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The Integumentary System

Figure 4.1 Functional Organization of the Integumentary System (Part 1 of 2)

- **The integumentary system is composed of:**

- **The skin is the most visible organ of the body**
- **Clinicians can tell a lot about the overall health of the body by examining the skin**

Cutaneous Membrane

Epidermis

- Protects dermis from trauma, chemicals
- Controls skin permeability, prevents water loss
- Prevents entry of pathogens
- Synthesizes vitamin D₃
- Sensory receptors detect touch, pressure, pain, and temperature
- Coordinates immune response to pathogens and skin cancers

Dermis

- | | |
|---|--|
| <p><u>Papillary Layer</u></p> <ul style="list-style-type: none">• Nourishes and supports epidermis | <p><u>Reticular Layer</u></p> <ul style="list-style-type: none">• Restricts spread of pathogens penetrating epidermis• Stores lipid reserves• Attaches skin to deeper tissues• Sensory receptors detect touch, pressure, pain, vibration, and temperature• Blood vessels assist in thermoregulation |
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Figure 4.1 Functional Organization of the Integumentary System (Part 2 of 2)

