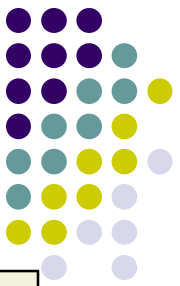


Q

## Corneal Wound Healing

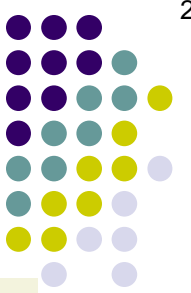


- Most *noncorneal* tissues heal via

two words

# A

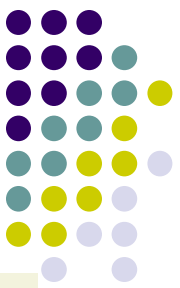
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- Most *noncorneal* tissues heal via **fibrovascular proliferation**.

## Q

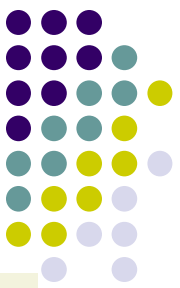
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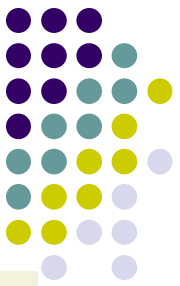
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## Q

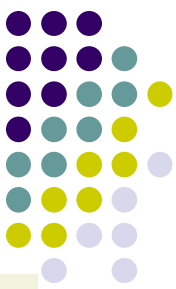
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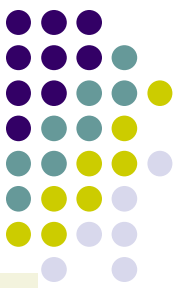
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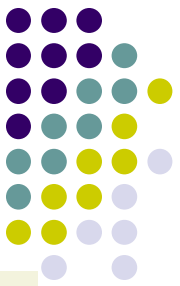


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*How do neutrophils get to the wound?*

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*How do neutrophils get to the wound?*  
Via the tear film



## Q

## Corneal Wound Healing

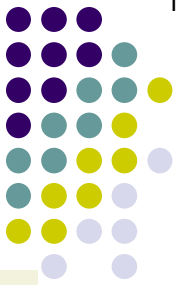


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two words and their three-letter abbreviation

# A

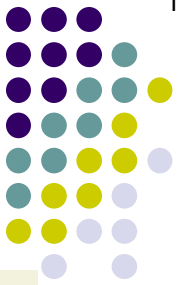
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## Q

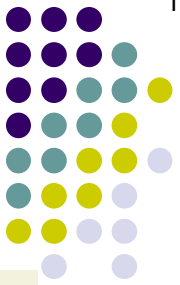
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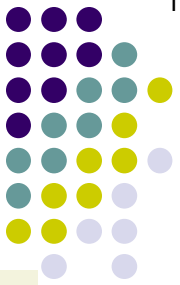
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The BCSC *Cornea* book states “Keratocytes are flattened fibroblasts.”

## Q

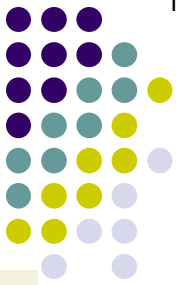
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- Successful stromal healing requires the presence of , which releases growth factors necessary for completion of healing.

## A

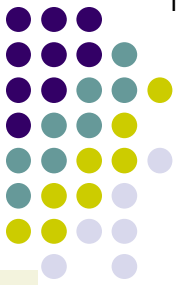
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## Q

## Corneal Wound Healing



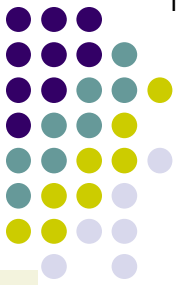
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- Stromal wound healing is heralded by an influx of neutrophils. Neutrophils release matrix metalloproteinases (MMPs) as well as growth factors. Once the wound is healed, fibroblasts proliferate and produce collagen.
- Successful stromal healing requires the presence of epithelium, which releases growth factors necessary for completion of healing.

*What about endothelial wounds? How do they heal?*



## A

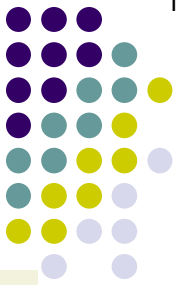
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- Stromal wound healing is heralded by an influx of neutrophils. Neutrophils release proteolytic enzymes that degrade extracellular matrix. *What about endothelial wounds? How do they heal?* Mainly via endothelial cell enlargement and migration to cover the wound.
- Once the wound is covered, fibroblasts migrate into the wound and proliferate.
- Successful stromal healing requires the presence of epithelium, which releases growth factors necessary for completion of healing.

## Q

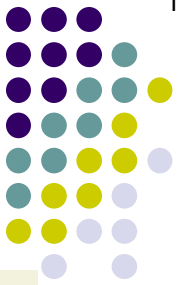
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- Once the wound is covered, fibroblasts proliferate and synthesize collagen fibers.
- Successful stromal healing requires the presence of epithelium, which releases growth factors necessary for completion of healing.

## A

## Corneal Wound Healing



- Most *noncorneal* tissues heal via fibrovascular proliferation. However, the cornea can't heal in this manner because it is avascular. Instead, the cornea heals via *fibrosis*.
- Stromal wound healing is heralded by an influx of neutrophils. Neutrophils are the first cells to migrate into the wound site.
  - What about endothelial wounds? How do they heal? Mainly via endothelial cell enlargement and migration to cover the wound.
  - What role does endothelial proliferation play in wound healing? Depends on which book you ask. Per the *Cornea* book, "Human corneal endothelial cells do not proliferate *in vivo*." However, according to the *Path* book, "a few [endothelial] cells are replaced through mitotic activity." Caveat emptor.
- Successful stromal healing requires the presence of epithelium, which releases growth factors necessary for completion of healing.