7a A&P:
Introduction to the Human Body - Body Compass

7a A&P:

Introduction to the Human Body - Body Compass Class Outline

5 minutes	Attendance, Breath of Arrival, and Reminders
10 minutes	7a Review Questions
15 minutes	Lecture: AOIs of the Hamstrings
30 minutes	Lecture
60 minutes	Total

7a A&P:

Introduction to the Human Body - Body Compass

Class Reminders

Assignments:

- 7a Review Questions (A: 119-130) Due before class starts!

Quizzes and Exams:

- 8a Quiz (A-73, classes 1b, 2a, 2b, 3a, 3b, 4a, 5a, 6a, and 7a)
- 9a Kinesiology Quiz (A-73, gluteals, hamstrings, gastrocnemius, and soleus)
- 10a Exam (A-73, classes 1b, 2a, 2b, 3a, 3b, 4a, 5a, 6a, and 7a)

Preparation for upcoming classes:

- 8a Quiz
  - Trail Guide: gastrocnemius and soleus
- 8b Kinesiology: AOIs - Posterior Lower Body
  - gluteals, hamstrings gastrocnemius and soleus
  - Packet F: 31-34

Classroom Rules

Punctuality - everybody's time is precious

- Be ready to learn at the start of class; we'll have you out of here on time
- Tardiness: arriving late, returning late after breaks, leaving during class, leaving early

The following are not allowed:

- Bare feet
- Side talking
- Lying down
- Inappropriate clothing
- Food or drink except water
- Phones that are visible in the classroom, bathrooms, or internship

You will receive one verbal warning, then you'll have to leave the room.

Classroom Rules

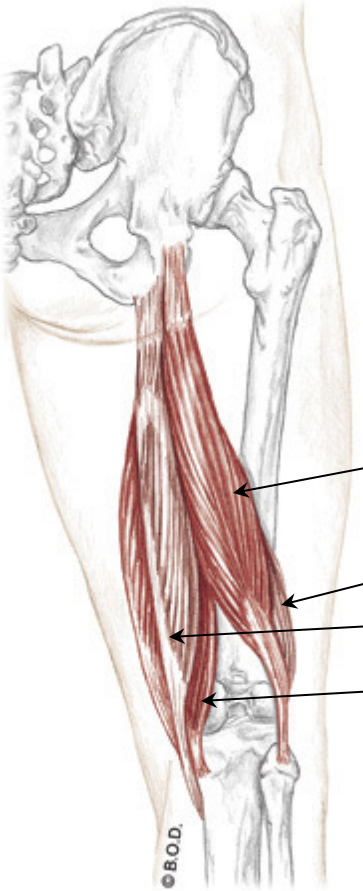
Cell Phones – Turn it off!



And put it away!

Hamstrings

Trail Guide, Page 311



Posterior View

The hamstrings are located along the posterior thigh. Compared to the quadriceps, they are not as massive.

Biceps femoris is the lateral hamstring that has two heads: the long head and the short head.

Semitendinosus and semimembranosus are the medial hamstrings.

When do you use your hamstrings?

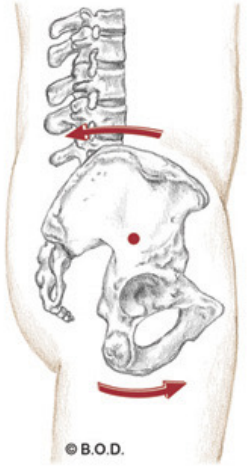
Actions of the Hamstrings



Flexion of the tibiofemoral joint



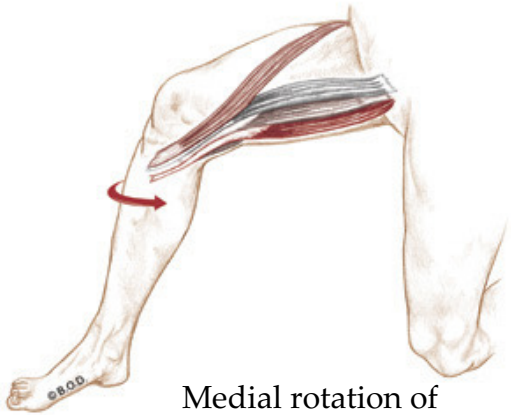
Lateral rotation of the flexed tibiofemoral joint



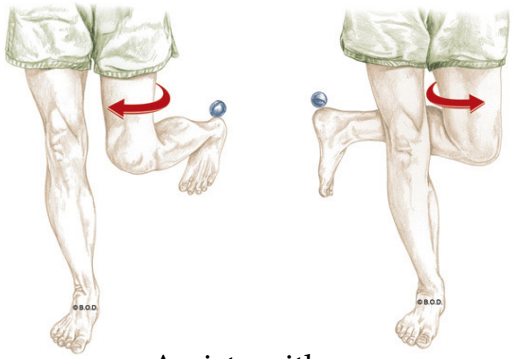
Posterior pelvic tilt



Extension of the coxal joint



Medial rotation of the flexed tibiofemoral joint



Assists with medial and lateral rotation of the coxal joint

Biceps femoris, page 312

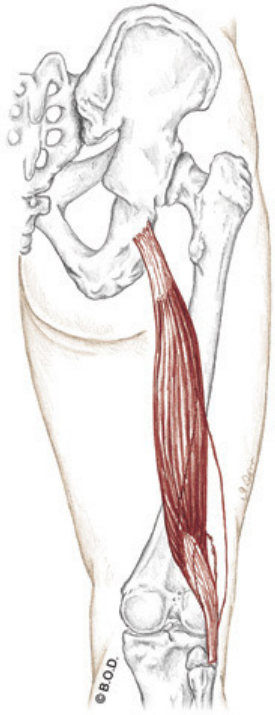
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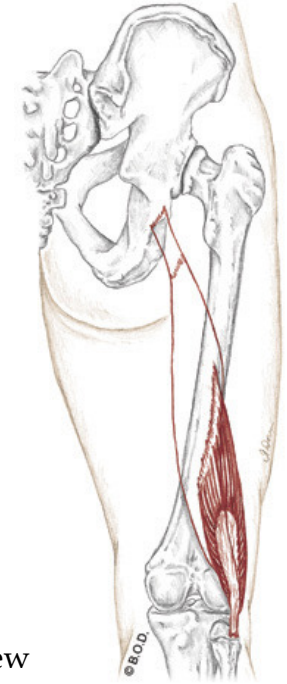
Flex the knee (tibiofemoral joint)

Laterally rotate the flexed knee (T/F joint)

Long head:
Extend the hip (coxal joint)
Assist to laterally rotate the hip (coxal joint)

Tilt the pelvis posteriorly





Posterior View

O *Long head:* Ischial tuberosity

Short head: Lateral lip of linea aspera



I Head of the fibula

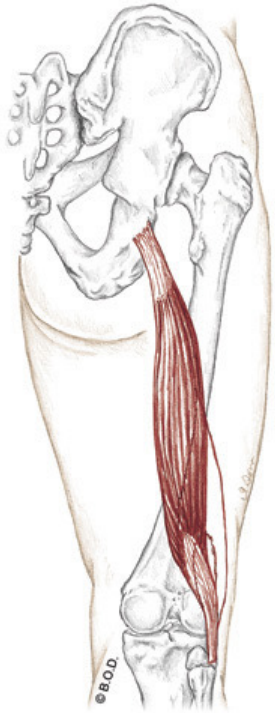
Biceps femoris, page 312

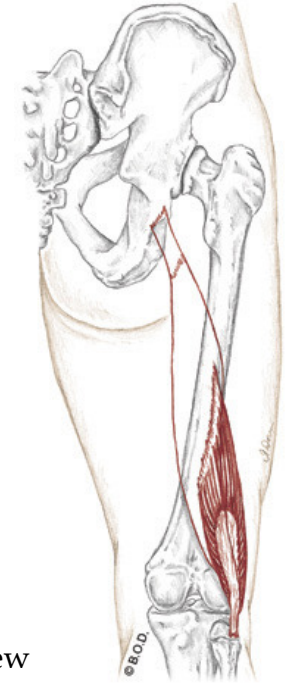
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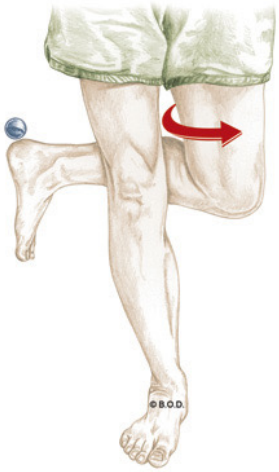


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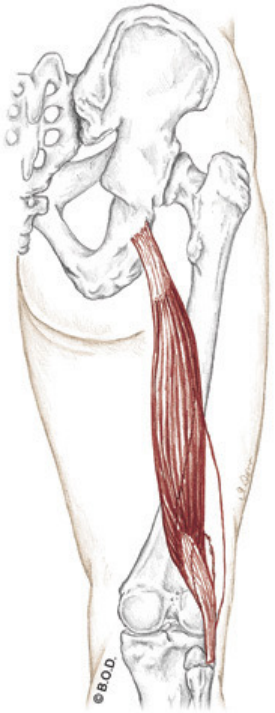
Biceps femoris, page 312

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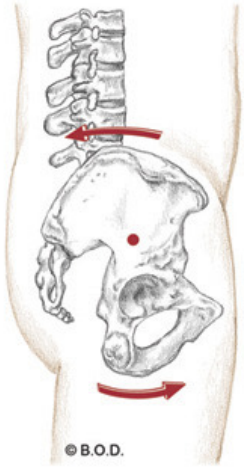




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Biceps femoris, page 312

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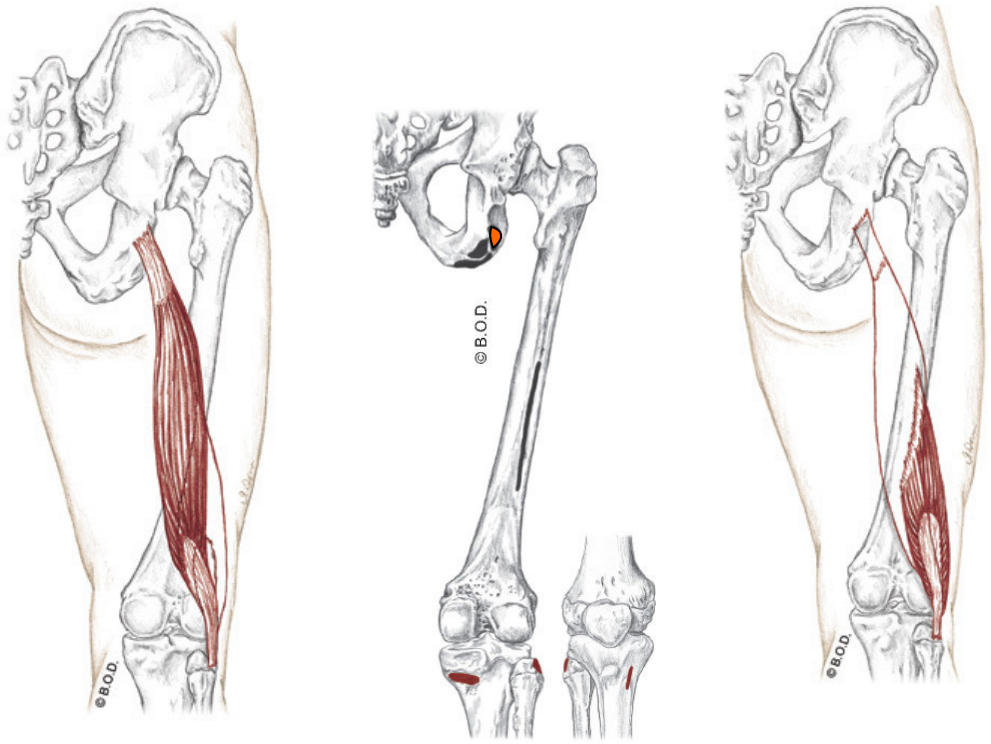
Tilt the pelvis posteriorly

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Posterior View



Biceps femoris, page 312

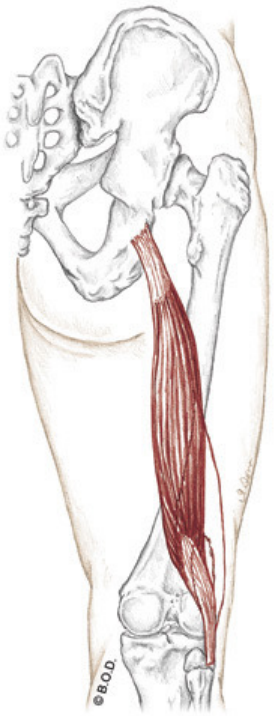
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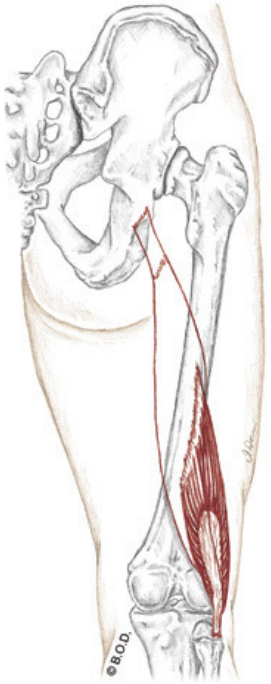
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Biceps femoris, page 312

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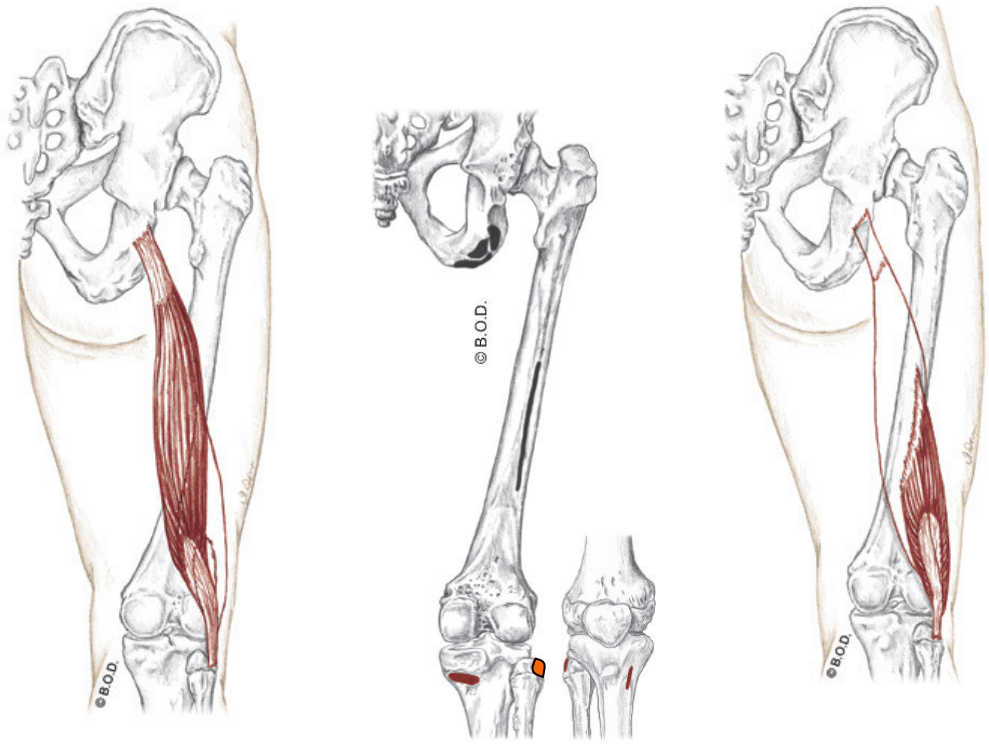
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Posterior View



Semitendinosus, page 312

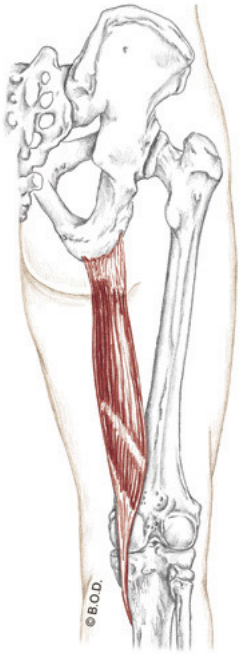
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Posterior View

O Ischial tuberosity

I Proximal, medial shaft of the tibia at pes anserinus tendon



Semitendinosus, page 312

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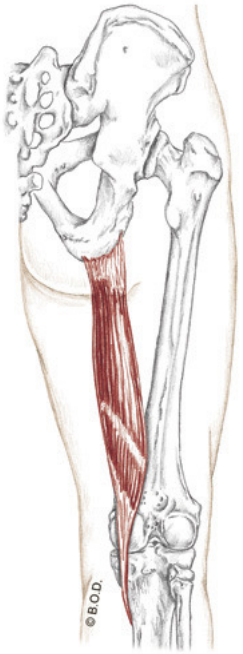
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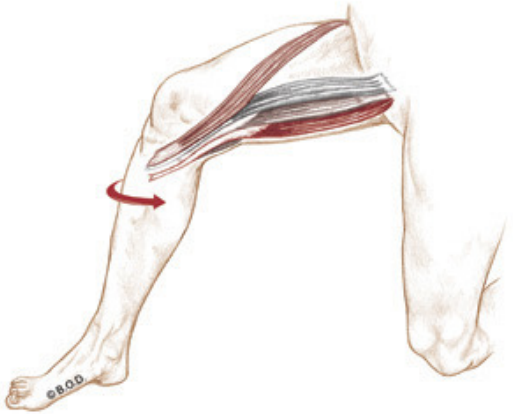
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Semitendinosus, page 312

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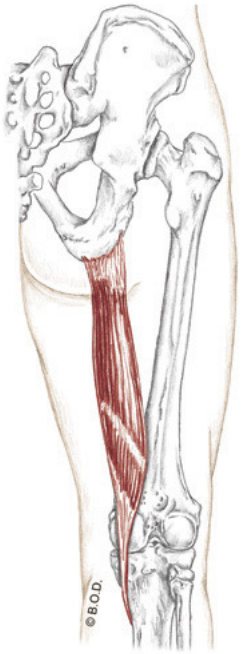
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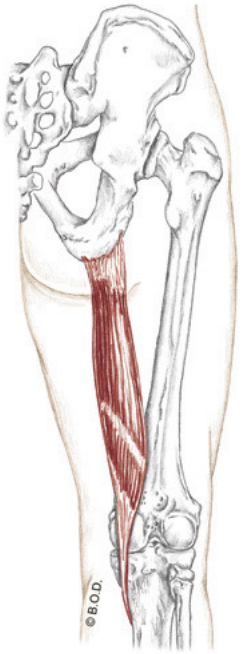
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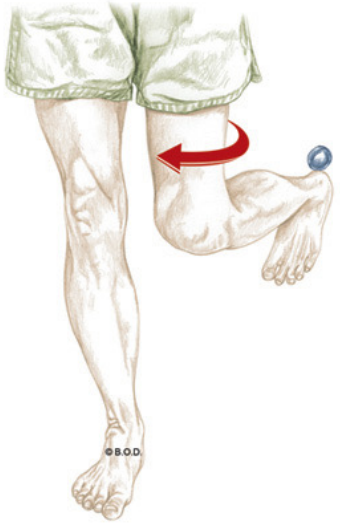
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Semitendinosus, page 312

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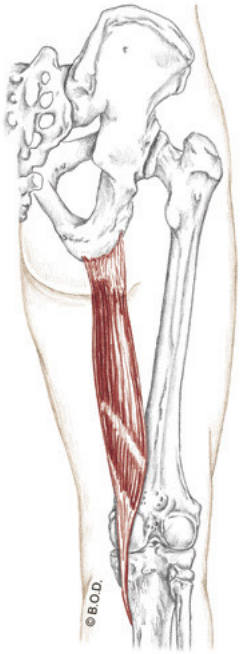
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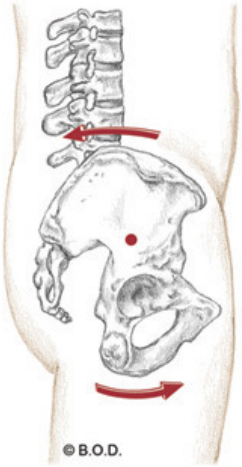
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Semitendinosus, page 312

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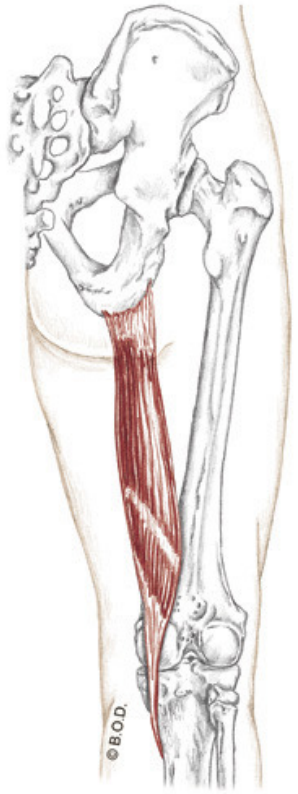
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Posterior View

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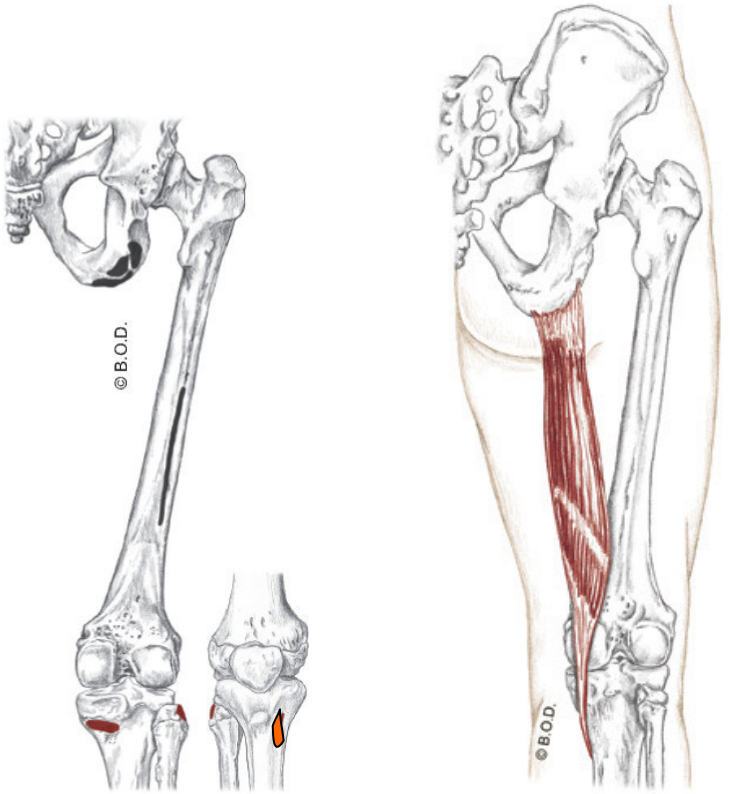
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Posterior View

Semimembranosus, page 312

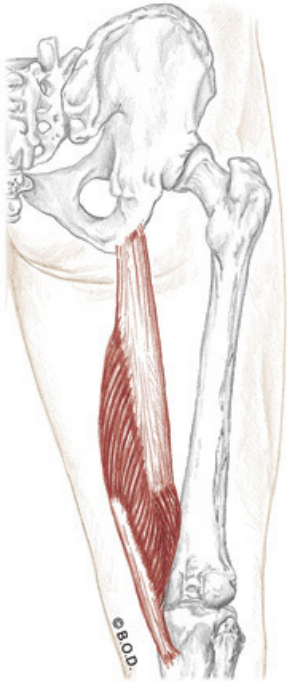
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I Posterior aspect of medial condyle of tibia



Semimembranosus, page 312

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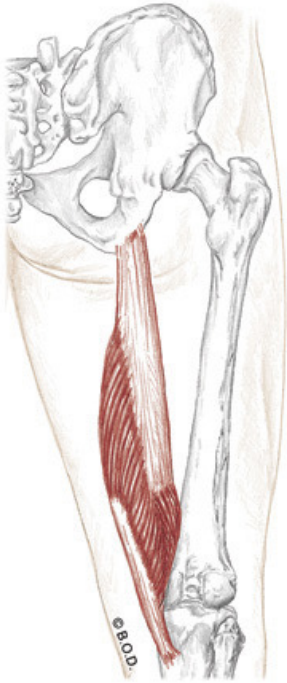
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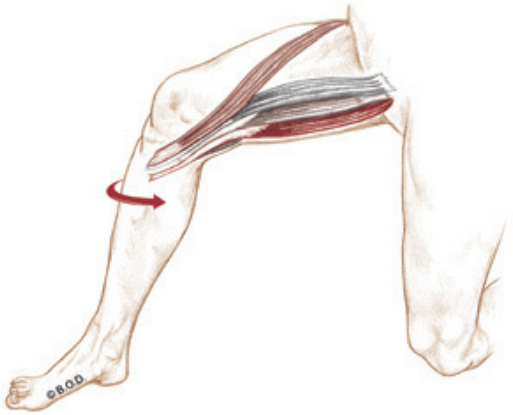
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Semimembranosus, page 312

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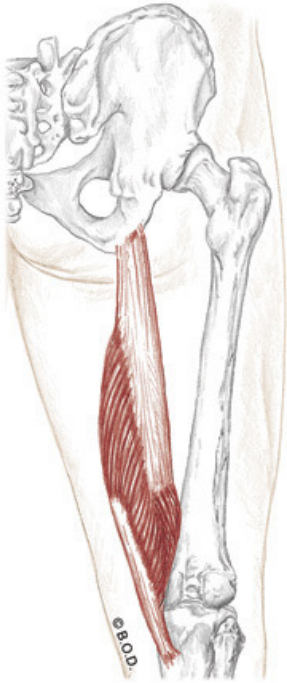
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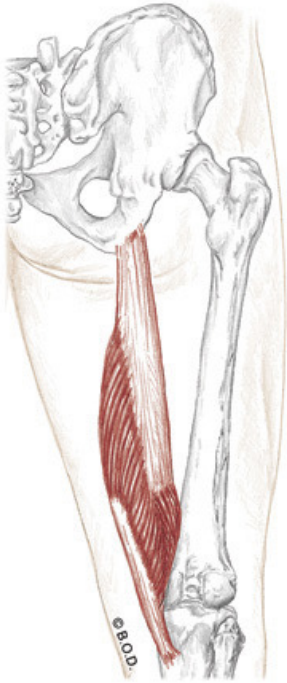
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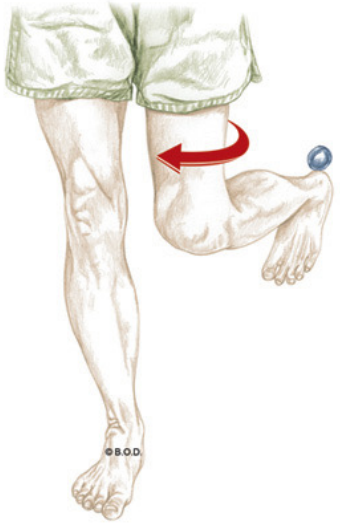
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Semimembranosus, page 312

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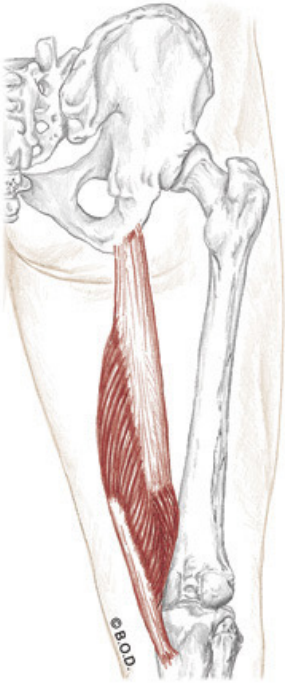
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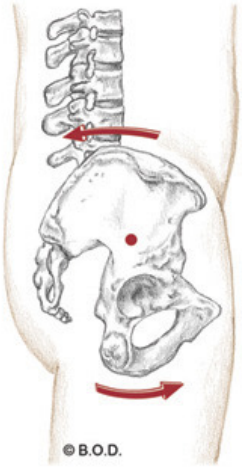
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Semimembranosus, page 312

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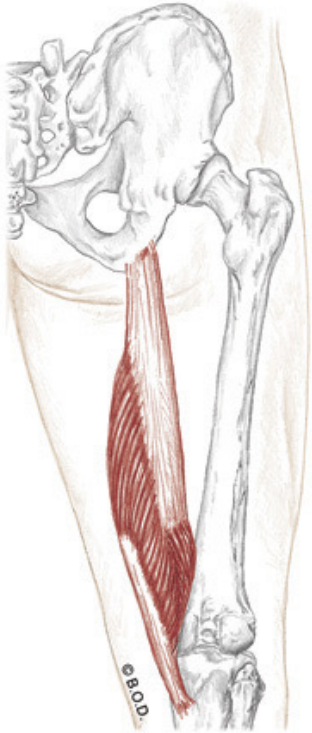
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Posterior View

Semimembranosus, page 312

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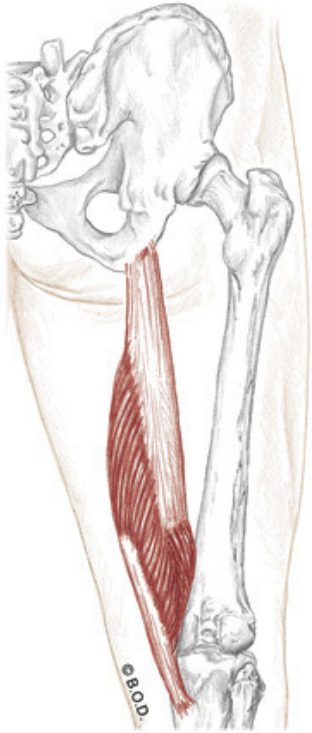
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Posterior View

7a A&P:
Introduction to the Human Body
E-11

Homeostasis

Homeostasis Constancy of the body's __internal__ environment. It represents a relatively stable condition within a very limited range.



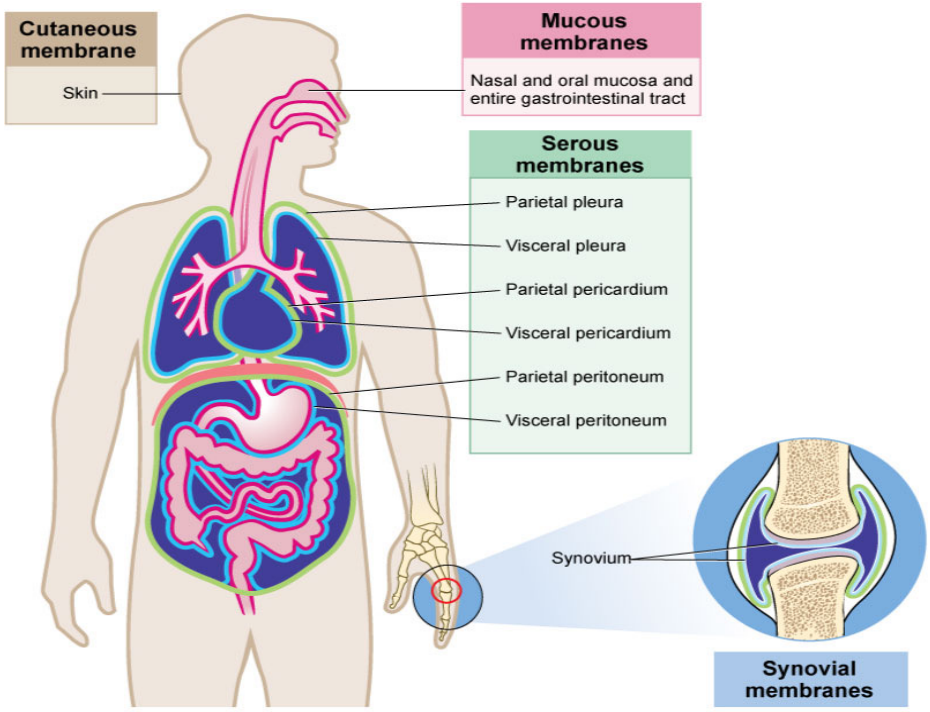
Example: when we get too cold our muscles spasm (shivering) to warm us.

Membranes

Membrane Soft pliable sheets of __tissue__ that cover the body, line tubes or body cavities, cover organs, and separate one part of a cavity from another.

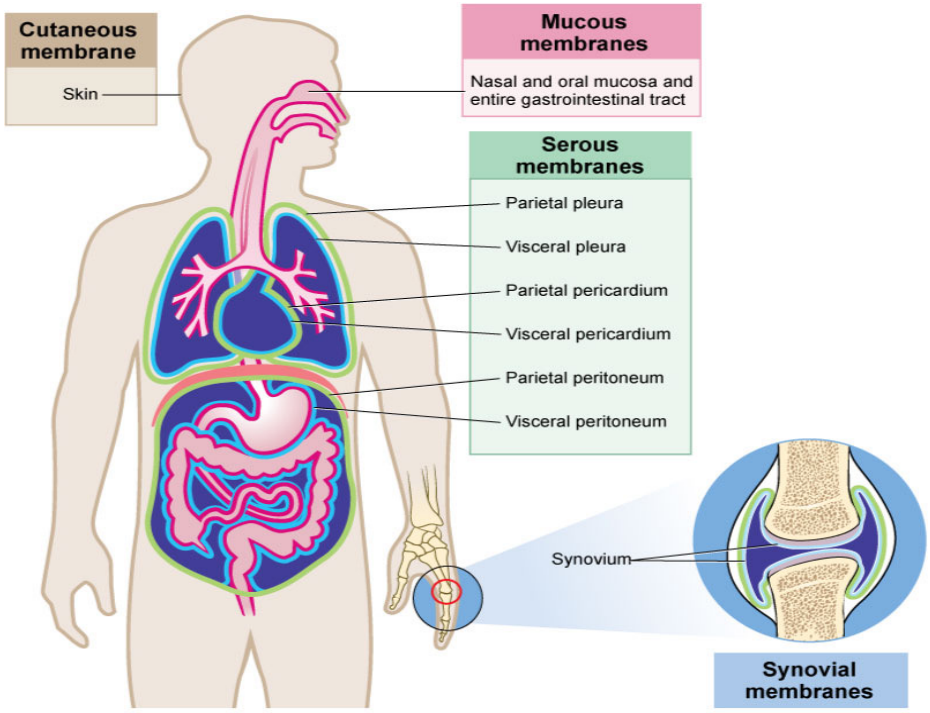
Membranes

Cutaneous membrane (AKA: skin) Epithelial membrane that covers the entire surface of the __body__.



Membranes

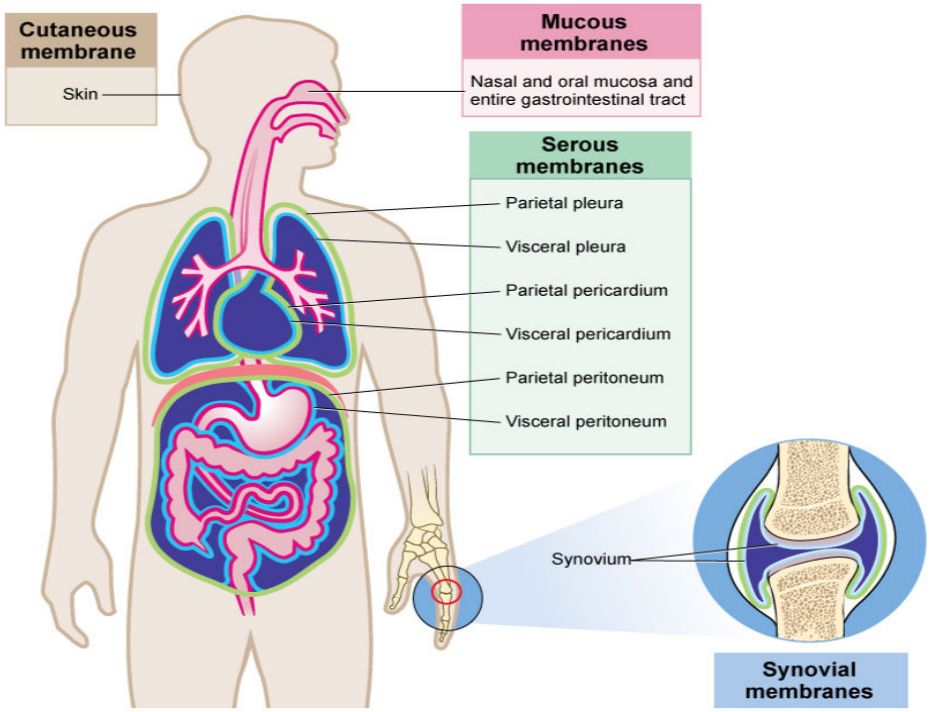
Mucous membrane (AKA: mucosa) Epithelial membrane that lines openings to the outside of the body. Example: nasal membrane.



Membranes

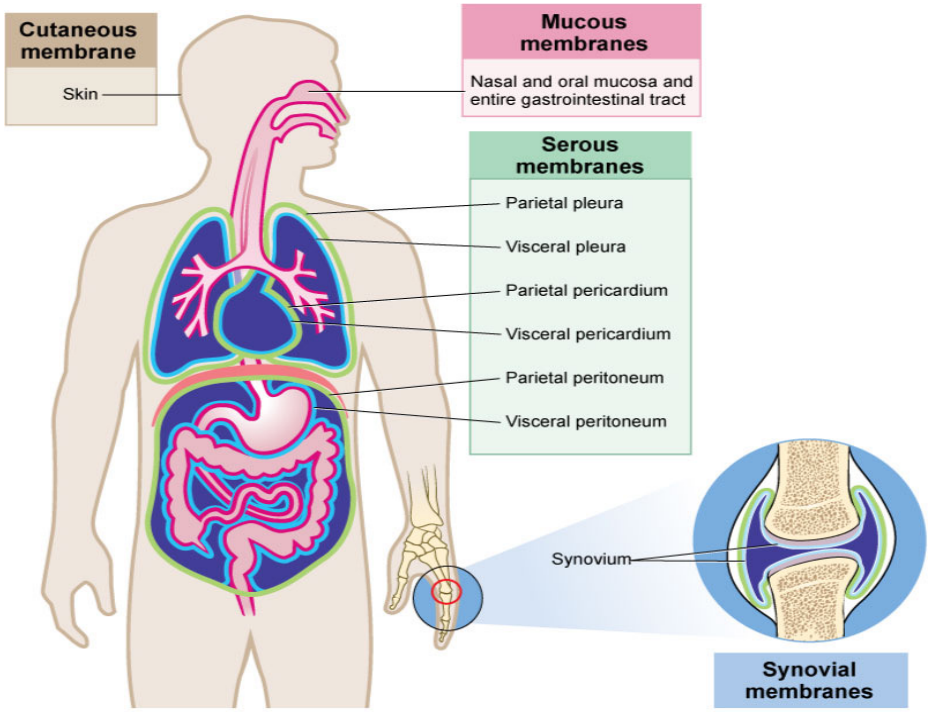
Serous membrane Epithelial membrane that lines __closed__ body cavities that do not open to the outside of the body.

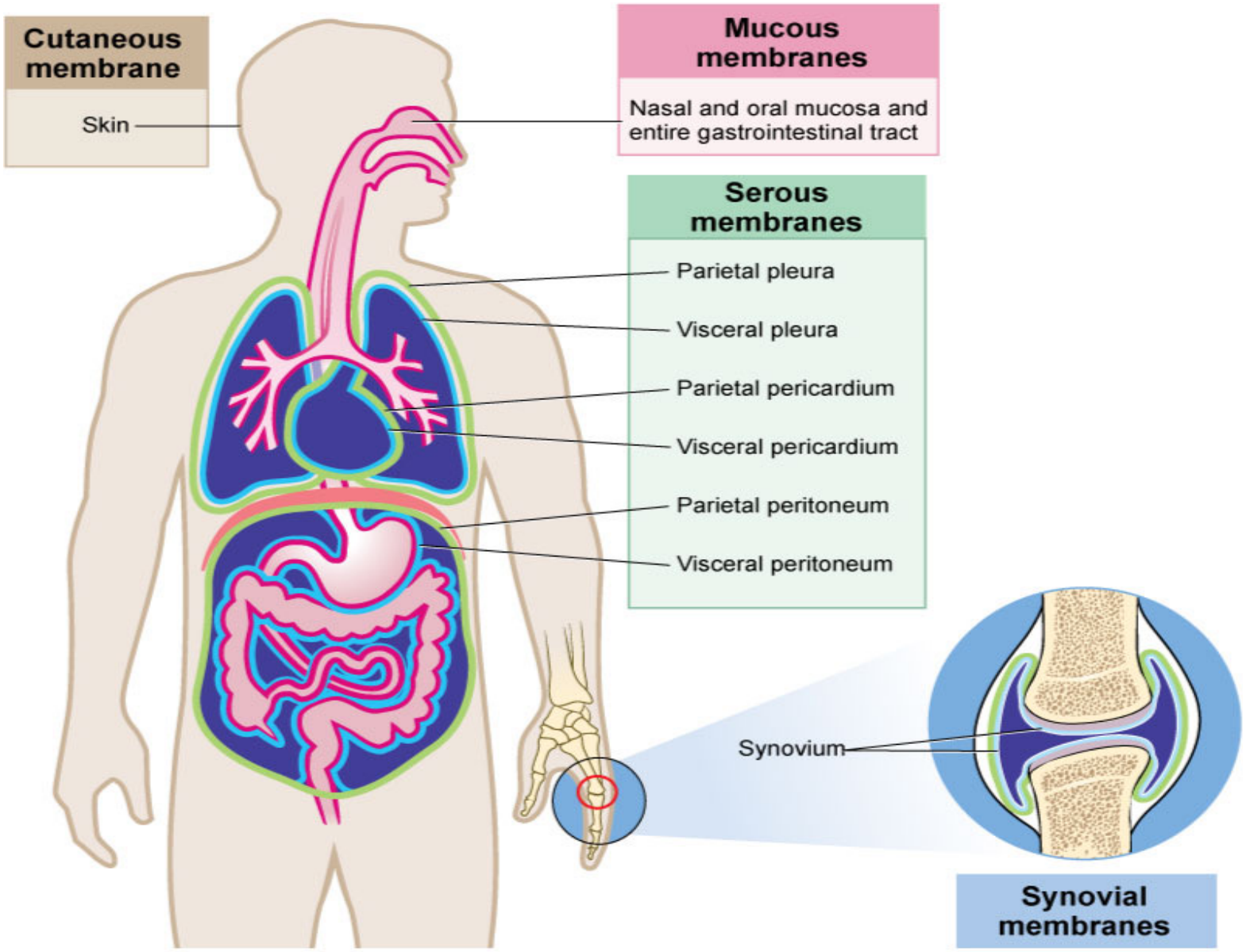
Example: pericardium.



Membranes

Synovial membrane Connective tissue membrane that lines cavities of freely moving joints.




Cutaneous membrane
Skin
Mucous membranes
Nasal and oral mucosa and entire gastrointestinal tract
Serous membranes
Parietal pleura
Visceral pleura
Parietal pericardium
Visceral pericardium
Parietal peritoneum
Visceral peritoneum
Synovium
Synovial membranes

Fill in the Blanks

1. _____ membrane = covers the external body surface.

2. _____ membrane = lines openings to the outside of the body

3. _____ membrane = lines body cavities.

4. _____ membrane = freely moving joints.

Fill in the Blanks

1. Cutaneous membrane = covers the external body surface.

2. Mucous membrane = lines openings to the outside of the body

3. Serous membrane = lines body cavities.

4. Synovial membrane = freely moving joints.

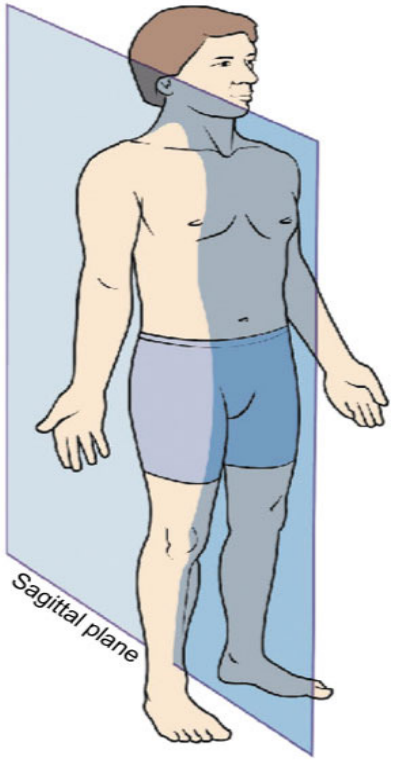
Anatomic Position

Anatomic position Standard body position used in Western medicine. The body is upright and facing forward, arms at the sides, palms facing __forward__, thumbs to the side, feet are about hip distance apart, with toes pointing forward.



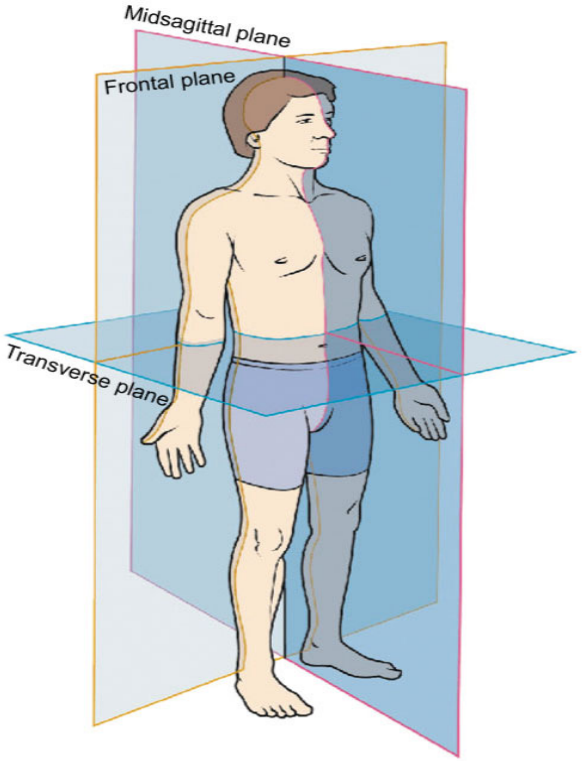
Planes of References

A plane is a flat, two-dimensional surface that extends infinitely in all directions without any thickness (length and width).



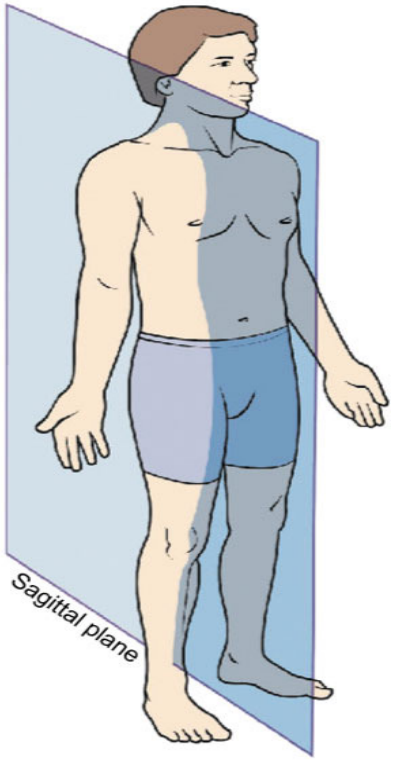
Planes of References

Midsagittal (AKA: median plane) Plane that runs longitudinally or vertically down the body, anterior to posterior, dividing the body into equal right , and left sections.



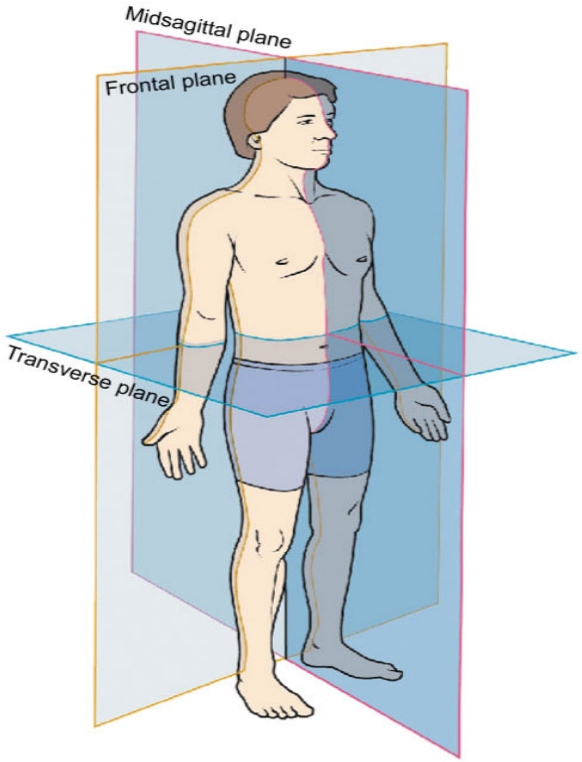
Planes of References

Sagittal plane Plane that passes through the body __parallel__ to the midsagittal plane.



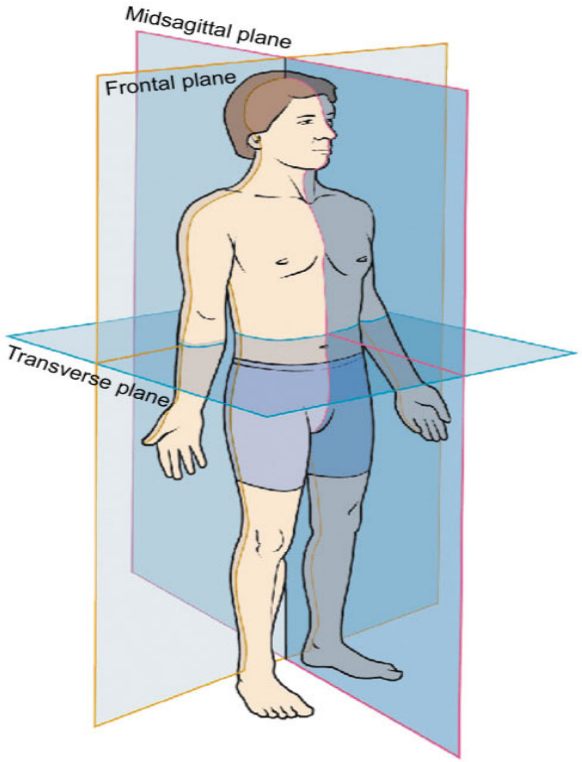
Planes of References

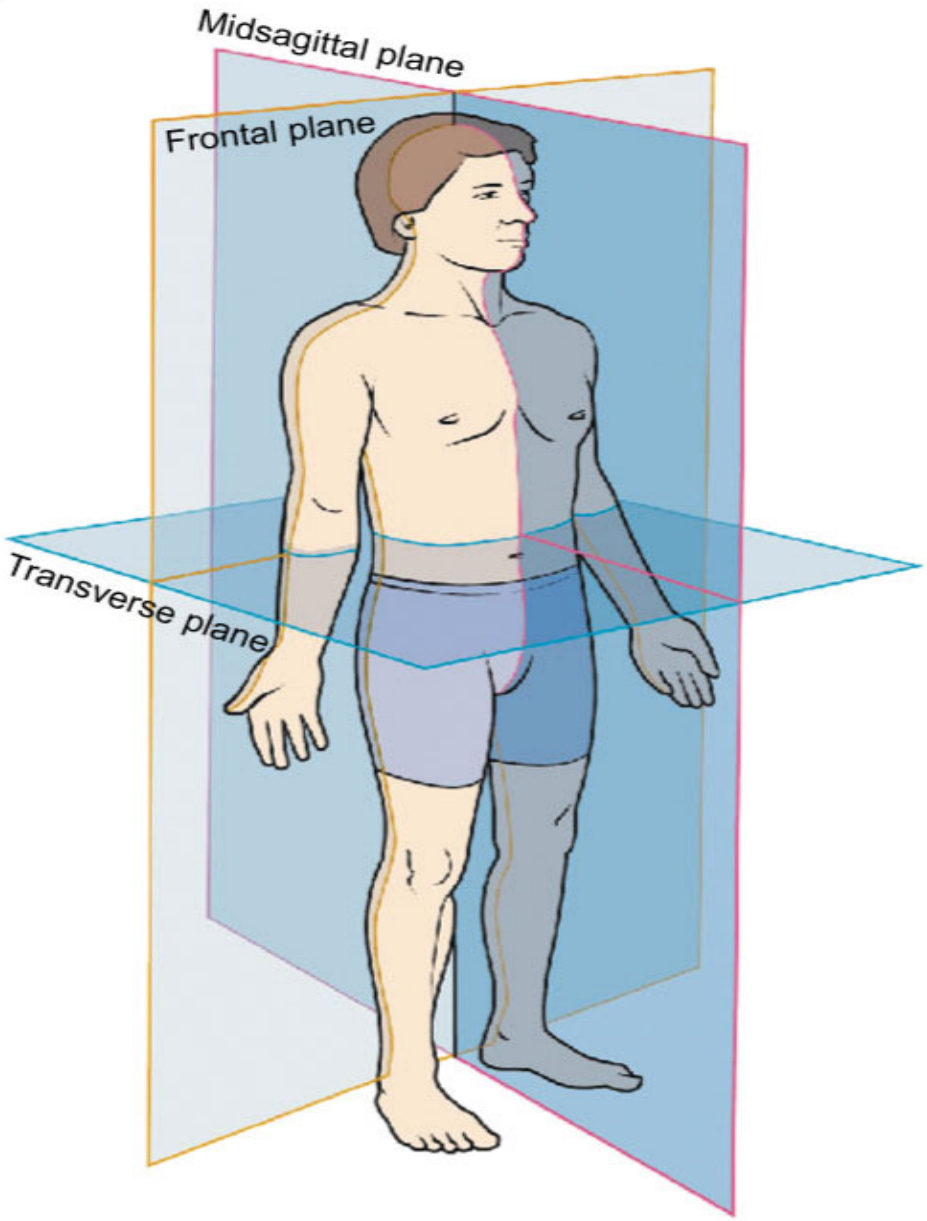
Frontal (AKA: coronal plane) Plane that passes through the body side to side, creating __anterior__ and __posterior__ sections.

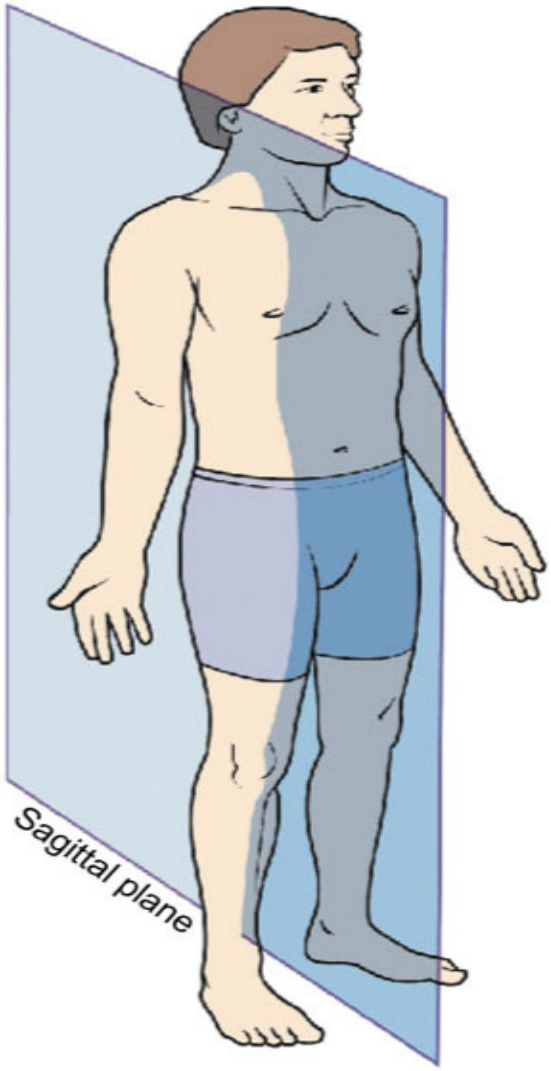


Planes of References

Transverse (AKA: horizontal plane) Plane that passes through the body to create __superior__ and __inferior__ sections.



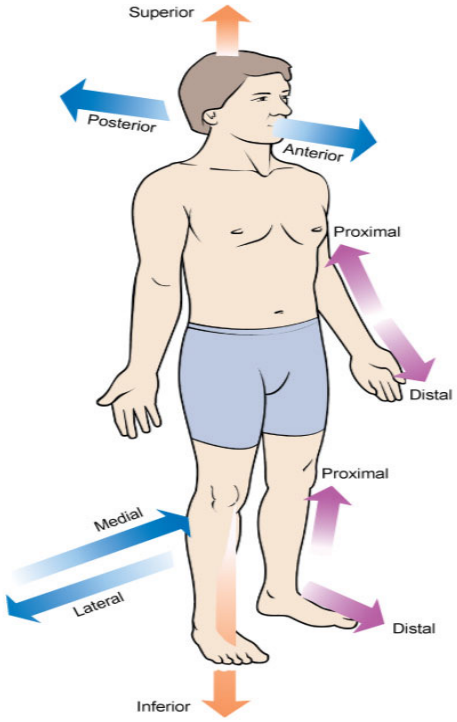

Midsagittal plane
Frontal plane
Transverse plane


Sagittal plane

Directional Terms

Superior (AKA: cranial or cephalic) Situated __above__ or toward the head end.

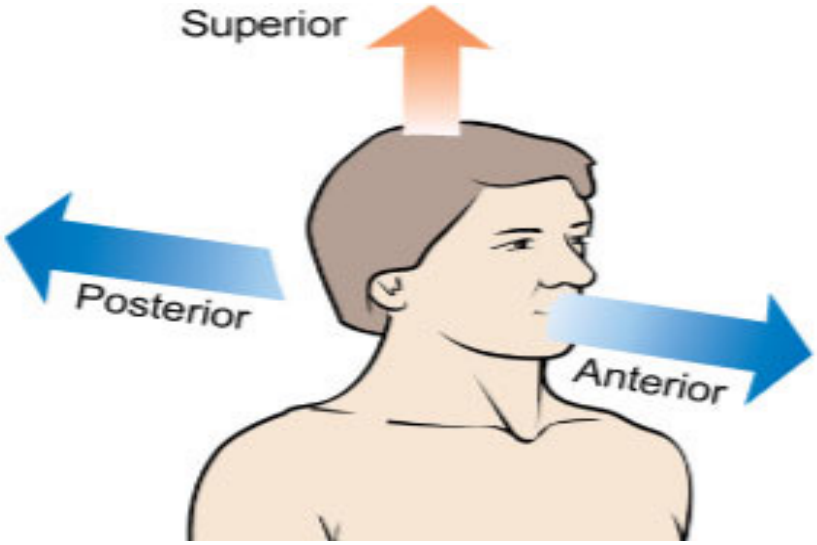
Inferior (AKA: caudal) Situated __below__ or towards the tail end.



Directional Terms

Anterior (AKA: ventral) Pertaining to the __front__ side of a structure.

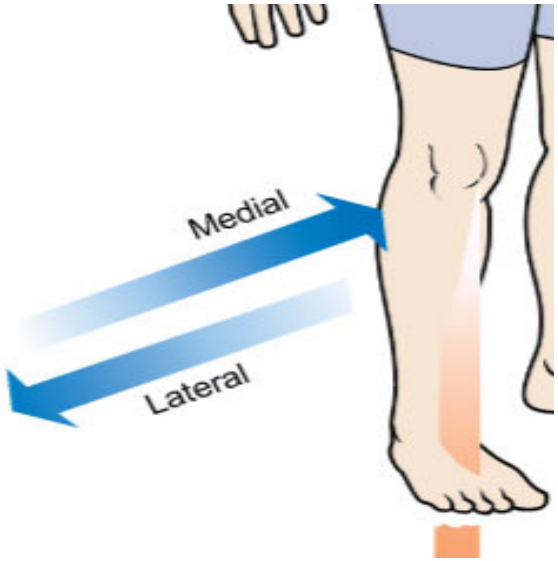
Posterior (AKA: dorsal) Pertaining to the __back__ of a structure.



Directional Terms

Medial Oriented __toward__ or near the midline of the body.

Lateral Oriented farther __away__ from the midline of the body.



Directional Terms

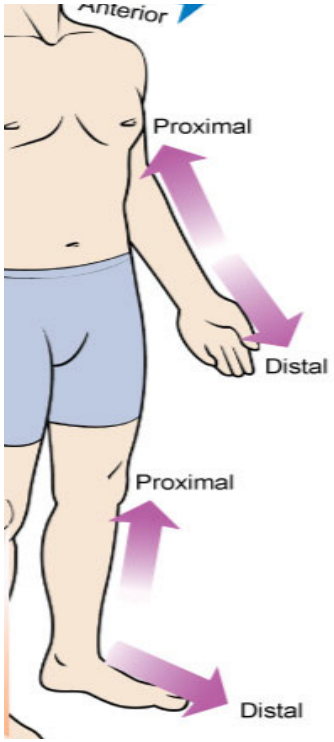
Ipsilateral (AKA: homolateral) Related to the __same__ side of the body.

Contralateral Related to __opposite__ sides of the body.

Directional Terms

Proximal Nearer to the point of reference. Extremities only.

Distal Farther from the point of reference. Extremities only.



Directional Terms

Deep (AKA: central) Pertaining to or situated at the __center__ of the body.

Superficial (AKA: peripheral) Pertaining to the __outside__ surface, periphery, or surrounding the external area of a structure.

7a A&P:
Introduction to the Human Body