

HYGIENE

OVERVIEW

- *the body's physical barriers serve as a defensive system that prevents pathogens from entering
 - **Integumentary system** consists of hair, nails, sebaceous, + sweat glands
 - **mucous membranes** line body passageways that are open to external environment - also act as a barrier
 - respiratory tract ◦ mouth
 - GI tract ◦ urinary tract

Skin

- *largest organ in body
- *first line of defense against pathogens
- *two roles in protecting against pathogens
 - **Physical barrier**
 - protect internal parts of the body from outside world
 - contains Langerhans cells
 - sense and kill pathogens that are found in skin trying to enter
 - **Two layers**
 - **epidermis**: outer most layer
 - squamous epithelial cells organized into 4 layers providing strength to skin
 - avascular - receives nutrition from dermis layer
 - **dermis**: under epidermis
 - connective tissue together with nervous tissue, blood, + blood vessels
 - provides strength + elasticity
 - contains nerves - can alert the body to stimuli that pose threat
 - **hypodermis (subcutaneous layer)**: beneath dermis
 - separates dermis from underlying organs
 - contains adipose tissue - acts as cushion from trauma
 - insulates internal environment of body by serving as a site of fat storage

Teeth

- *Primary roles:
 - chewing food to form a ball that can be easily swallowed
 - providing support + structure to the face
 - shaping the face
 - assisting in producing sounds during speech
- *first line of defense: **enamel**
 - protects teeth from plaque + pathogens
 - hardest material in human body
- ***dentin**: protects pulp inside teeth
 - pulp is composed of blood vessels, nerves, + connective tissue that supplies nutrients to teeth
- *bacteria in mouth produce acid and over time can dissolve enamel - dental cavities, infection, loss of teeth

Nails

- *consist of layers of keratin that protect ends of fingers + toes
- ***cuticle**
 - surrounds proximal + lateral edges of nail
 - form of epidermis that connects skin on finger + nail plate to form a barrier + prevent infection of underlying tissue
- ***Pterygium**
 - provides skin with additional protection against pathogens
 - under cuticle

Mucous membranes

- *act as physical barrier
- *secrete mucous, a viscous liquid that entraps pathogens + small particles
- *mucous membranes of nose contain cilia - traps particles that person inhales
 - cilia push particles to either front of nose or back of throat - person coughs or sneezes to prevent particles from invading