

### Myotomes and dermatomes

| Level | Myotome                         | Dermatome                       |
|-------|---------------------------------|---------------------------------|
| C5    | Elbow flexion                   | Lateral upper arm               |
| C6    | Wrist extension                 | Thumb and lateral forearm       |
| C7    | Elbow extension                 | Middle finger                   |
| C8    | Thumb extension, finger flexion | Medial hand and forearm         |
| T1    | Finger abduction                | Medial upper arm                |
| L2    | Hip flexion                     | Anterior thigh                  |
| L3    | Knee extension                  | Medial thigh and knee           |
| L4    | Dorsiflexion                    | Medial leg and medial malleolus |
| L5    | Great toe extension             | Dorsum of foot                  |
| S1    | Plantarflexion                  | Lateral foot                    |
| S2    | Knee flexion                    | Posterior thigh and calf        |

### Gross motor milestones

| Age      | Gross motor                      |
|----------|----------------------------------|
| 1–2 mo   | Head up in prone                 |
| 4 mo     | Rolls front to back              |
| 6 mo     | Sits unsupported                 |
| 8–9 mo   | Crawls, pulls to stand           |
| 10–12 mo | Cruises, walks with assistance   |
| 12–15 mo | Walks independently              |
| 18 mo    | Stairs with a hand held, running |
| 2 yr     | Jumps, kicks a ball              |

### Deep tendon reflexes (DTRs)

- ✓ C5: biceps
- ✓ C6: brachioradialis
- ✓ C7: triceps
- ✓ L4: patellar
- ✓ S1: Achilles

### Motor learning

- ✓ **Cognitive:** understands the task
- ✓ **Associative:** refines motor patterns
- ✓ **Autonomous:** automatic, little feedback needed

### Cranial nerve mnemonics

- ✓ **Names:** Oh Oh Oh To Touch And Feel Very Green Vegetables AH
- ✓ **Function:** Some Say Marry Money But My Brother Says Big Brains Matter Most (sensory, motor, both)

### Musculoskeletal system

- ✓ **Special tests:**
  - **Shoulder:** Hawkins-Kennedy, Neer, apprehension, empty can, crank
  - **Elbow:** Cozen's, Mill's
  - **Wrist:** Phalen's, Finkelstein
  - **Hip:** FABER, FADIR, Thomas, Ely's, Ober
  - **Knee:** Lachman, McMurray, valgus/varus stress
  - **Ankle:** anterior drawer, Thompson, talar tilt
- ✓ **Gait deviations:**
  - **Vaulting:** compensates for a functionally long swing leg
  - **Hip hiking:** clears the limb when hip or knee flexors are weak
  - **Circumduction:** weak dorsiflexors
  - **Trendelenburg:** gluteus medius weakness