

CHAPTER 26 INFECTIONS OF THE SKIN AND EYES

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ANATOMY OF THE SKIN

- ◆ Skin is a barrier impenetrable to pathogens and must be broken for infection to occur from the outside
- ◆ Pathogens can enter through natural openings in the skin such as ducts and glands
- ◆ Skin can also be accessed from the blood and lymph

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BACTERIAL INFECTIONS OF THE SKIN

- ◆ A wide variety of bacteria cause skin infections
- ◆ Nosocomial infections are a serious hazard with most being caused by *Staphylococcus aureus* and group A streptococci
- ◆ Group A streptococci can cause necrotizing fasciitis, which is a very serious infection

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BACTERIAL INFECTIONS OF THE SKIN

- ◆ Bacteria can also infect the hair follicles, sebaceous glands, and sweat glands causing infections such as acne, which the most common skin infection in humans
- ◆ Gas gangrene causes necrosis of tissues and can be rapidly fatal
- ◆ Cutaneous anthrax is usually a mild infection unless it becomes systemic, in which case it can be fatal

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VIRAL INFECTIONS OF THE SKIN

- ◆ Viruses can enter through broken skin or through the blood and lymph
- ◆ Several systemic viral infections, including measles, rubella, and smallpox, manifest themselves through skin lesions

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VIRAL INFECTIONS OF THE SKIN

- ◆ VZV and HSV-1 cause latent infections that reside in the nervous system and cause skin lesions on reactivation
- ◆ Warts are caused by the human papillomavirus

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FUNGAL INFECTIONS OF THE SKIN

- ◆ Fungi are always present on the skin and are rarely infectious
- ◆ The most common fungal infection of the skin is candidiasis, caused by *Candida albicans*
- ◆ Several forms of dermatophyte-caused infection are classified according to the inflammatory response seen in the skin

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PARASITIC INFECTIONS OF THE SKIN

- ◆ Cutaneous leishmaniasis is one of the most common parasitic infections of the skin
- ◆ Lice cause pediculosis and can also transmit other infections such as epidemic typhus

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INFECTIONS OF THE EYES

- ◆ Like the skin, the eyes are affected by infections through direct exposure to pathogens
- ◆ The most common eye infection is conjunctivitis
- ◆ People who wear contact lenses are prone to keratitis

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INFECTIONS OF THE EYES

- ◆ Trachoma, which is a form of chronic conjunctivitis, is caused by *Chlamydia trachomatis* and is a serious problem in developing countries
- ◆ *Neisseria* pathogens in infected mothers can cause eye infection in babies as they move down the birth canal

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