory response
- Incomplete granulation tissue
- Reduced wound contraction
- Possible increased risk of wound infection

High doses of nonsteroidal anti-inflammatory drugs (NSAIDs)

Examples: ibuprofen, celecoxib

- Decreased tensile strength of wound
- Reduced wound contraction
- Delayed epithelialization

Antiplatelets

Examples: aspirin, clopidogrel

- Decreased platelet adhesion and activation
- Inhibition of inflammation phase of healing
- Inhibition of epithelial proliferation of keratinocytes

Anticoagulants

Example: heparin

- Inhibition of cross linking of collagen and acceleration of its degradation

Vasoconstrictors

Examples: nicotine, cocaine, adrenaline (epinephrine), and ergotamine

- Tissue hypoxia by reducing microcirculation

Antineoplastic agents

Example: chemotherapy medications

- Delay of cell migration into wound
- Lower collagen production
- Impaired proliferation of fibroblasts
- Inhibition of contraction of wounds
- Possible increased risk of wound infection