

## Five Phases of healing of an extraction site:

1. Hemorrhage and clot formation
2. Organization of the clot by granulation tissue
3. Replacement of granulation tissue by connective tissue and epithelialization of the site
4. Replacement of the connective tissue by fibrillar bone
5. Recontouring of the alveolar bone and bone maturation

**Note: Glucocorticoids** have been shown to have the greatest effect on granulation tissue -- **they retard healing**. This is believed to be due to the fact that:

- Glucocorticoids interfere with the migration of neutrophils and mononuclear phagocytes into a site of inflammation; the phagocytic and digestive ability of macrophages is also reduced.
- Glucocorticoids inhibit formation of granulation tissue by retarding capillary and fibroblast proliferation and collagen synthesis.

The same stages that occur in normal wound healing of soft tissue injuries also occur in the repair of injured bone. However, **osteoblasts** and **osteoclasts** are also involved to repair damaged bone tissue.

Bone heals by **primary** and **secondary** intention as does soft tissue.

- **Primary intention** bone repair involves both endosteal and periosteal proliferation. This type of bone repair occurs when either the bone is incompletely fractured or a surgeon closely reapproximates the fractured ends of a bone. **Little fibrous tissue is produced with minimal callus formation.**