SENSORY PATHWAYS: (p 503)
- first order neuron: cell body in dorsal root ganglion
- second order: cell body in posterior grey horn (or medulla), goes to thalamus
- third order: cell body in thalamus, transmits to cerebrum, becomes conscious.

four types of ascending tracts: (p 504-507)
two in posterior funiculus:
- 1 fasciculus gracilis (slender bundle) (p 503) muscle position
- 2 fasciculus cuneatus (wedge bundle) fine touch localization: upper limb and neck, upper trunk

a pair in the lateral and anterior funiculus:
- 3 spinothalamic tract: (p 504) lateral: pain and temperature ventral: touch and pressure

one in the lateral funiculus
- 4 spinocerebellar: (p 507) 2 dorsal and 2 ventral: proprioceptors to Purkinje cells in the cerebellum, do not reach cerebrum, therefore unconscious (p 486)

MOTOR PATHWAYS:
two descending tracts:
- pyramidal: corticospinal tracts: two branches: lateral funiculus (p 510)
  - ventral funiculus

extrapyramidal: influence coordination, posture, balance, visual and auditory, stimulation, etc.

REFLEXES:

Monosynaptic patellar reflex (a postural reflex, helps maintain posture): (p 444) tap patellar ligament, stretches muscle spindle (p 442), generates sensory impulse
  - Sensory neuron in DRG sends message to anterior horn cell
  - Anterior horn cells transmit message to contract to quadriceps

Polysynaptic withdrawal reflex (step on a tack): (p 445) pain from tack generates sensory impulse
  - Sensory neuron in DRG sends message to internuncial cell (association)
  - Internuncial cell sends messages to inhibitory and motor neurons
  - Motor neuron (anterior horn cell) stimulates flexors
  - Inhibitory neuron inhibits extensors

Babinski sign: infant fans toes when sole is stroked, adult curls (because of inhibitory impulses) (p 446)
  - Fanning in adults indicate lack of inhibitory impulses, damage to CNS.