

# Wound Infections

Skin protects the body from infection. Breaks in the skin can occur through punctures (like a nail or a thorn), **abrasions** (scrapes or scratches), or **lacerations** (rips in the skin tissue). Healthy individuals can develop infections through wounds in the skin. However, it is more likely that persons with underlying **immune system** (the body's ability to fight infection) problems will develop wound infections if a break in their skin occurs. The October 26, 2005, issue of *JAMA* includes an article about use of supplemental oxygen to decrease the risk of surgical wound infections.

## SIGNS OF WOUND INFECTIONS

- Redness, warmth, and tenderness in the area of the wound
- Pus—a foul-smelling, yellowish-white fluid coming from the wound
- Fever

## RISK FACTORS

- Older age
- Diabetes
- Immune system disorders, cancer, human immunodeficiency virus infection, and malnutrition
- Paralysis or other limited mobility (wheelchairs, confined to bed)
- Hospitalization, which increases risk for infection by organisms that are resistant to antibiotics

## COMPLICATIONS OF WOUND INFECTIONS

- Death of surrounding tissue, including muscle, connective tissue, or bones, which may require surgical **debridement** (removal of dead tissue)
- Spread of the infection to the bloodstream, involving other organs
- **Septic shock**, a critical illness involving the whole body, which may require intensive care and life support and lead to multiple organ failure or death

## SURGICAL WOUND INFECTIONS

The **incision** (cut) in the skin performed for an operation can become infected. Surgical wound infections can range from redness surrounding a small portion of the incision to deeper infections involving underlying muscles or to a severe infection spread through the bloodstream. Doctors take precautions to prevent surgical wound infections, including use of **sterile** (free from germs) procedures and instruments and appropriate use of antibiotics. Risk factors for surgical wound infections include diabetes, emergency procedures, smoking, severe obesity, altered immune function, malnutrition, low body temperature, and long operation times.

## TREATMENT

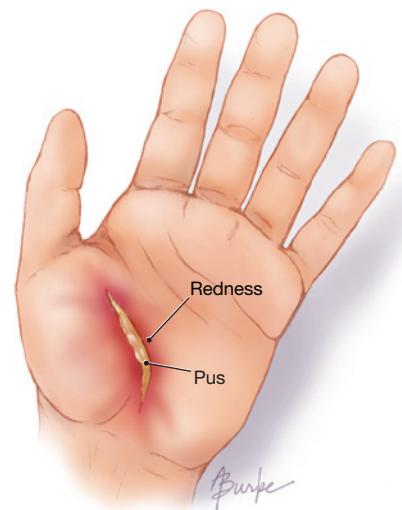
Treating wound infections depends on the nature of the wound, degree of infection, and the bacteria responsible for the infection. All wounds should be cleaned, any foreign materials (such as dirt or splinters) removed, and any pus drained. Prescription antibiotics may be necessary to treat the infection and prevent its spread. A tetanus vaccine booster shot may be indicated to prevent the occurrence of **tetanus** (lockjaw), a serious illness that includes severe muscle spasms. Severe infections or infections that occur in persons with medical problems may require hospitalization and **intravenous** (through a vein directly into the bloodstream) antibiotics. In the case of sepsis or septic shock, intensive care and life support may be needed.

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- Centers for Disease Control and Prevention  
800/311-3435  
www.cdc.gov
- American College of Surgeons  
800/621-4111  
www.facs.org

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Sources: American College of Surgeons, National Institute of Allergy and Infectious Diseases, Centers for Disease Control and Prevention

