# Inflammation, Tissue Repair, and Wound Healing Case Study

Carlton, a 6-year-old boy, was playing on a sandy beach with his mother. He began to run along the shoreline when he stepped on the sharp edge of a shell, giving himself a deep cut on his foot. His mother washed his foot in the lake and put on his running shoe to take him home. One day later, Carlton’s foot looked worse. The gash was red and painful. The foot was warm to touch and appeared swollen. Carlton’s mom put some gauze over the wound and prepared to take him to the local community health clinic.

* What is the physiologic mechanism causing the wound to become red, hot, swollen, and painful? How is this different than the inflammatory response that might occur in an internal organ?
* What are the immunologic events that are happening at the local level during Carlton’s acute inflammatory response?