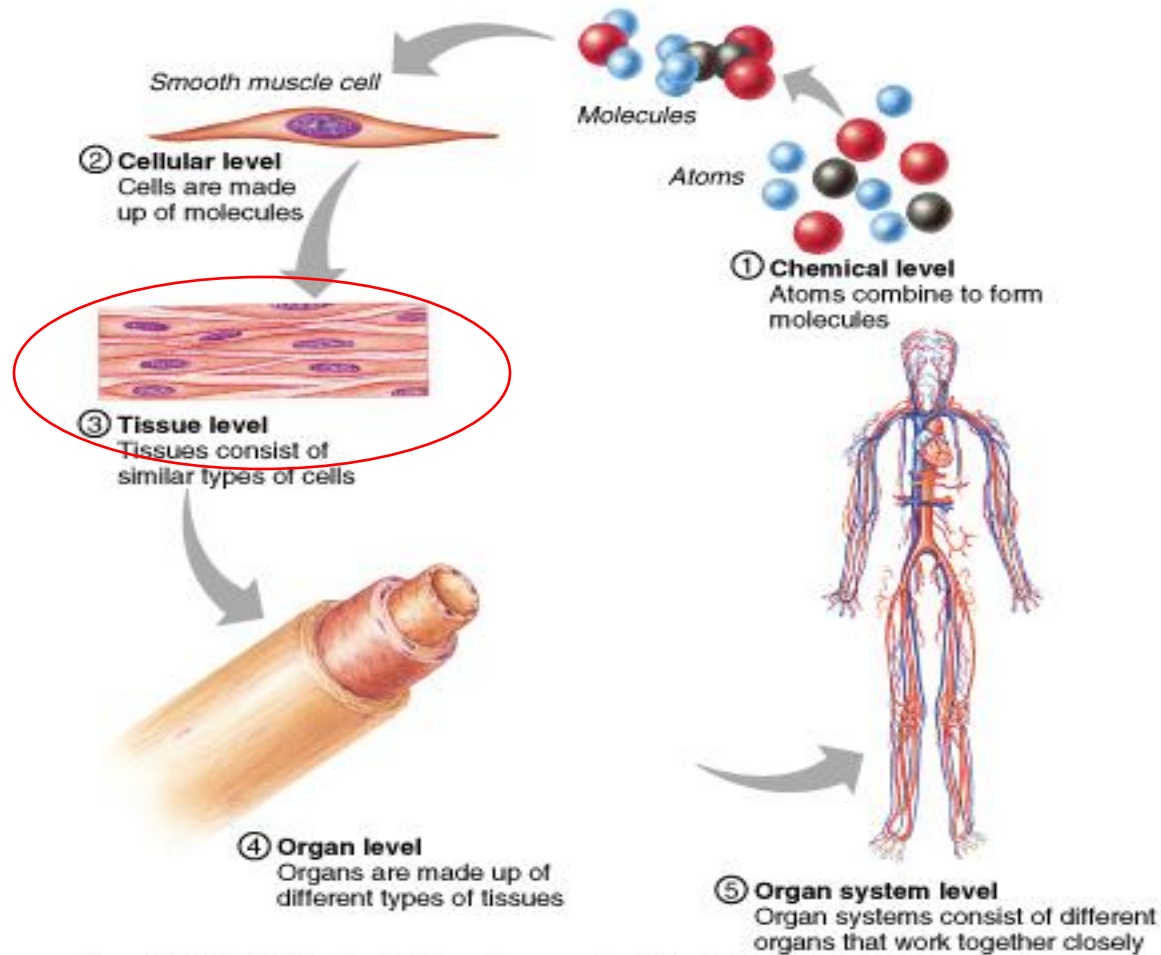


Tissues - Anatomy



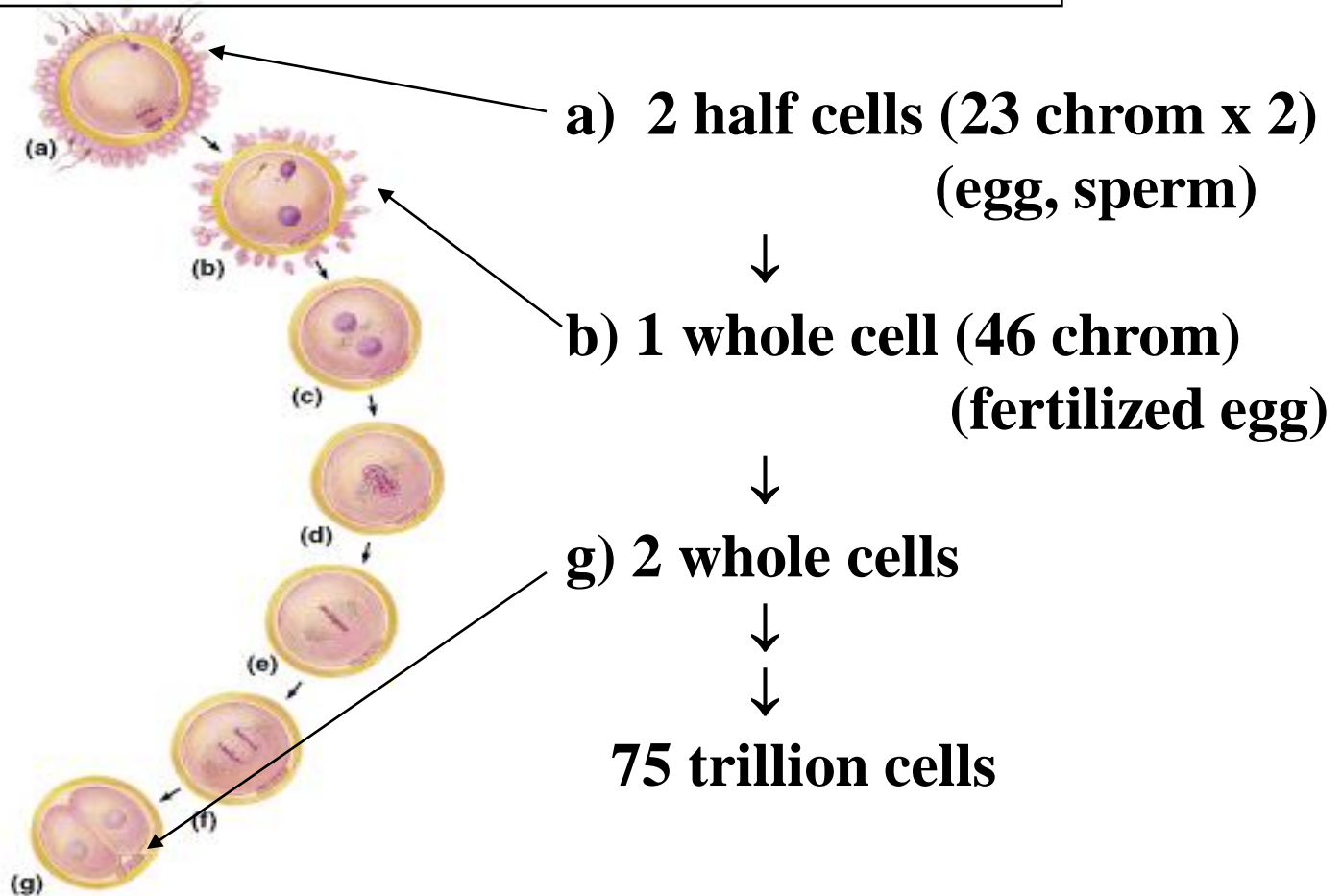
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Topics

- 1. Human Cells**
- 2. Role of Uterus**
- 3. Epithelial Tissue**
- 4. Connective Tissue**
- 5. Muscle Tissue**
- 6. Nervous Tissue**

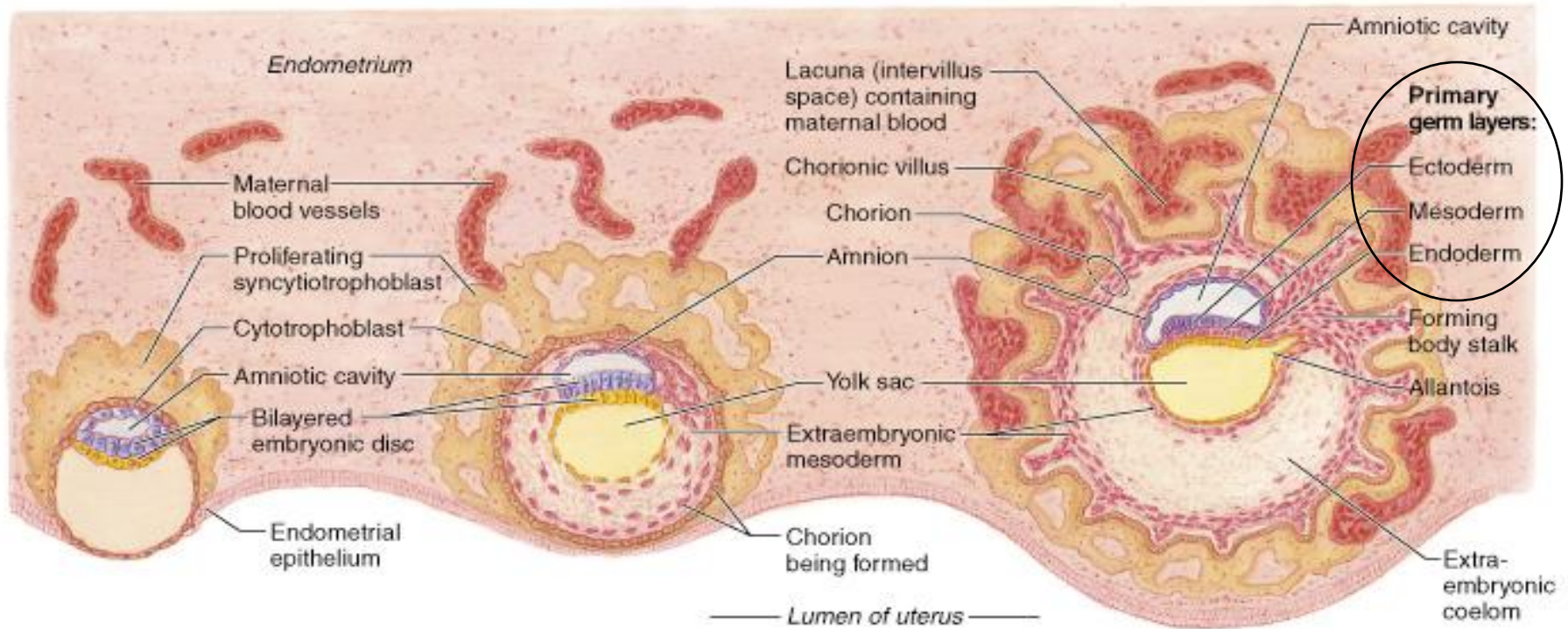
Cell Division

mitosis: increase # cells, 1 -> 75 trillion



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Uterus - Shelter



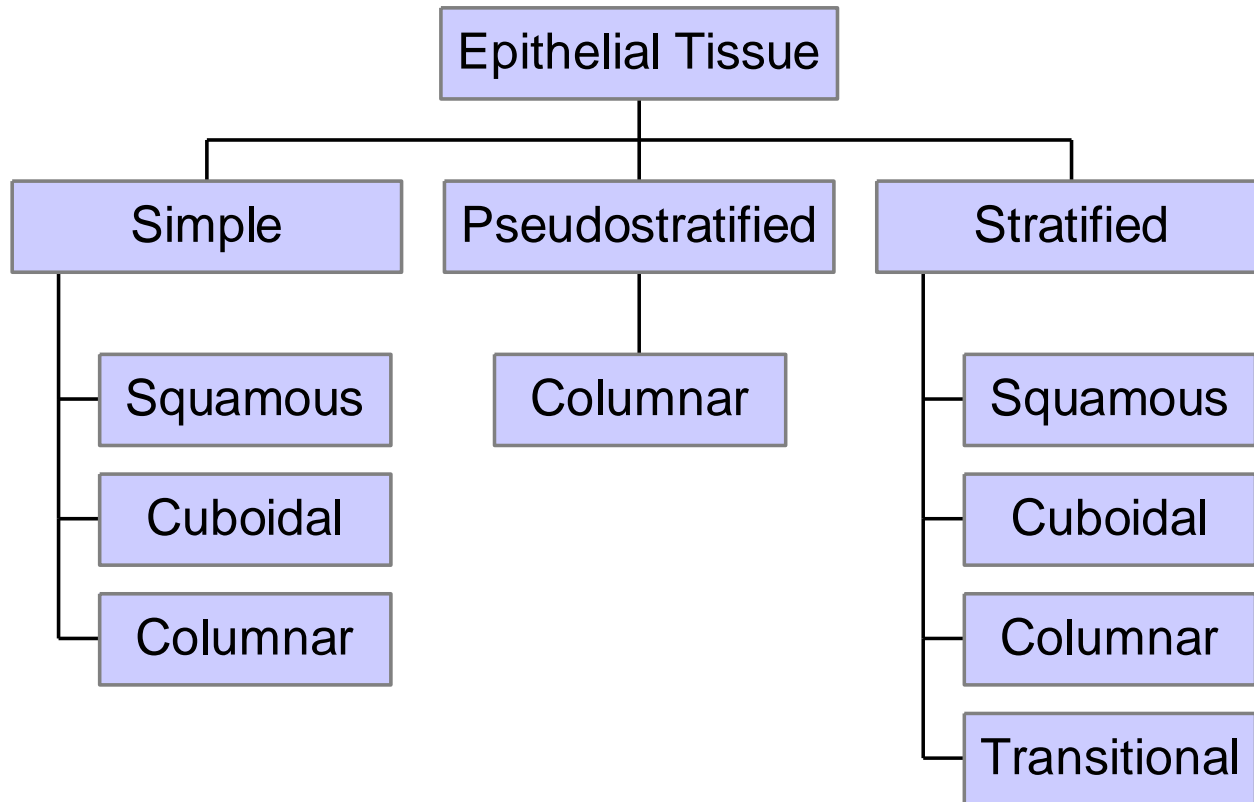
(a) 7½-day implanting blastocyst

(b) 9-day implanted blastocyst

(c) 16-day embryo

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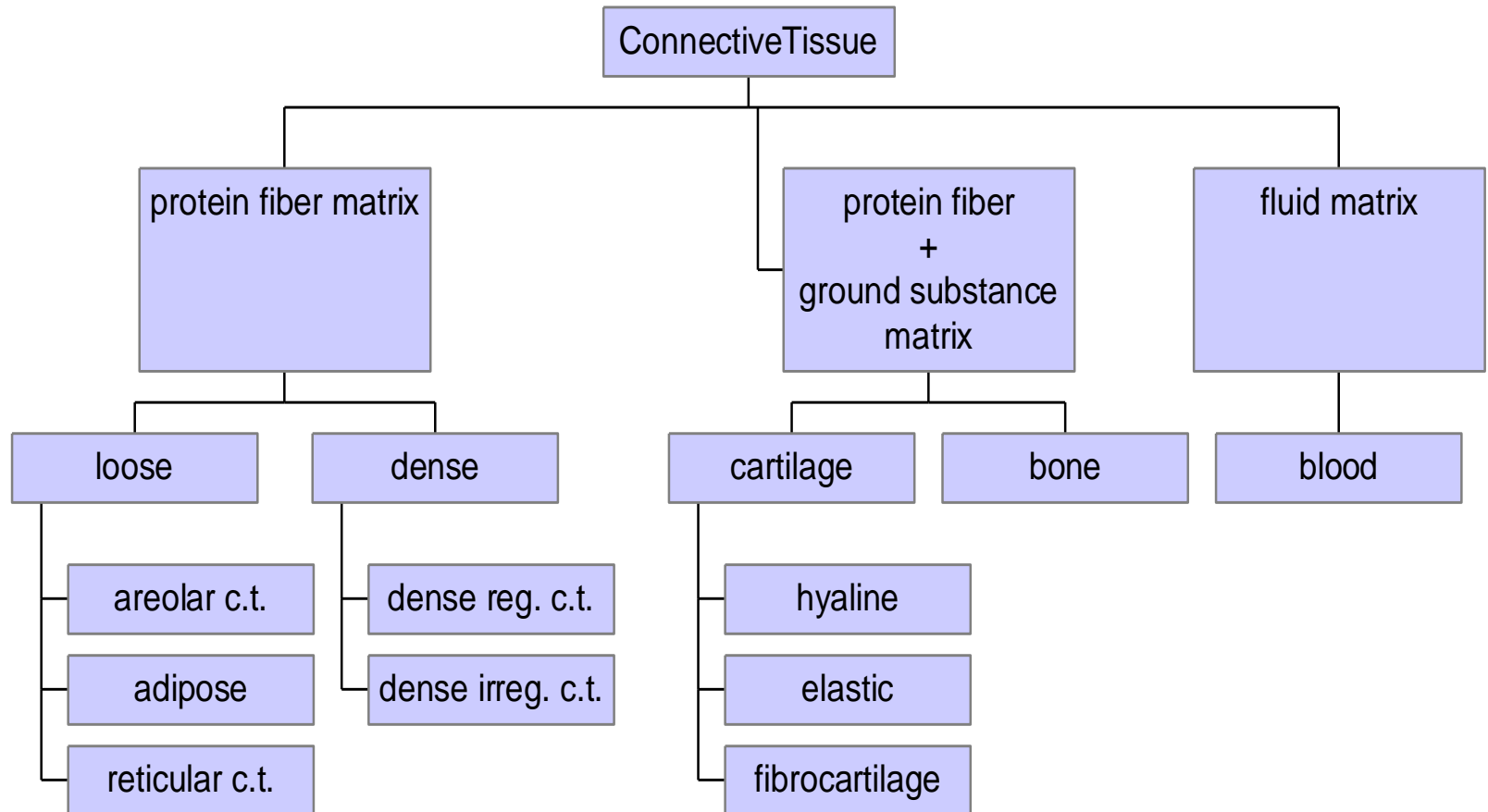
Epithelial Classification



Epithelial Tissue Summary

- 1) function:** covering, lining, prod. secretions
- 2) structure:** glands, membranes
- 3) attachment:** with basement membrane to surfaces
- 4) blood supply:** very little; diffusion from connective tissue
- 5) nerve supply:** abundant
- 6) renewal rate:** very fast
- 7) embryonic origin:** ecto-, meso-, endoderm
- 8) cell types:** squamous, cuboidal, columnar
- 9) tissue types:**
 - 1) simple:** squamous, cuboidal, columnar
 - 2) pseudostrat.:** ciliated
 - 3) stratified:** squamous, cuboidal, columnar, transitional

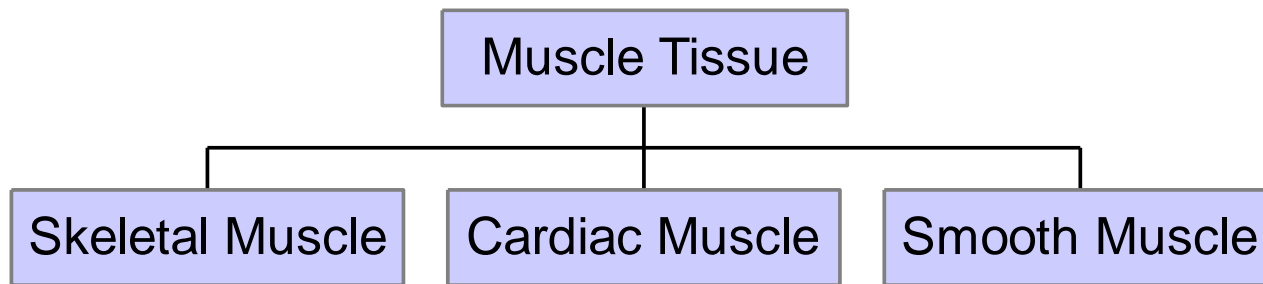
Conn. Tissue Classification



Connective Tissue Summary

- 1) function:** protect, support, bind, defence, transport energy, insulation
- 2) structure:** amorphous (no specific form)
- 3) attachment:** to other cells in matrix
- 4) blood supply:** abundant
- 5) nerve supply:** abundant
- 6) renewal rate:** limited, slower than epi.
- 7) embryonic origin:** mesoderm
- 8) cell types:** blast, cyte, clast cells
- 9) tissue types:**
 - 1) protein fiber matrix (5)**
 - 2) fiber + gr. substance matrix: 4)**
 - 3) fluid matrix (1)**

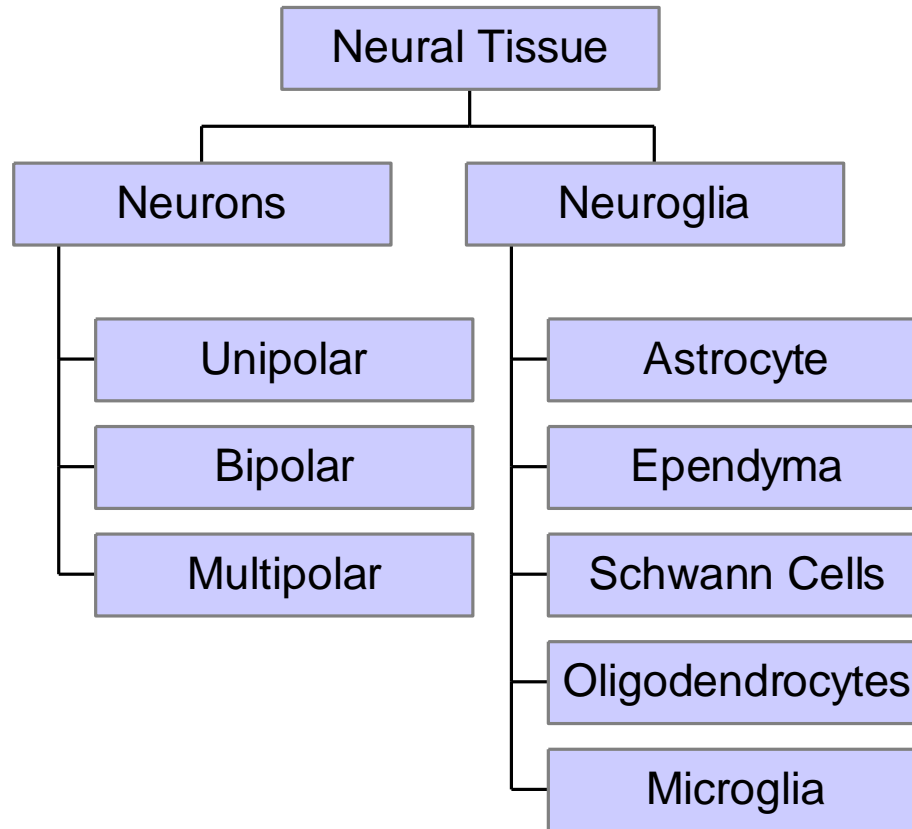
Muscle Tissue



Muscle Tissue Summary

- 1) function: movement, posture, heat prod., gen. force**
- 2) structure: fibers**
- 3) attachment: to bones, organs**
- 4) blood supply: abundant**
- 5) nerve supply: abundant**
- 6) renewal rate: none**
- 7) embryonic origin: mesoderm**
- 8) cell types: skeletal, smooth, cardiac**
- 9) tissue types: skeletal, smooth, cardiac**

Nervous Tissue



Nervous Tissue Summary

- 1) function:** coord., cogitation, cognition, emotions
- 2) structure:** variety
- 3) attachment:** muscles, other nerves
- 4) blood supply:** abundant
- 5) nerve supply:** none
- 6) renewal rate:** neuron (none); neuroglia (some)
- 7) embryonic origin:** ectoderm
- 8) cell types:** neuron (3), neuroglia (5)
- 9) tissue types:** neuron, neuroglia