**Mobility Aids**

- Strollers
- Walkers
- Scooters
- **Manual wheelchairs:**
  - Transport
    - Dependent mobility
    - Short distances
  - Standard non-adjustable
  - Adjustable/lightweight
- **Motorized wheelchairs**
  - Standard
  - Reclining

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**Skin**

- Composed of three main layers:
  - **Epidermis:** surface layer
    - Dead cells that are being worn away and replaced by cells from dermis
      - Nine pounds of epidermis flake off each year
  - **Dermis:** underlying (much thicker) layer.
  - **Subcutis**
    - Functions as thermal insulator and shock absorber
  - Also contains:
    - Fat
    - Blood vessels
    - Sensory receptors
    - Hair follicles
    - Sweat and sebaceous glands

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Decubitus Ulcers (Pressure Sores)

- Breakdown due to external force applied over bony prominence for a period of time
  - Due to compression, shear of blood vessels, or friction
  - Common with individuals with sensory deficit (spinal cord injury, hemiplegia)
  - Typical sites: sacrum, ischium, trochanter, heel, scapula

- 5 stages:
  1. Reactive hyperemia
     - Redness that goes away
  2. Non-blanching hyperemia
     - Skin stays red; sore on dermis only
  3. Sore extends down to subcutaneous tissue
  4. Sore extends through fat layer and muscle becomes swollen
  5. Sore extends below fascia into muscle or bone

Decubitus Ulcers (Pressure Sores)

- Pressure sores typically occur with:
  - Thin, bony body type
    - e.g. from muscle atrophy
  - Lack of sensation
    - common in SCI
  - Lack of mobility necessary to shift weight
    - overweight, paralysis
  - Poor microcirculation
    - common in SCI and diabetics
  - Increased temperature and humidity at interface
  - Poor health or hygiene
  - Poor nutrition
  - Age

- Cause of mortality for 4% of people with spinal cord injury
Seating and Positioning

• Different needs for different people. Examples:
  – Individuals with abnormal tone that affects his/her ability to assume and maintain symmetric erect sitting posture
  – Individual with neurological or joint condition that results in postural deformity and contractures
  – Individual at risk of or presenting pressure sore due to impaired/absent sensation or inability to independently change position

• Goals of rehab professional
  – Reduce deforming effects of abnormal tone
  – Correct or delay progression of deformities
  – Accommodate fixed orthopedic deformities
  – Improve functions such as balance, head control, mobility, activities of daily living
  – Reduce the risk of pressure sores

Seating Components

• Correct seating and posture relies on:
  – Pelvic and thigh support
  – Trunk support
  – Shoulder support
  – Head/neck support
  – Upper/lower extremity support