

## MEMBRANES

Membrane Type	Locations	Functions	Important Notes
<b>Cutaneous</b> – should be covered with microbes!	<b>SKIN</b>	Protection	Epidermis, dermis & hypodermis
<b>Mucous</b> – should be covered with microbes!	<b>GI tract</b> <b>Respiratory tract</b> <b>Urinary tract</b> <b>Reproductive tract</b> <b>Conjunctiva</b> (places that open to the OUTSIDE)	Reduce friction with mucus Fight infection Regulate immune response	Goblet cells make mucus Should NOT be sterile; flora is required for normal function Epithelium
<b>Serous</b> – should be sterile!	<b>Peritoneum</b> – encloses intestines <b>Pleura</b> – encloses lungs <b>Pericardium</b> – encloses heart (places NOT open to the OUTSIDE)	Reduce friction with serous fluid when the intestines move, when the lungs expand, and when the heart beats	Always has two layers: inner layer = <b>visceral</b> Outer layer = <b>parietal</b> Serous fluid is between the layers
<b>Synovial</b> – should be sterile!	Moveable joints	Reduce friction when joints move	<b>Rheumatoid arthritis</b> is an <b>autoimmune disease</b> in which the synovial membrane is attacked by a person's own white blood cells.

## Wound Healing

1. **Regeneration:** cells multiply to replace damaged cells with the same kind of cells.
  - a. Example: skin cells are replaced daily as they are sloughed off
2. **Fibrosis:** Dense fibrous connective tissue replaces damaged cells with scar tissue (no longer functions as original cells did). Fibroblasts produce collagen fibers to fill the gap where the original cells were.
  - a. Scar tissue is less stretchy than the original cells, and may lack Merkel cells

Epithelial and connective tissues are best at regeneration; muscle tissue and nervous tissue are usually replaced with scar tissue.

Research now supports keeping superficial injuries moist and covered. A hard scab produces more of a scar than a moist scab.