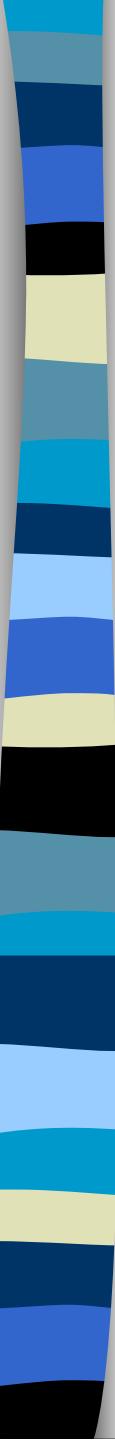




1a

Introduction to the Human Body and

Health & Hygiene (H&H): Disease and Prevention

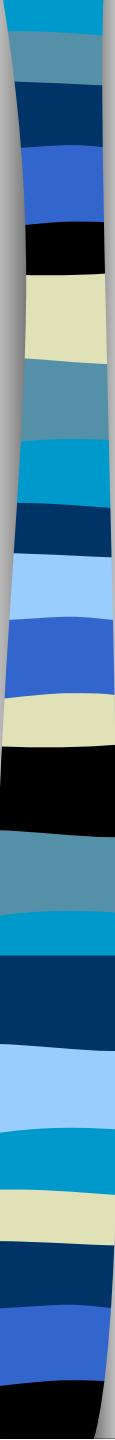


1a Introduction to the Human Body and Health & Hygiene (H&H): Disease and Prevention

5 minutes Attendance, Breath of Arrival, and Reminders

55 minutes Lecture

60 minutes total class time



1a Introduction to the Human Body and Health & Hygiene (H&H): Disease and Prevention

Class Reminders

Assignments:

- 3a Student Handbook Review Questions (A: 115-118)
- 4a Autobiography and Photo (B-4) – *email to your instructor AND tlcschool.com*
- 7a Written Exam Review Questions (A: 119-130)

Quizzes:

- 6a Kinesiology Quiz (A-73, and A: 75-80)
 - 20 multiple-choice questions in 20 minutes
 - Study terms on page A-51 and
 - AOIs for deltoid, traps, lats, teres major, rhomboids, triceps, and erectors

Preparation for upcoming classes:

- 2a Kinesiology: Names and Locations of Bones and Posterior Muscles
 - Trail Guide: Trapezius
 - Salvo: Pages 416-417
 - Packet E: 17
 - RQ Packet A: 120 and A 136
- 2b H&H: Tools of the Trade
 - Salvo: Chapter 3
 - Packet F: 1-16
 - RQ Packet A: 121-122

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.



1a Introduction to the Human Body

E: 11-14

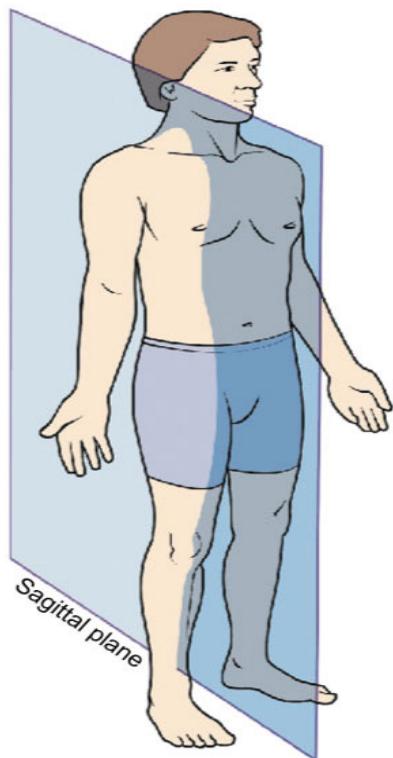
Anatomic Position

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.



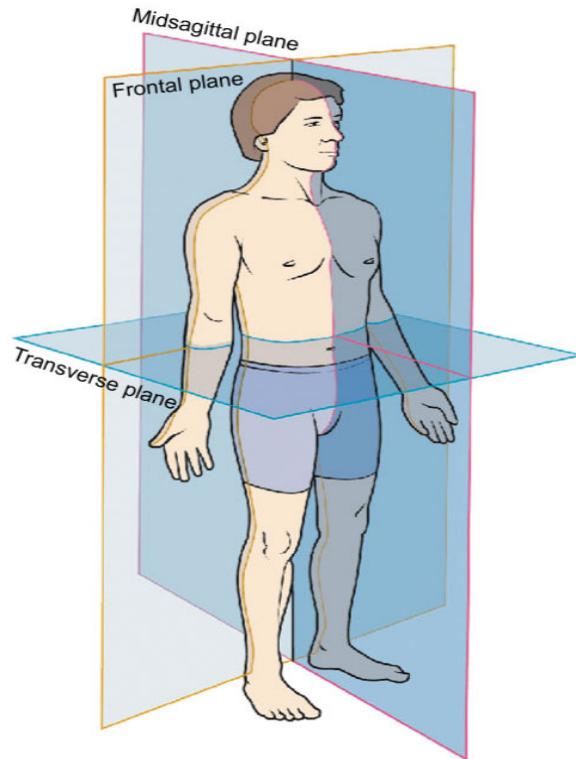
Planes of References

Plane A flat surface determined by three points in space such as height, depth, and width.



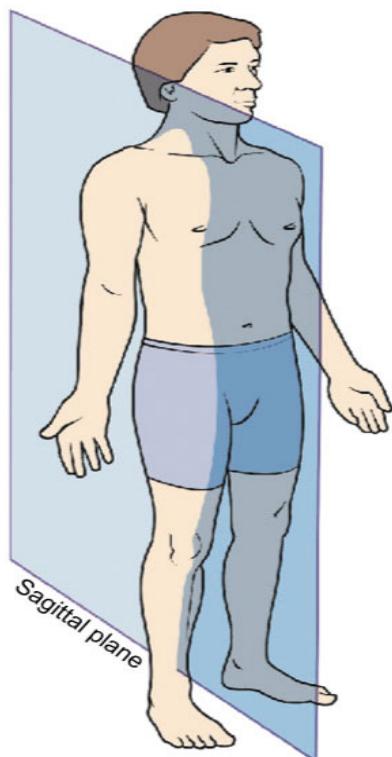
Planes of References

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.



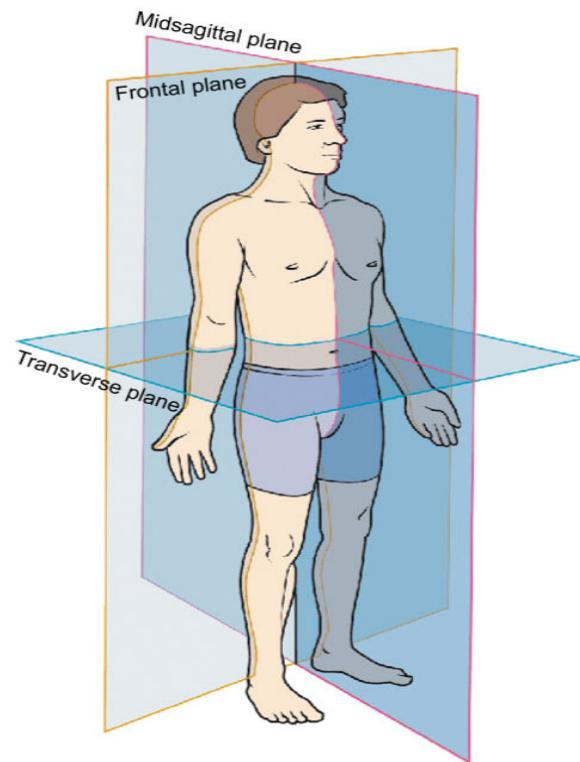
Planes of References

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



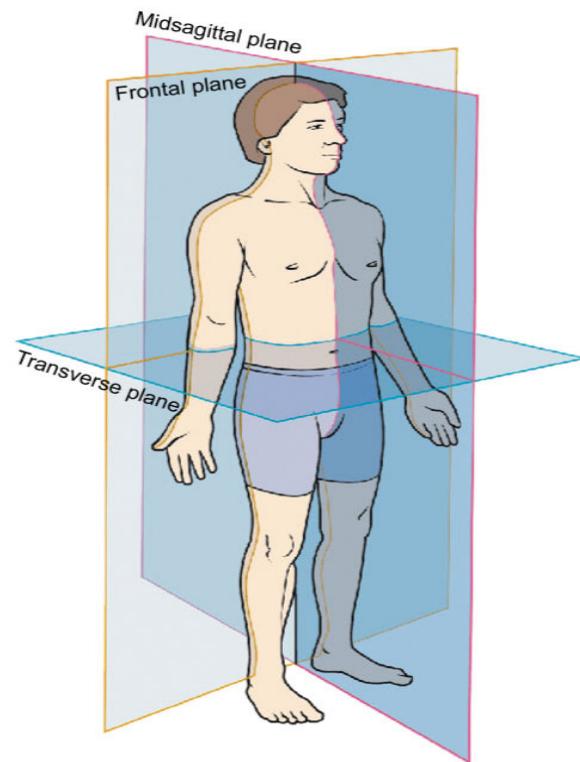
Planes of References

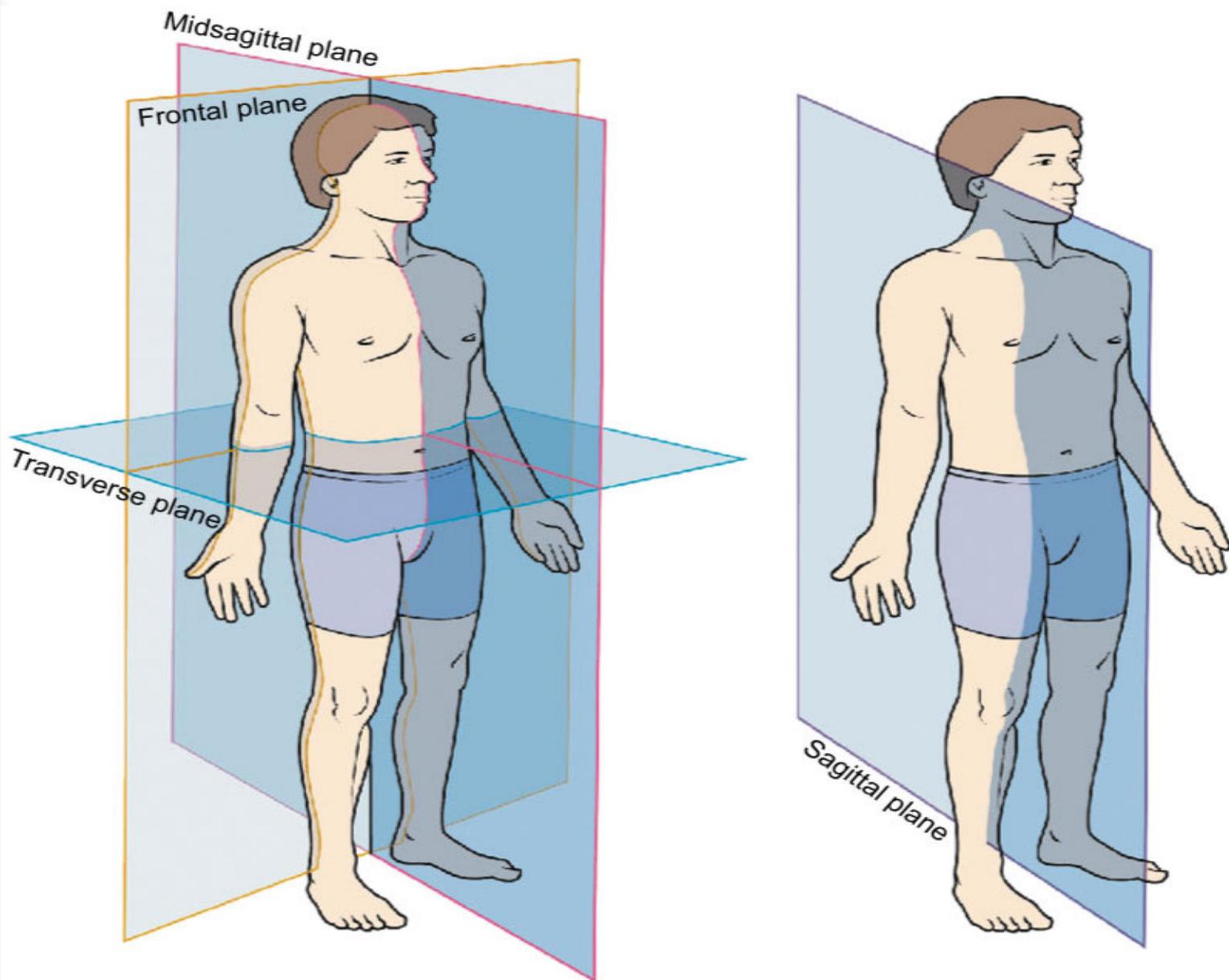
Frontal (AKA: coronal plane) Plane that passes through the body side to side, creating anterior and posterior sections.



Planes of References

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

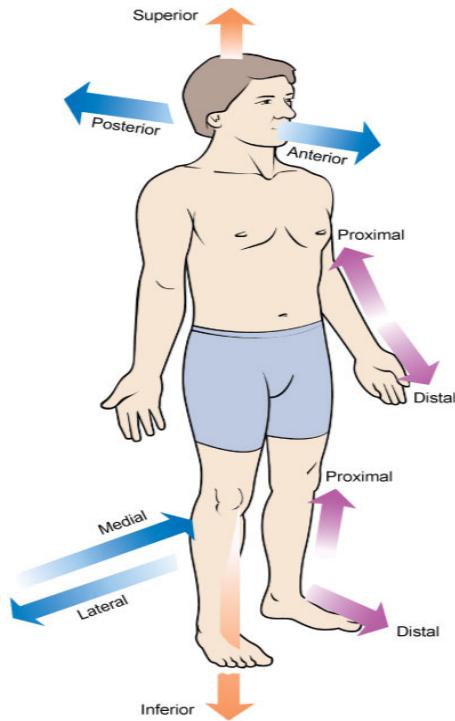




Directional Terms

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

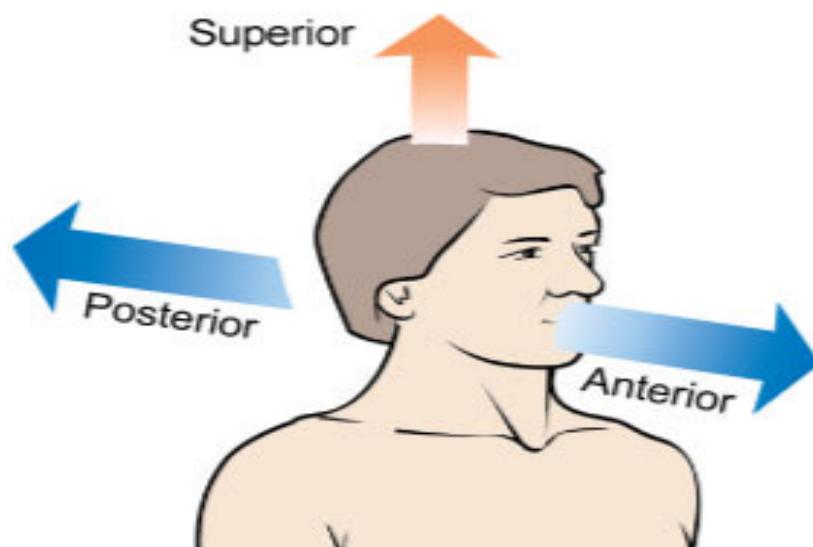
Inferior (AKA: caudal) Situated below or towards the tail end.



Directional Terms

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

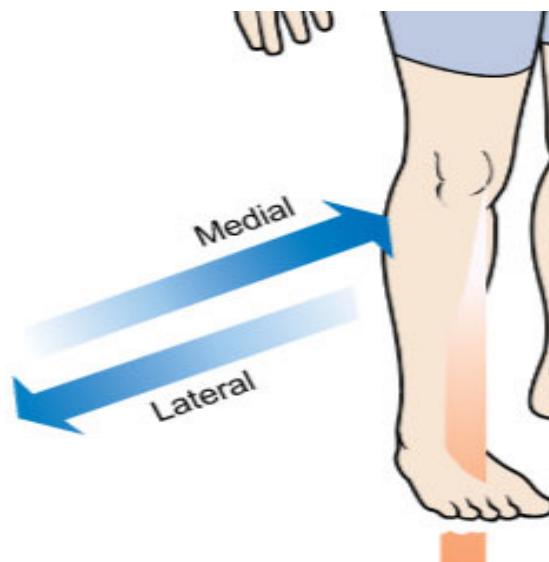
Posterior (AKA: dorsal) Pertaining to the back of a structure.



Directional Terms

Medial Oriented toward or near the midline of the body.

Lateral Oriented farther away from the midline of the body.



Directional Terms

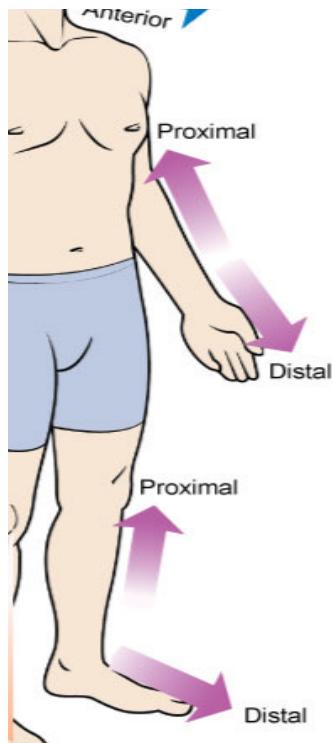
Ipsilateral (AKA: homolateral) Related to the same side of the body.

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.

Fill in the Blanks

_____ Situated above or toward the head end.

_____ Situated below or towards the tail end.

_____ Pertaining to the front side of a structure.

_____ Pertaining to the back of a structure.

_____ Oriented toward or near the midline of the body.

_____ Oriented farther away from the midline of the body.

_____ Related to the same side of the body.

_____ Related to opposite sides of the body.

_____ Nearer to the point of reference. Extremities only.

_____ Farther from the point of reference. Extremities only.

_____ Pertaining to or situated at the center of the body.

_____ Pertaining to the outside surface, periphery, or

surrounding the external area of a structure.

Fill in the Blanks

Superior Situated above or toward the head end.

Inferior Situated below or towards the tail end.

Anterior Pertaining to the front side of a structure.

Posterior Pertaining to the back of a structure.

Medial Oriented toward or near the midline of the body.

Lateral Oriented farther away from the midline of the body.

Ipsilateral Related to the same side of the body.

Contralateral Related to opposite sides of the body.

Proximal Nearer to the point of reference. Extremities only.

Distal Farther from the point of reference. Extremities only.

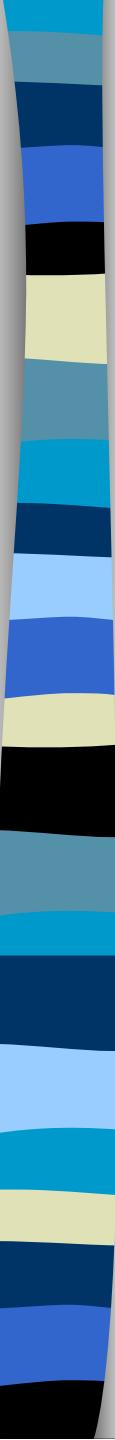
Deep Pertaining to or situated at the center of the body.

Superficial Pertaining to the outside surface, periphery, or surrounding the external area of a structure.



1a Introduction to the Human Body

E - 17



Divisions of the Skeletal System – Page E:17 (from 22a)

Adult Human 206 bones total

Axial Skeleton 80 bones

Appendicular Skeleton 126 bones

Divisions of the Skeletal System

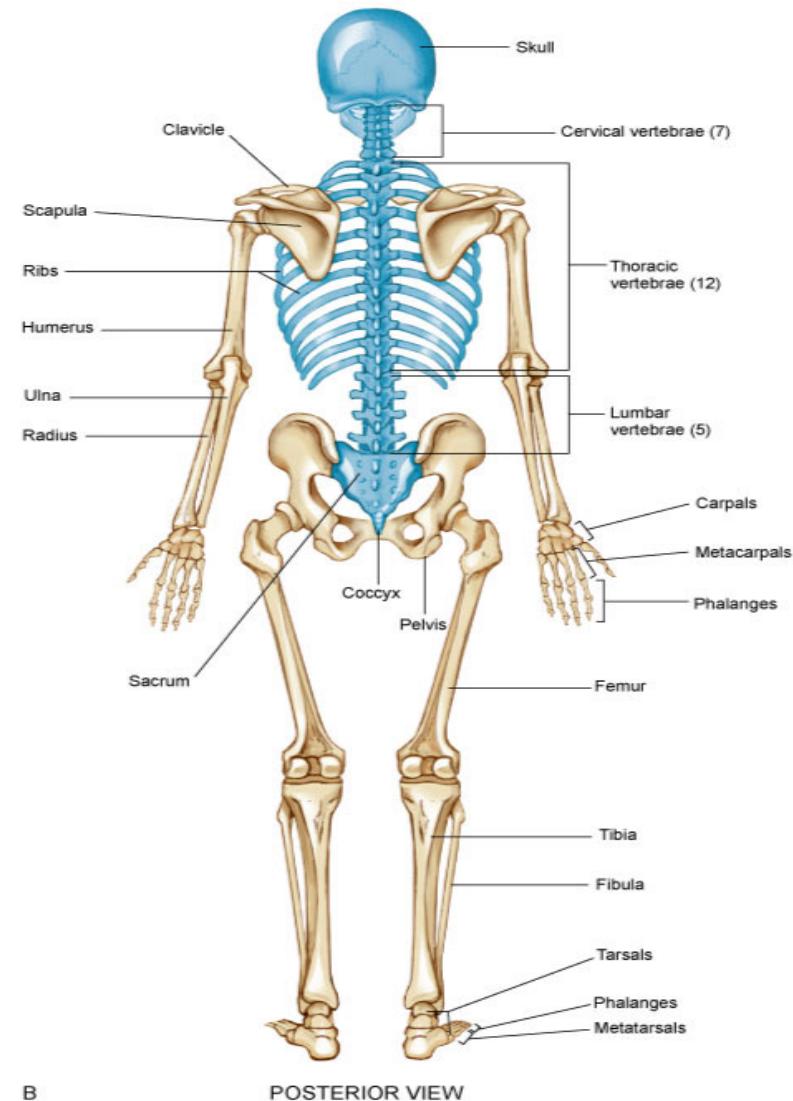
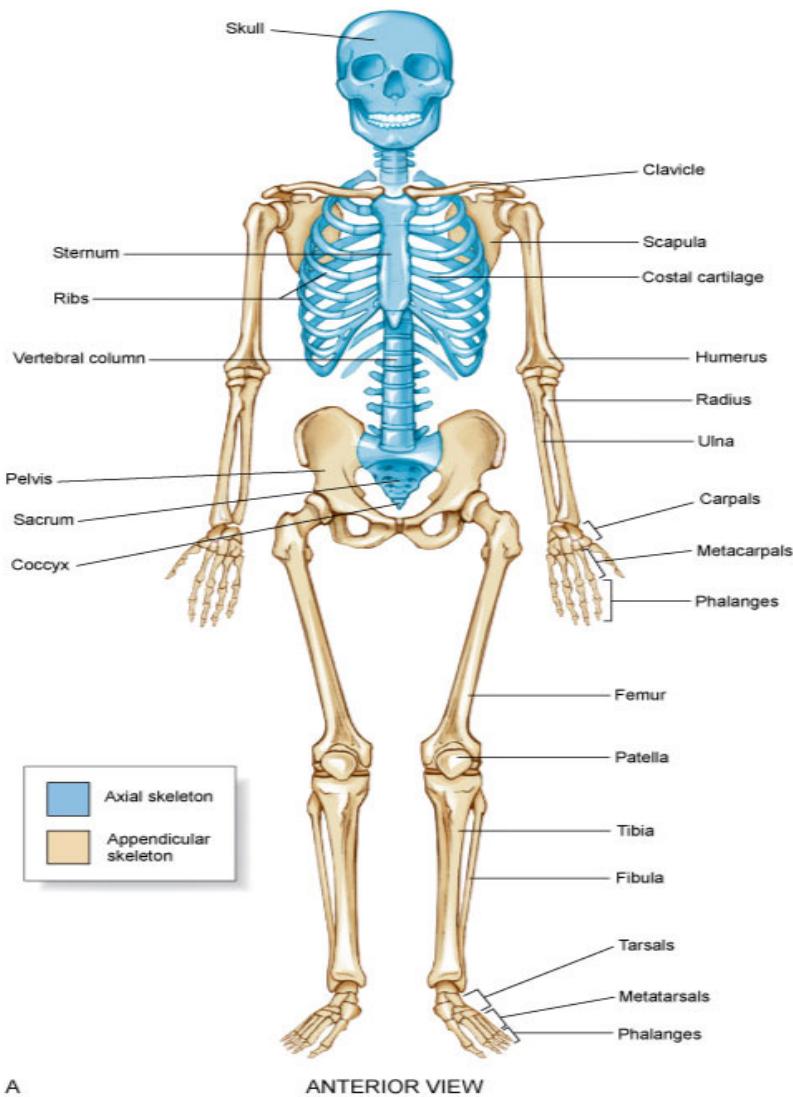
80 Axial Skeleton

- The skeleton that a snake would have
- No arms or legs

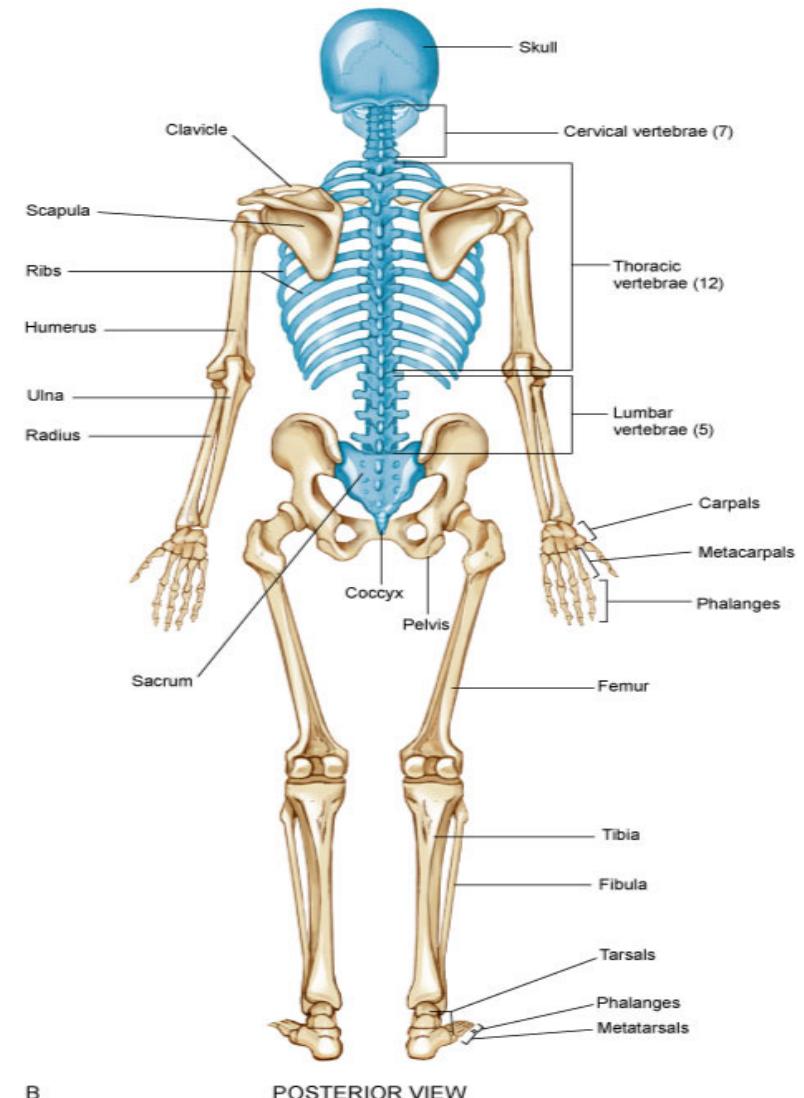
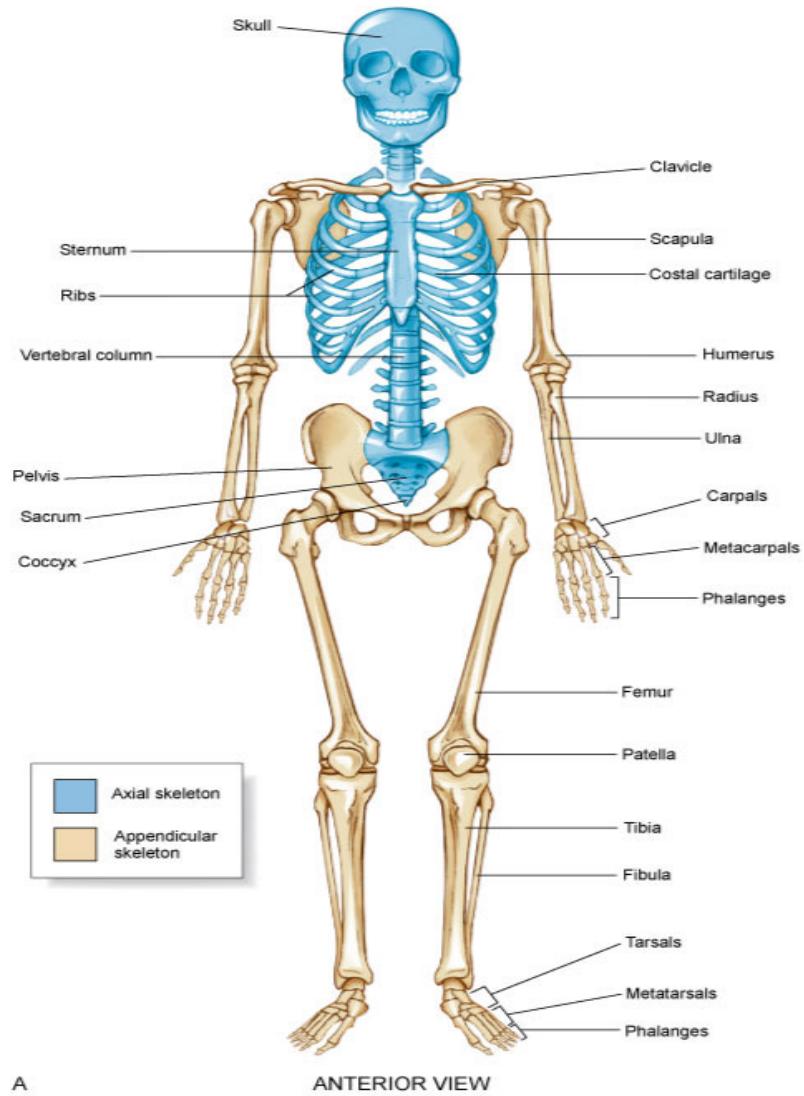
126 Appendicular Skeleton

- The shoulder girdle and arms
- The pelvic girdle and legs

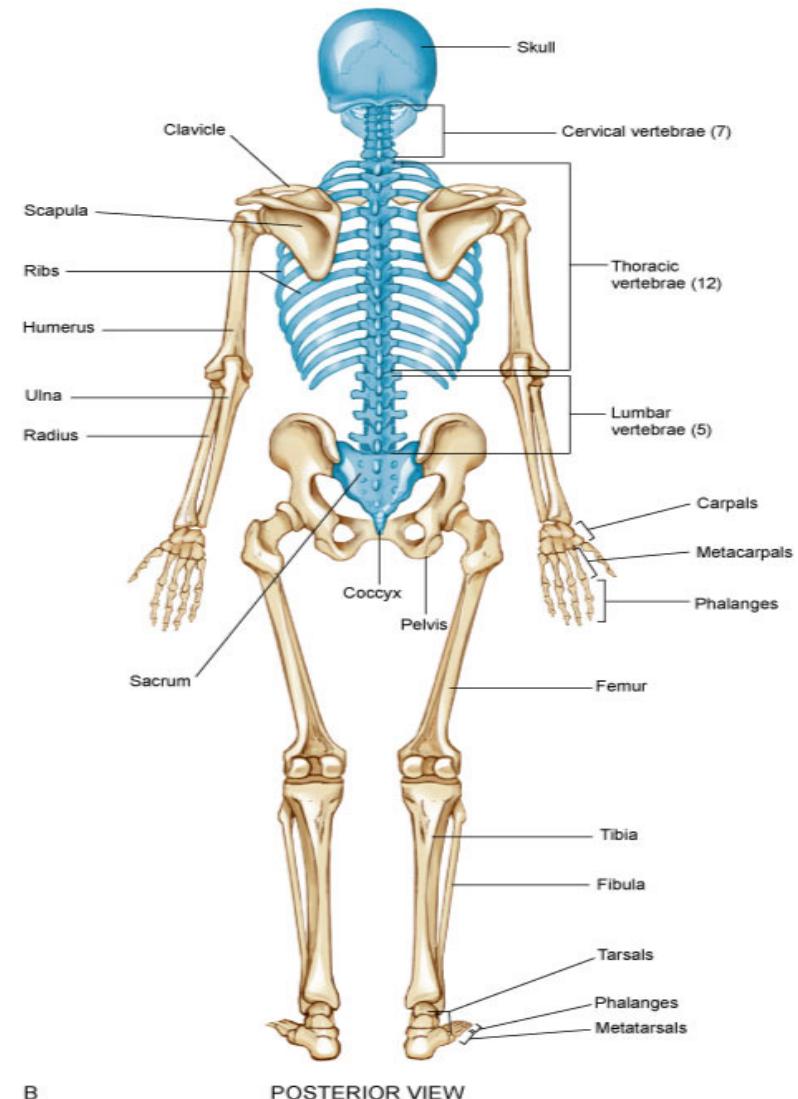
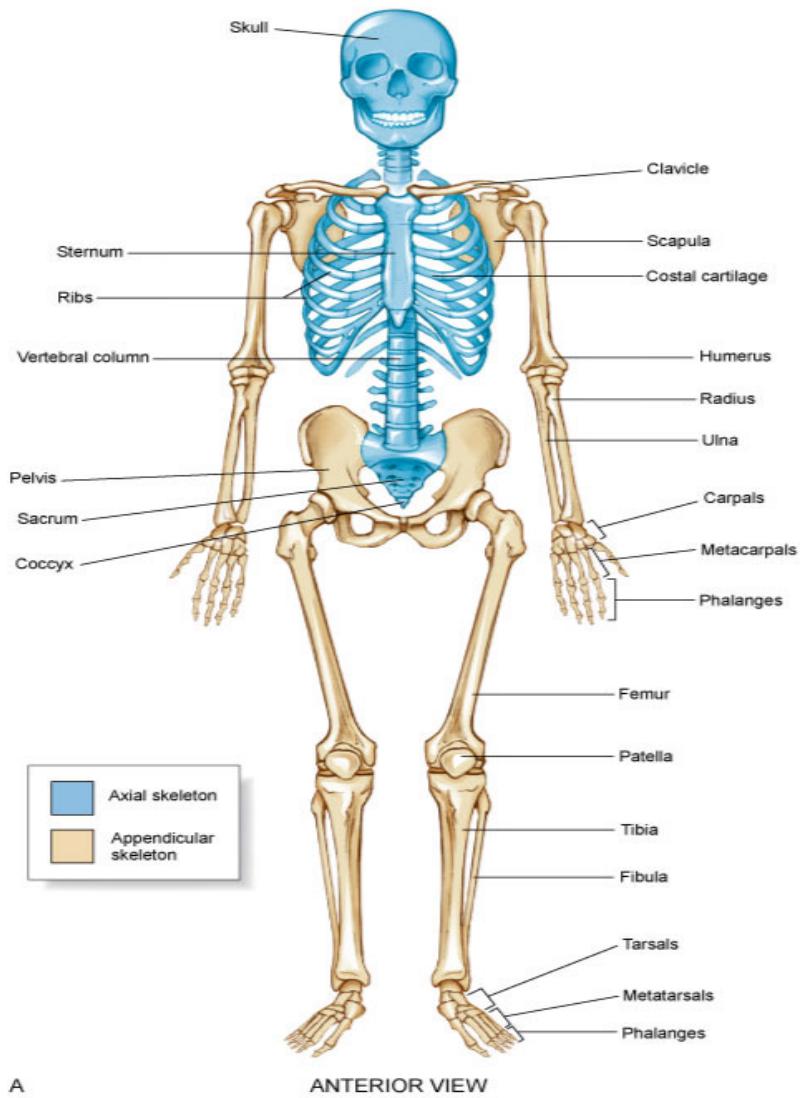
Axial Skelton in BLUE (80 bones)



Appendicular Skeleton in GOLD/WHITE (126 bones)



Human Skeleton (206 bones)





80 Axial Skeleton

80 Axial Skeleton

29 Skull

26 Vertebral column

1 Sternum

24 Ribs

80 Total

80 Axial Skeleton

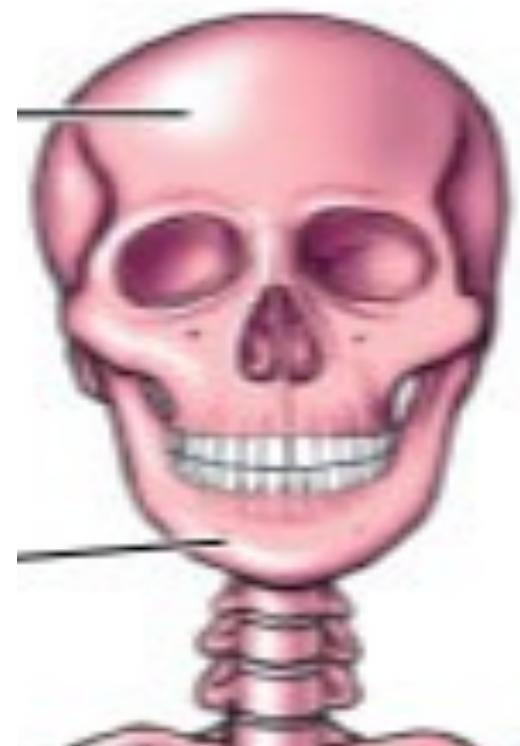
29 Skull

8 Cranium

14 Face

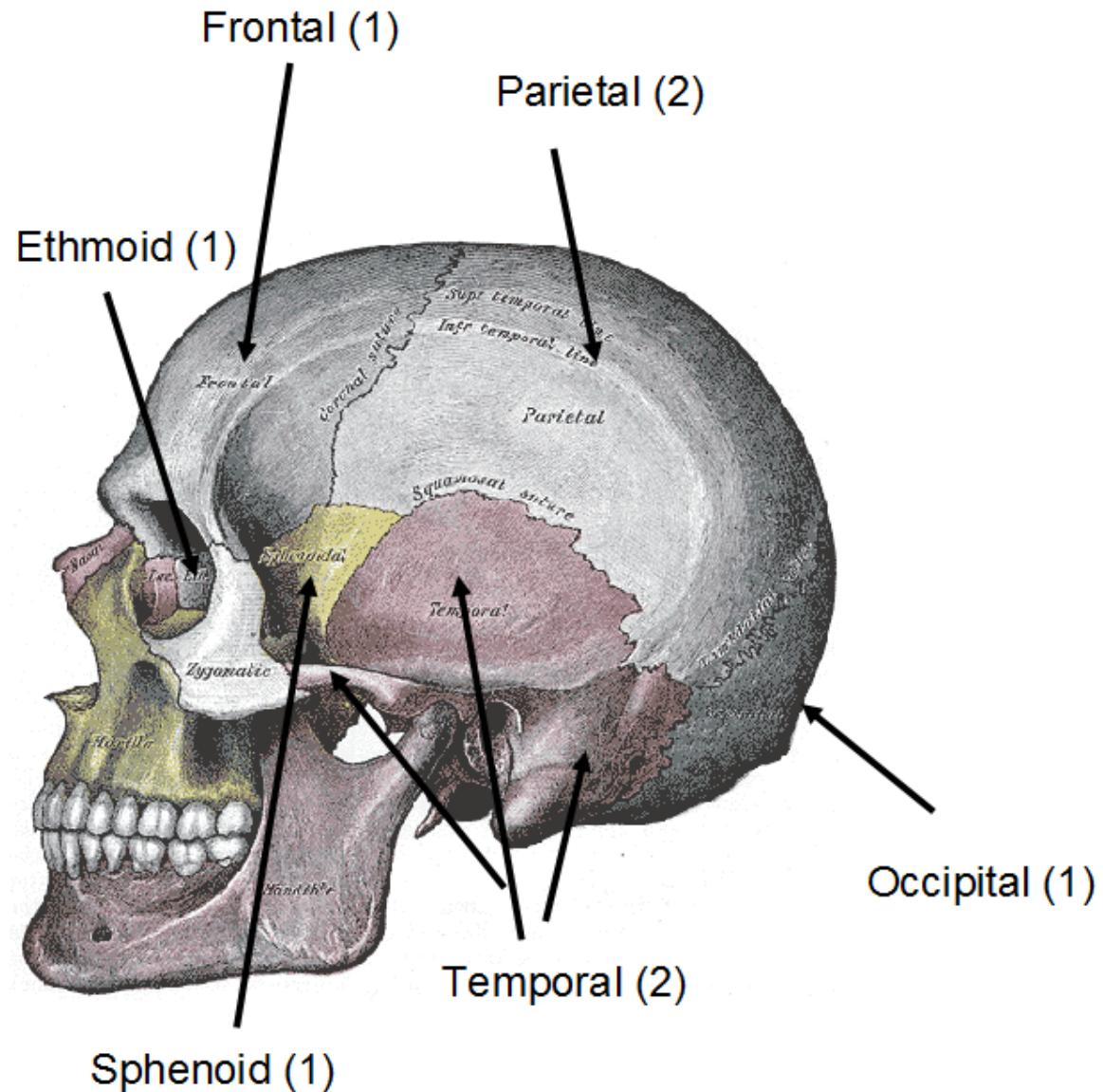
6 Ear

1 Hyoid



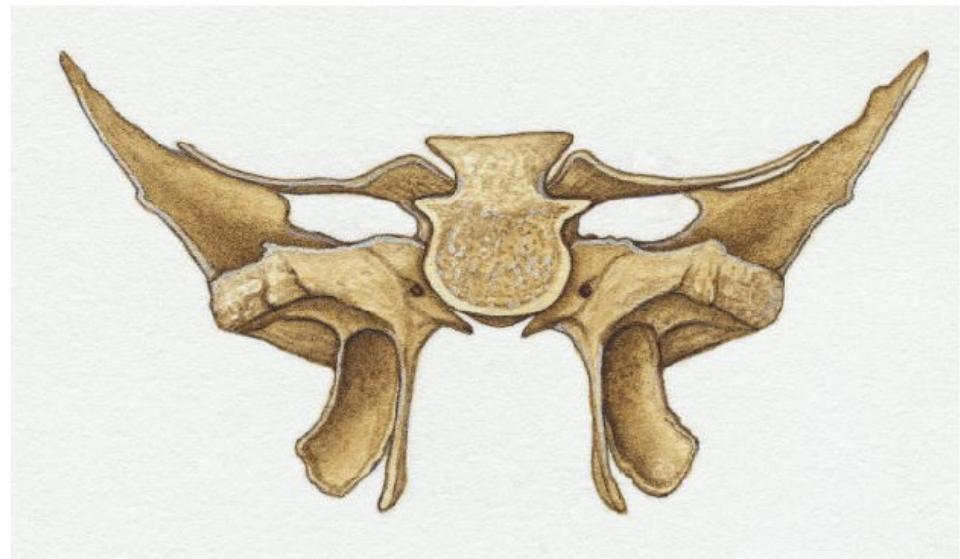
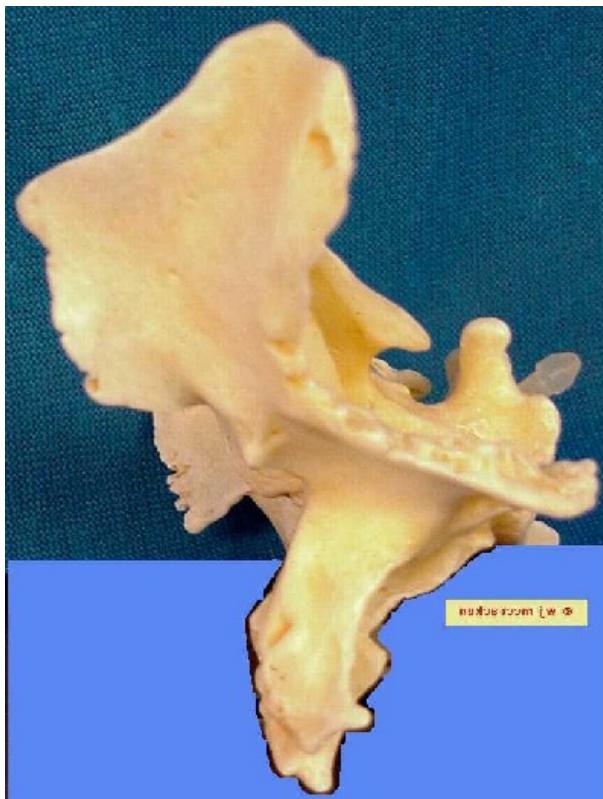
80 Axial Skeleton

8 Cranium



80 Axial Skeleton

1 Sphenoid

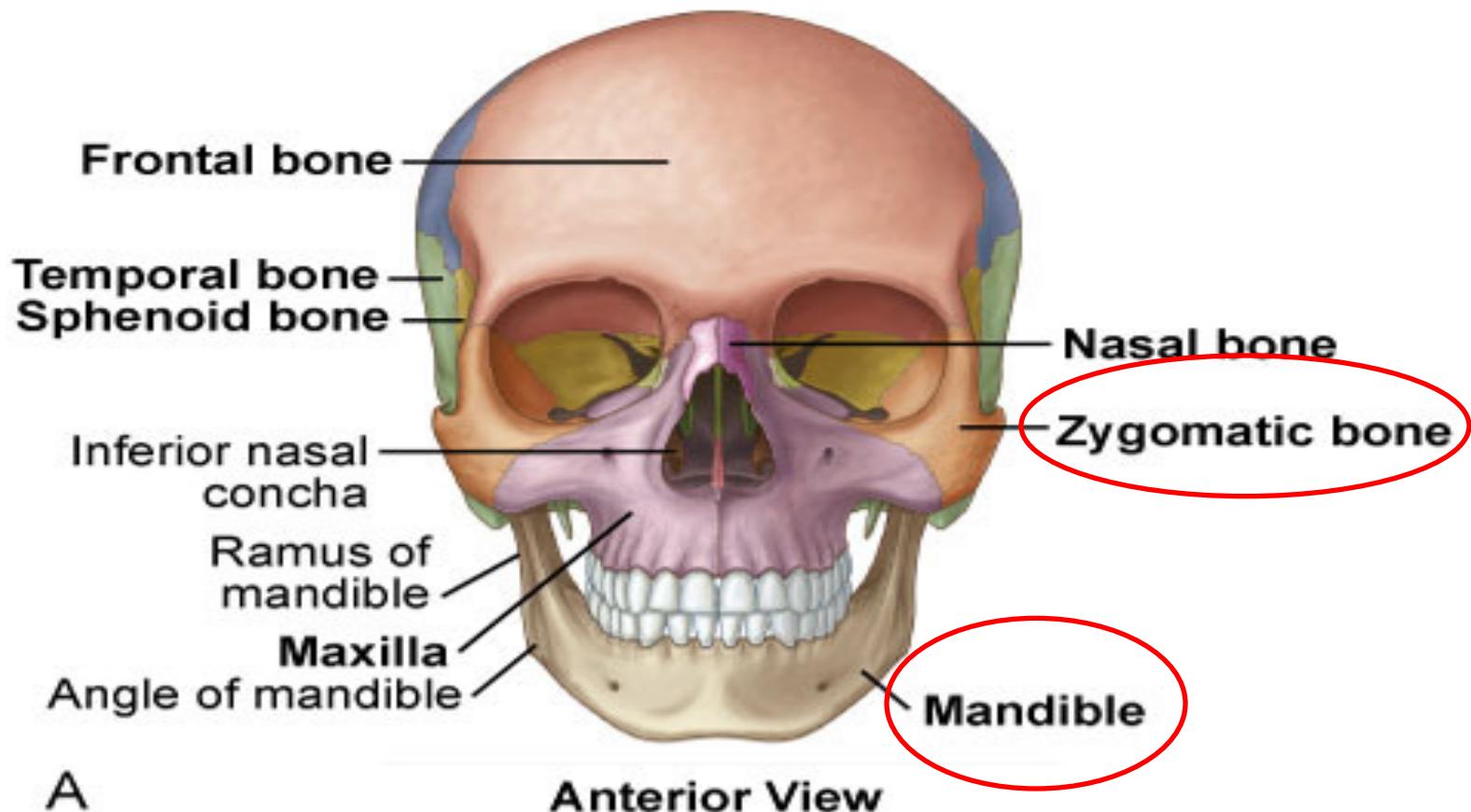


80 Axial Skeleton

14 Face

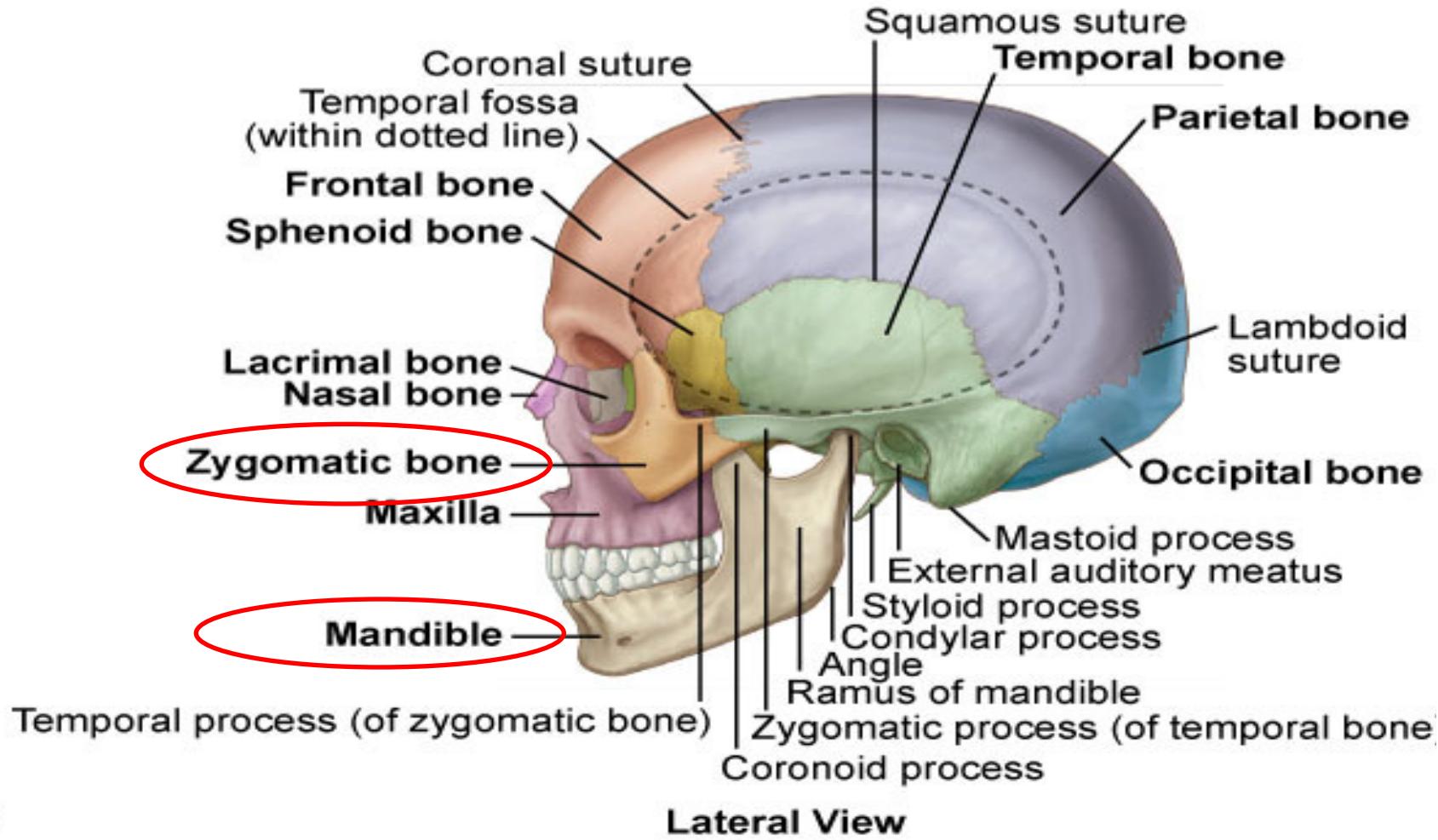
zygomatic 2

mandible 1



80 Axial Skeleton

14 Face



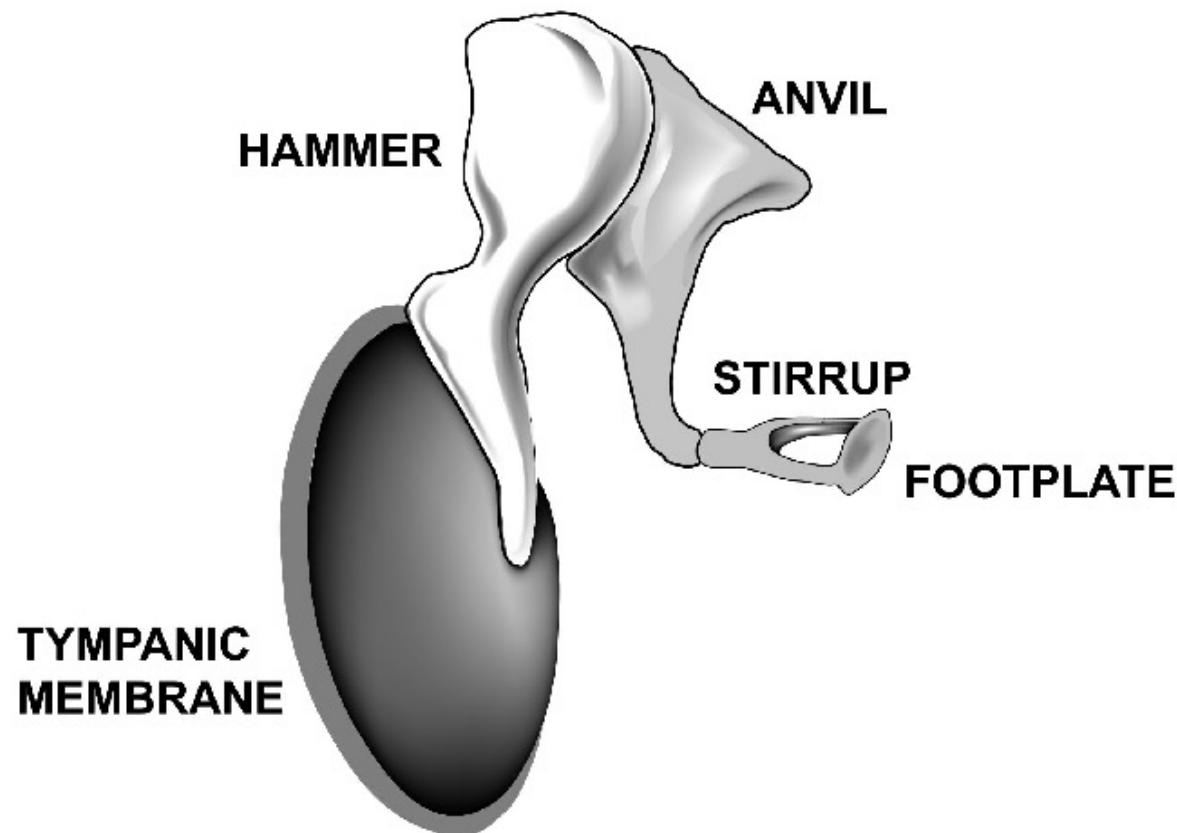
80 Axial Skeleton

6 Ear

2 malleus (hammer)

2 incus (anvil)

2 stapes (stirrup)



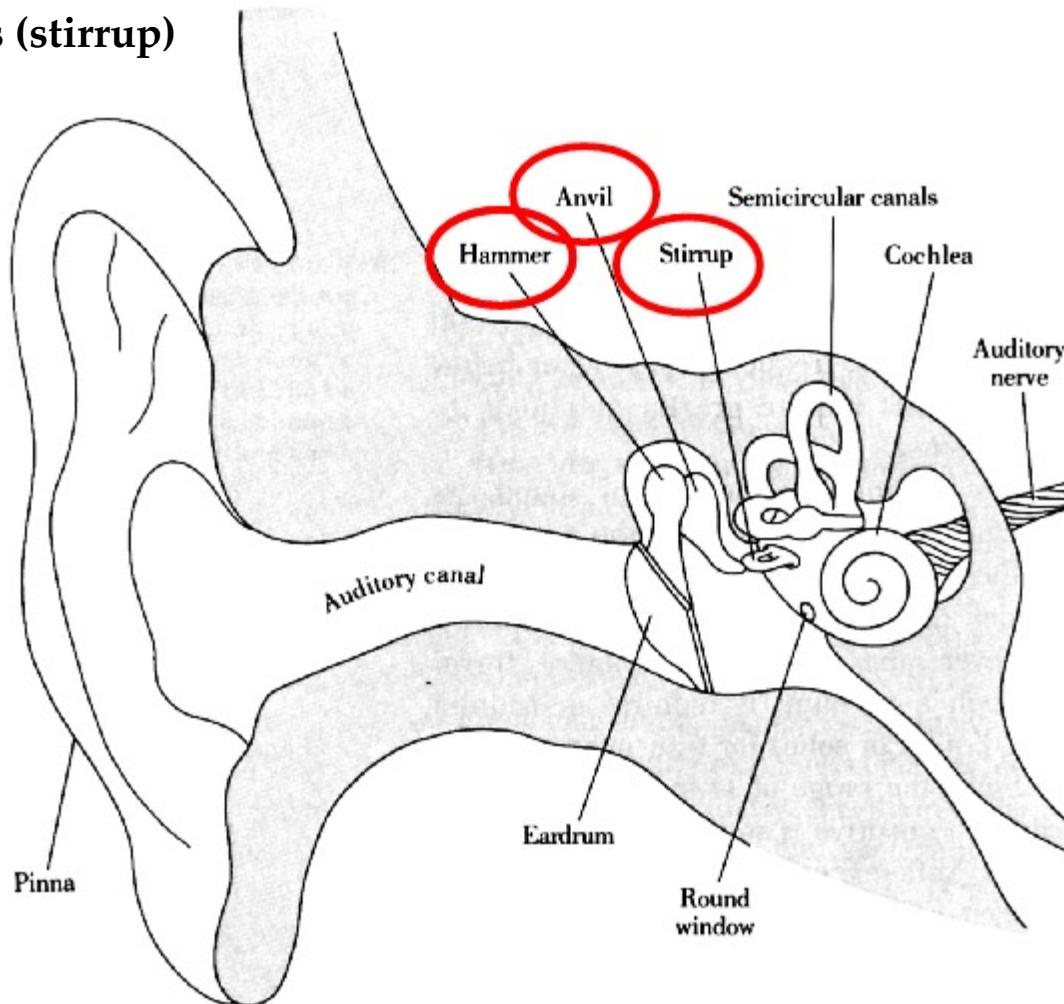
80 Axial Skeleton

6 Ear

2 malleus (hammer)

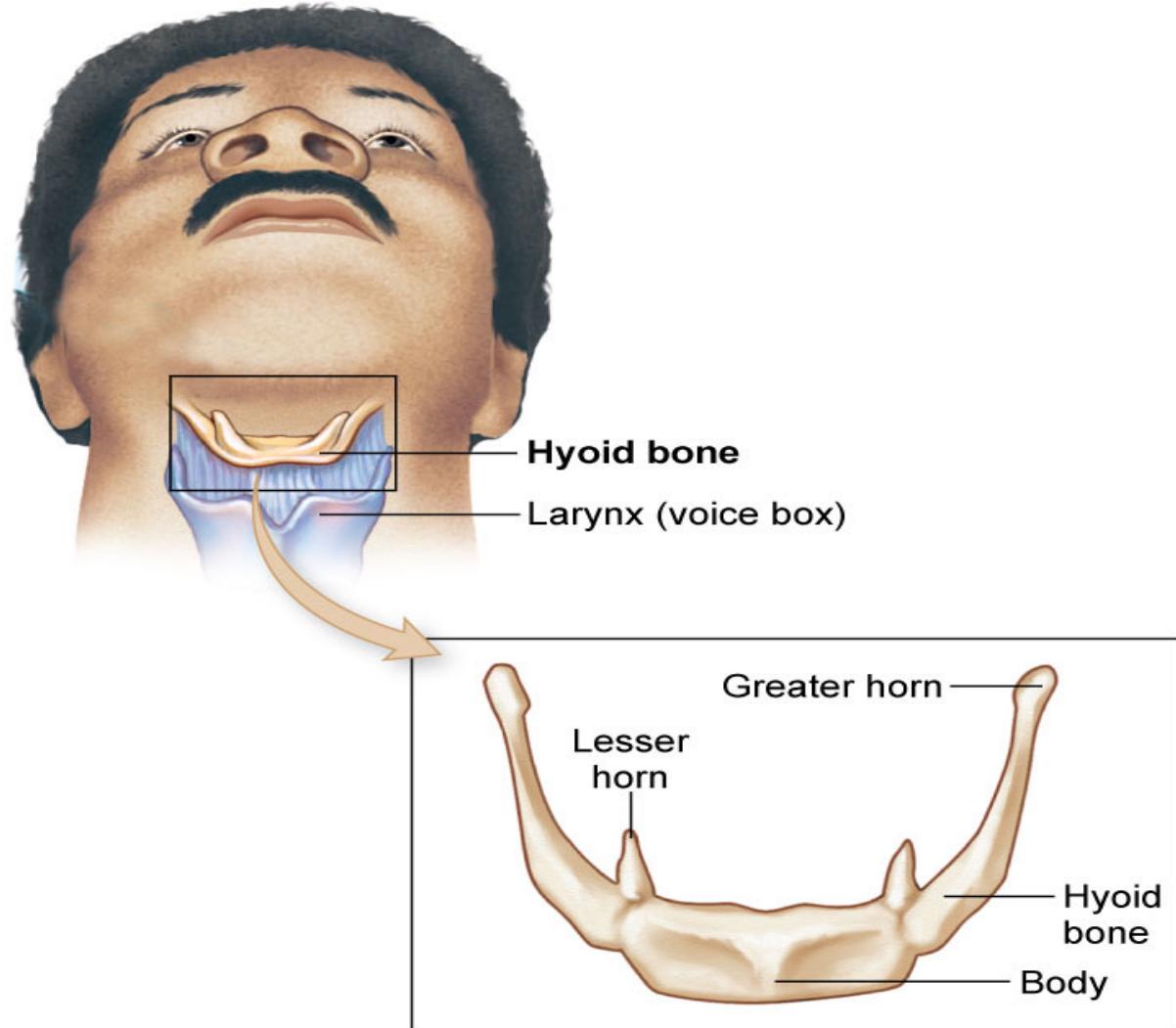
2 incus (anvil)

2 stapes (stirrup)



80 Axial Skeleton

1 Hyoid



From Patton KT, Thibodeau GA: *Anatomy & physiology*, ed 7, St. Louis, 2010, Mosby.

Fig. 21-19. Hyoid bone, anterior view.

80 Axial Skeleton

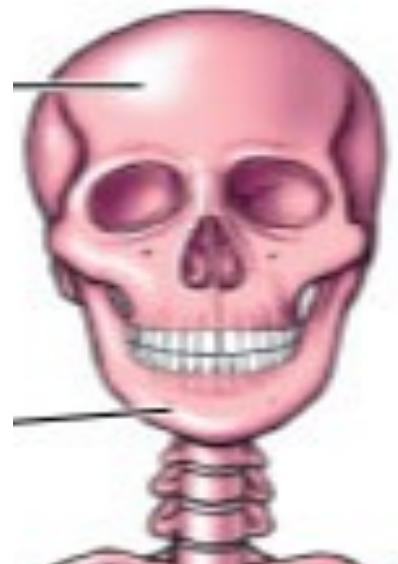
29 Skull

8 Cranium

14 Face

6 Ear

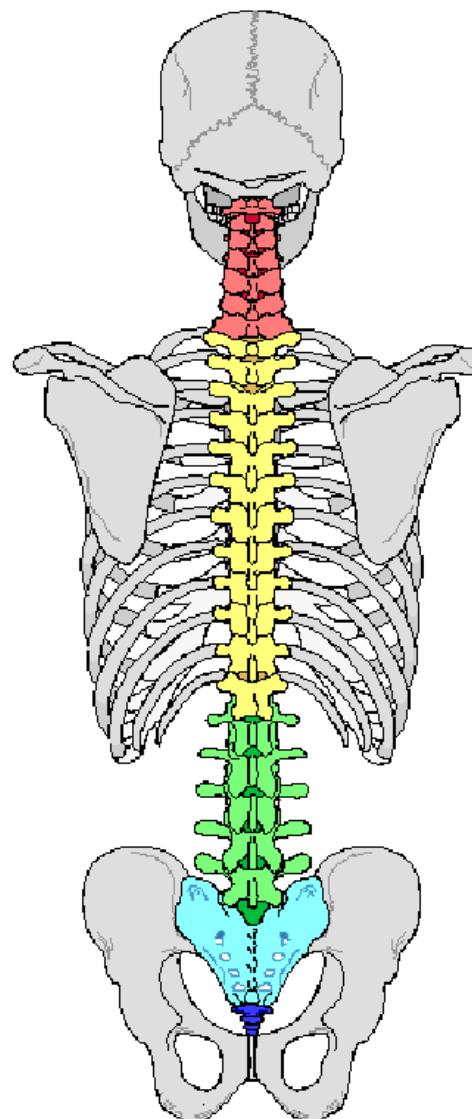
1 Hyoid



80 Axial Skeleton

26 Vertebral Column

7 Cervical
12 Thoracic
5 Lumbar
1 Sacrum
1 Coccyx



80 Axial Skeleton

26 Vertebral Column

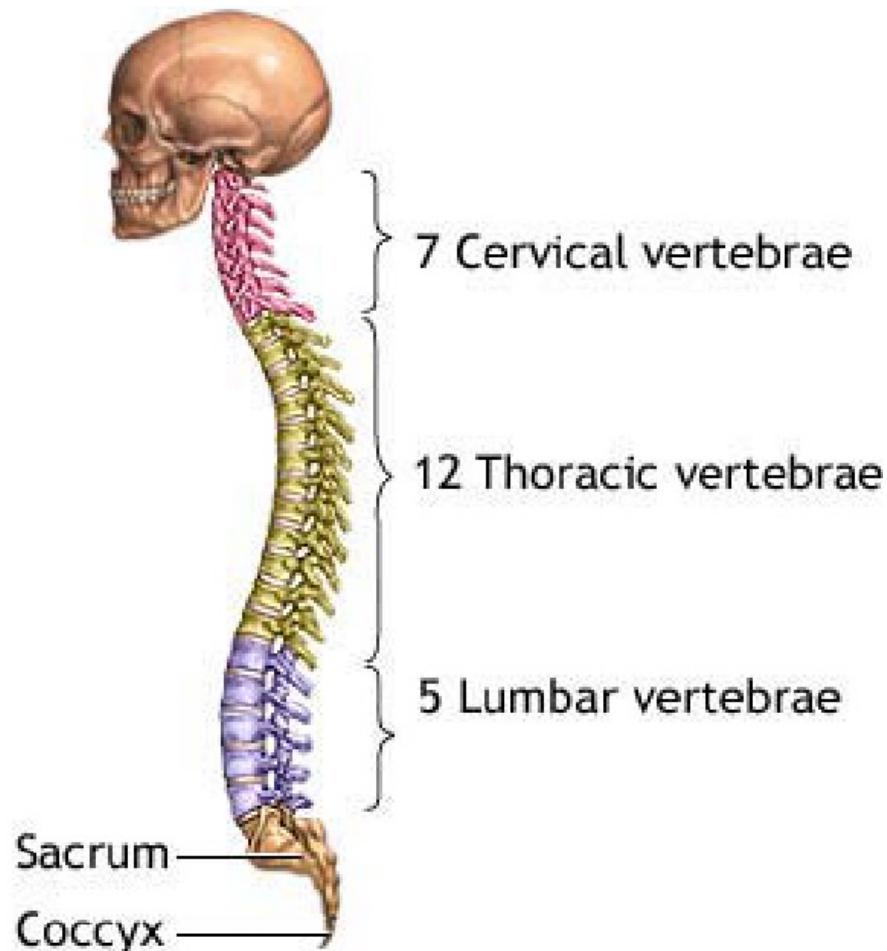
7 Cervical

12 Thoracic

5 Lumbar

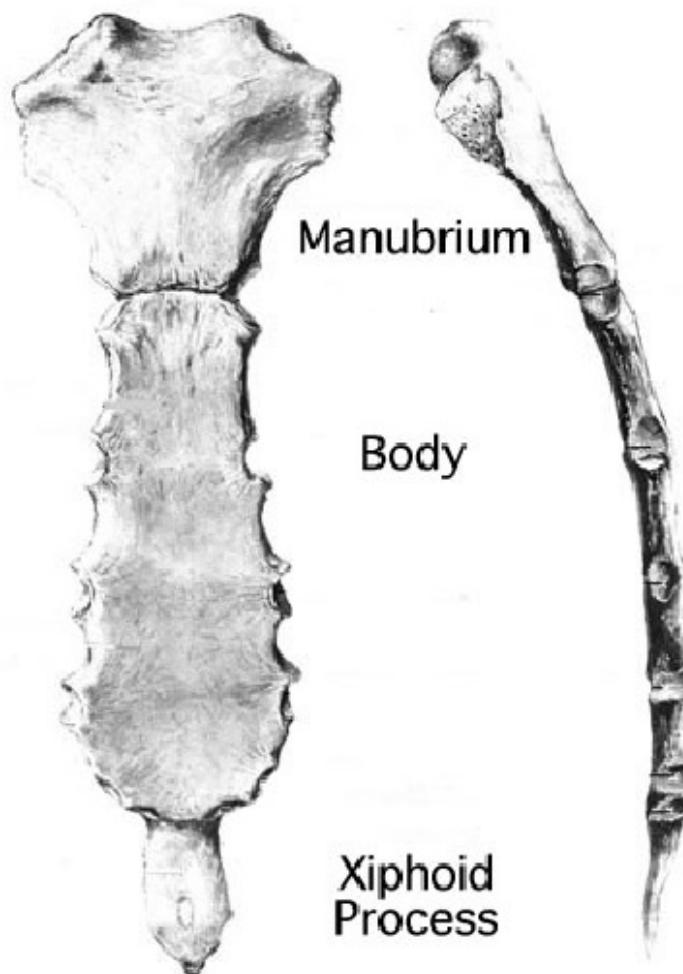
1 Sacrum

1 Coccyx



80 Axial Skeleton

1 Sternum



80 Axial Skeleton

24 Ribs

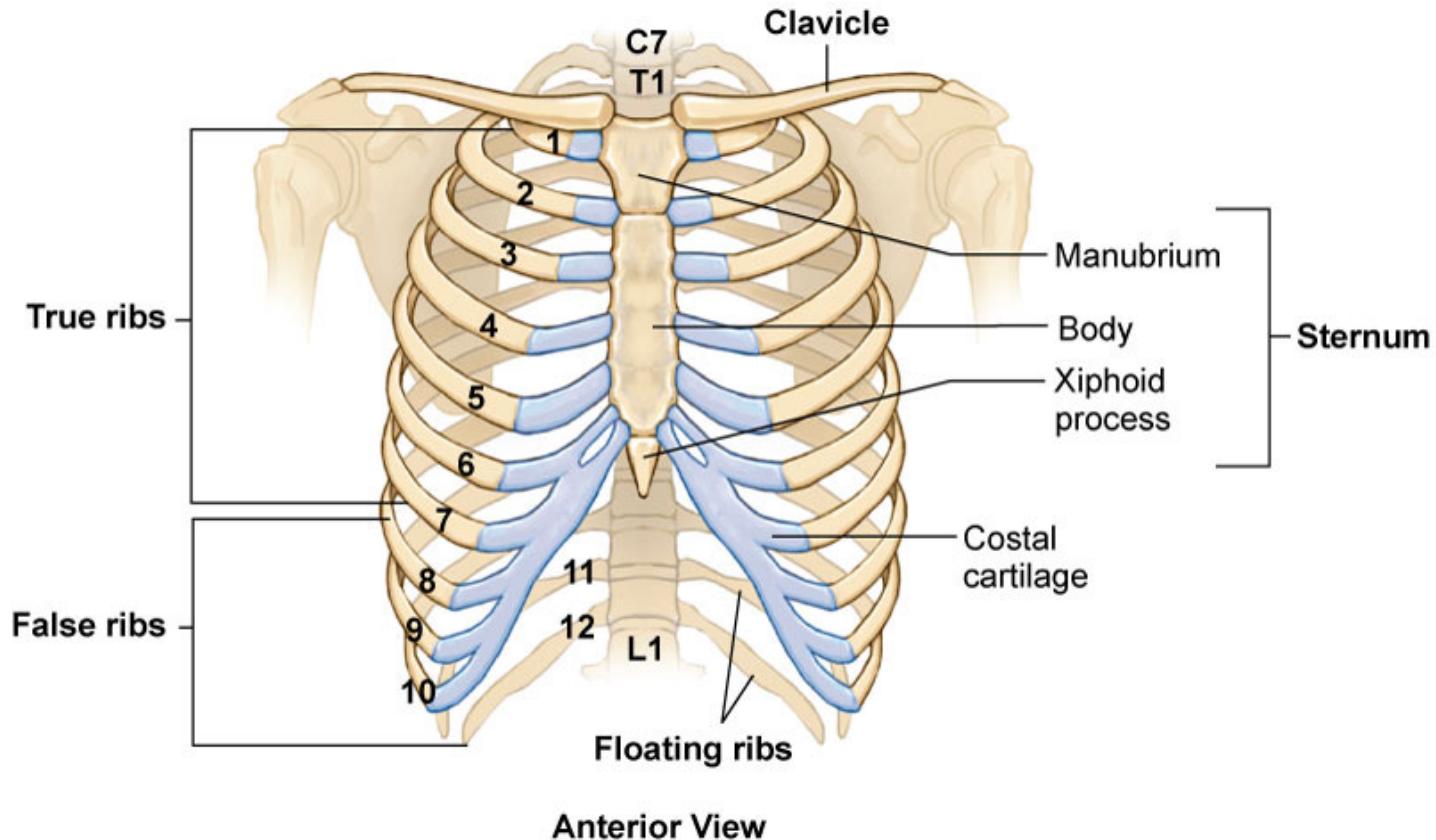
14 True ribs

Directly attaching to the sternum by way of cartilage.

10 False ribs including 4 Floating ribs

False- Not *directly* attached to the sternum.

Floating- Not attached to the sternum at *all*.





126 Appendicular Skeleton

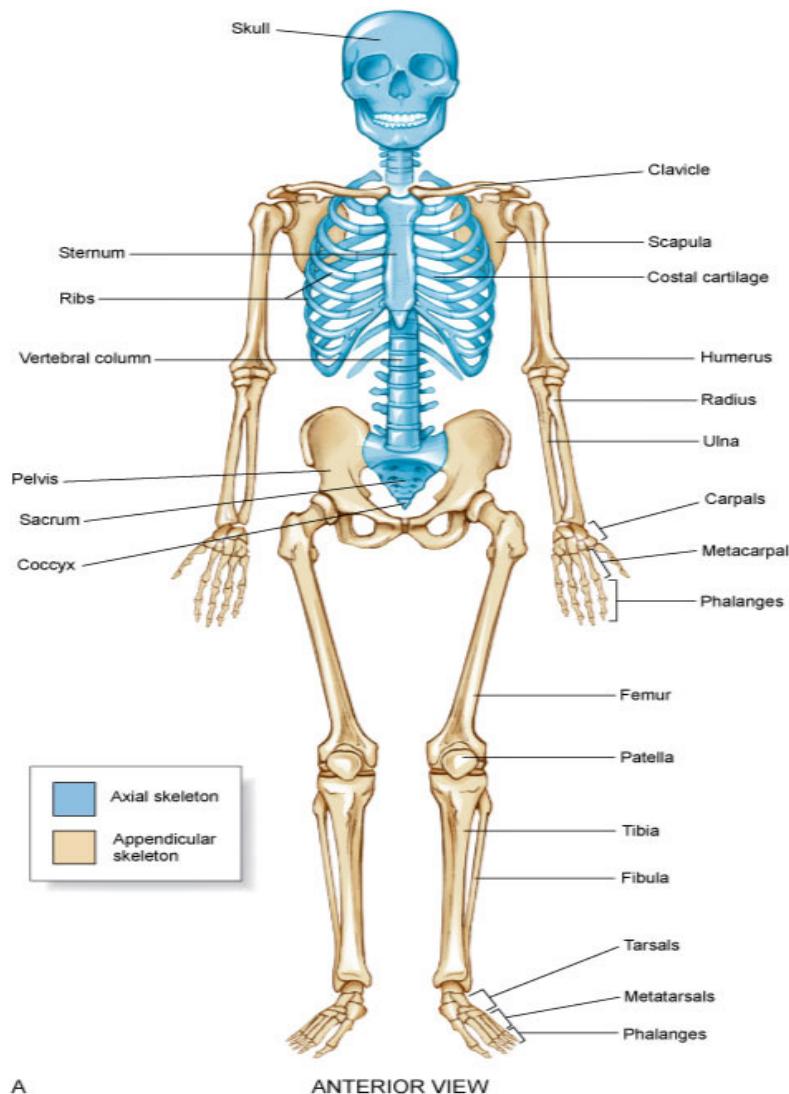
126 Appendicular Skeleton

4 Shoulder Girdle

60 Upper Extremity

2 Pelvic Girdle

60 Lower Extremity

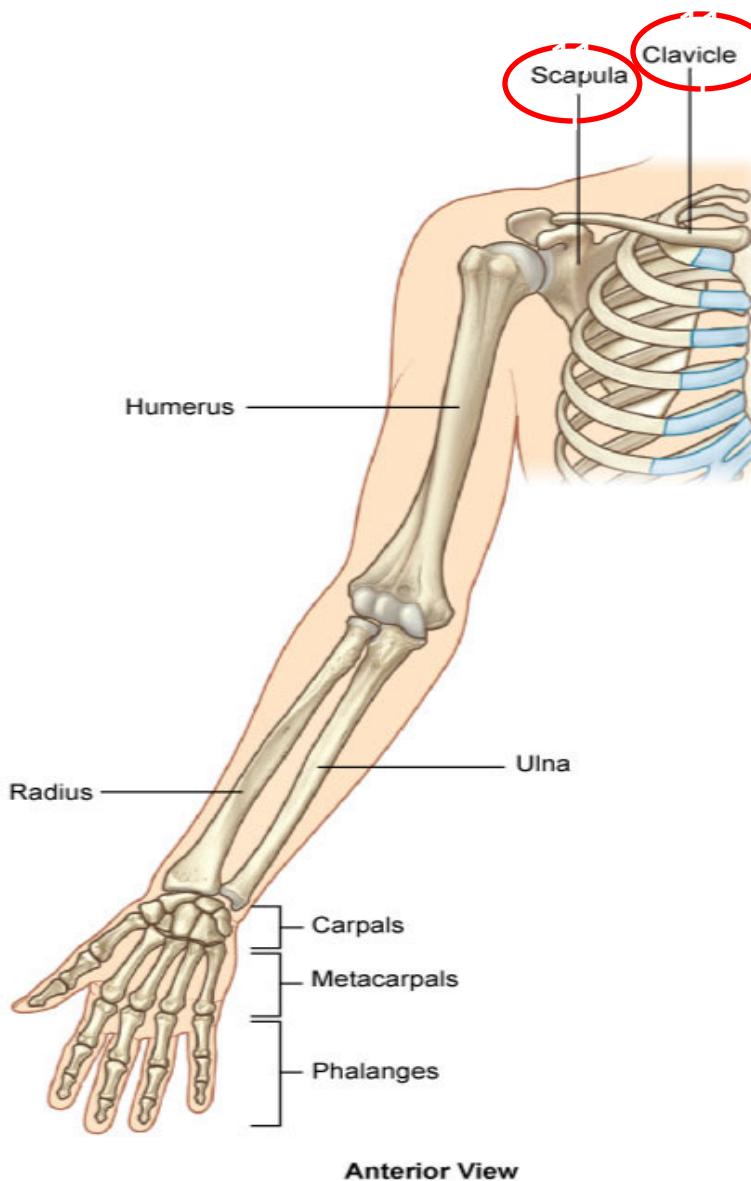


126 Appendicular Skeleton

4 Shoulder Girdle

clavicle 2

scapula 2



126 Appendicular Skeleton

60 Upper Extremity

humerus 2

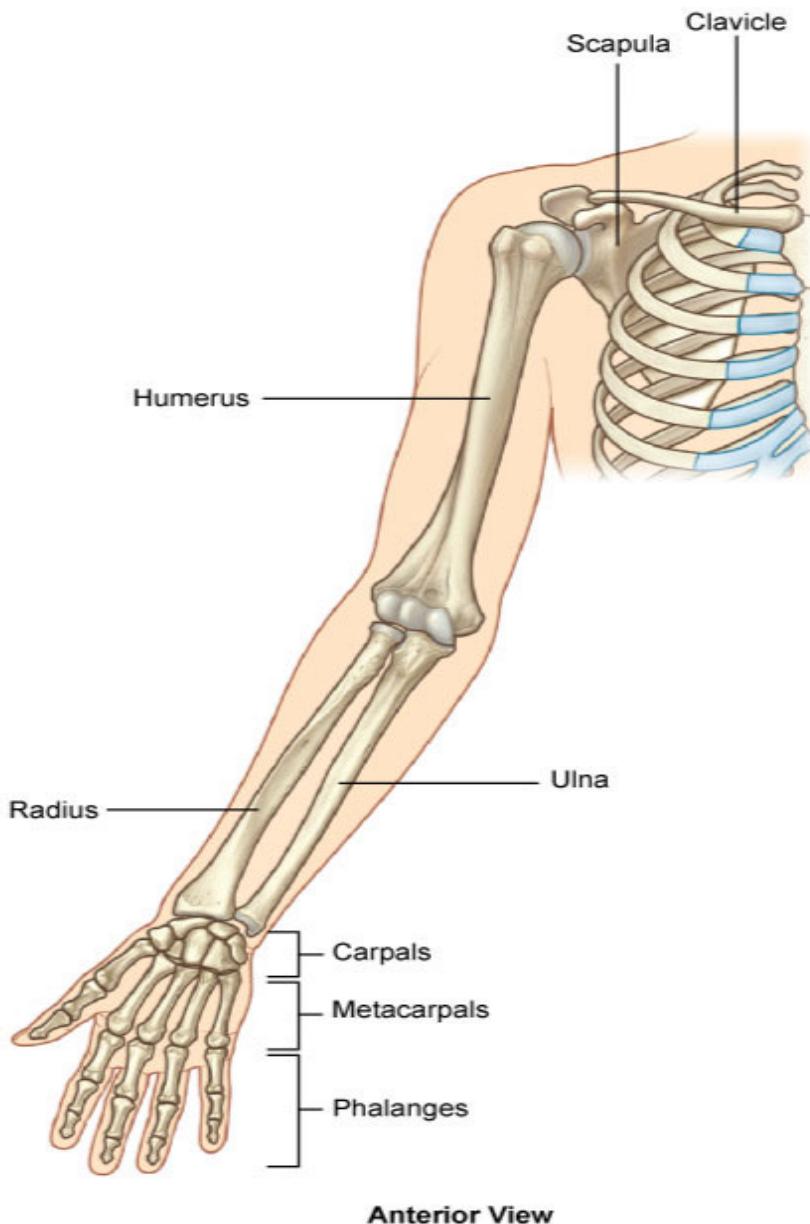
radius 2

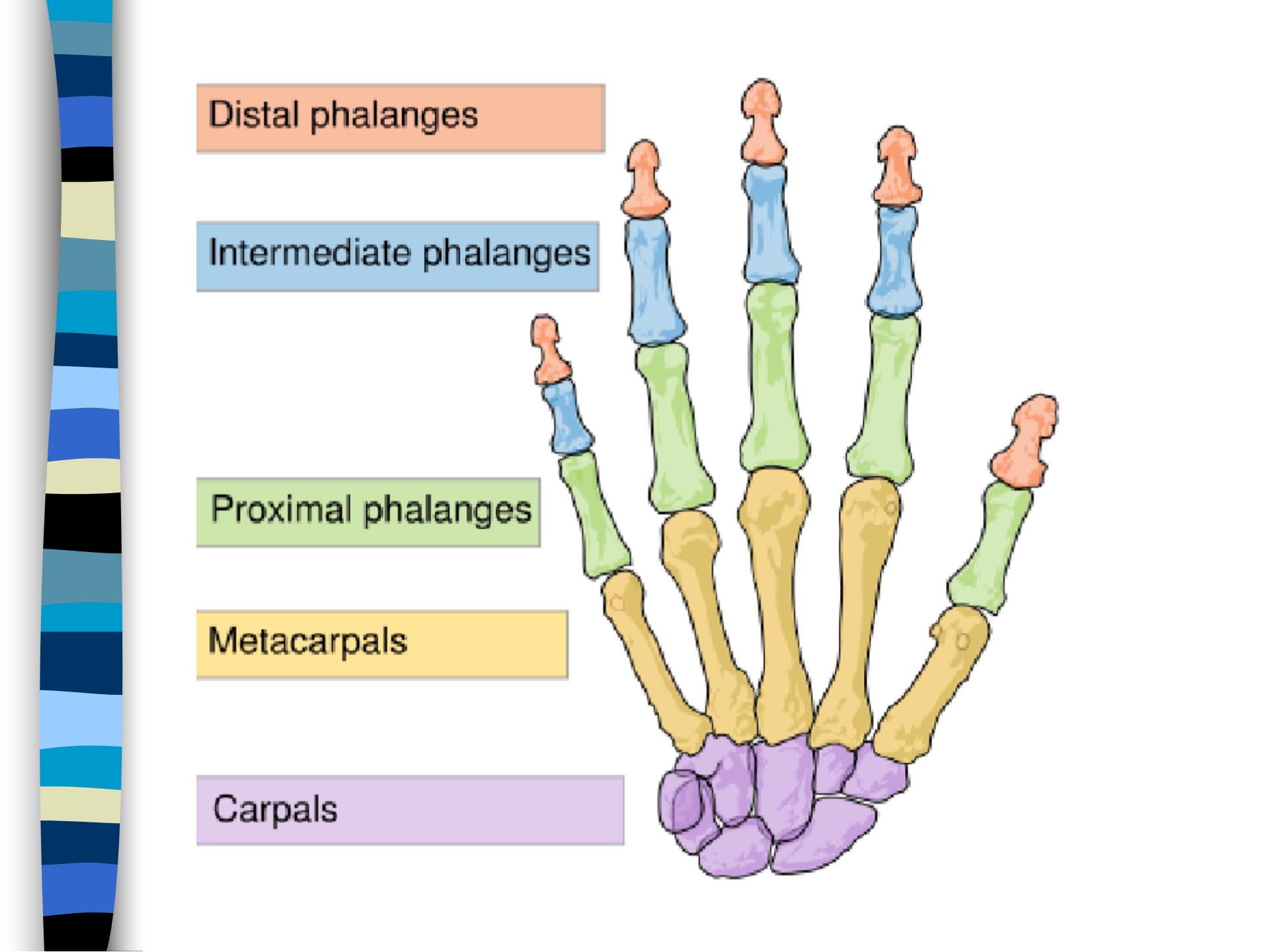
ulna 2

carpals 16

metacarpals 10

phalanges 28





Distal phalanges

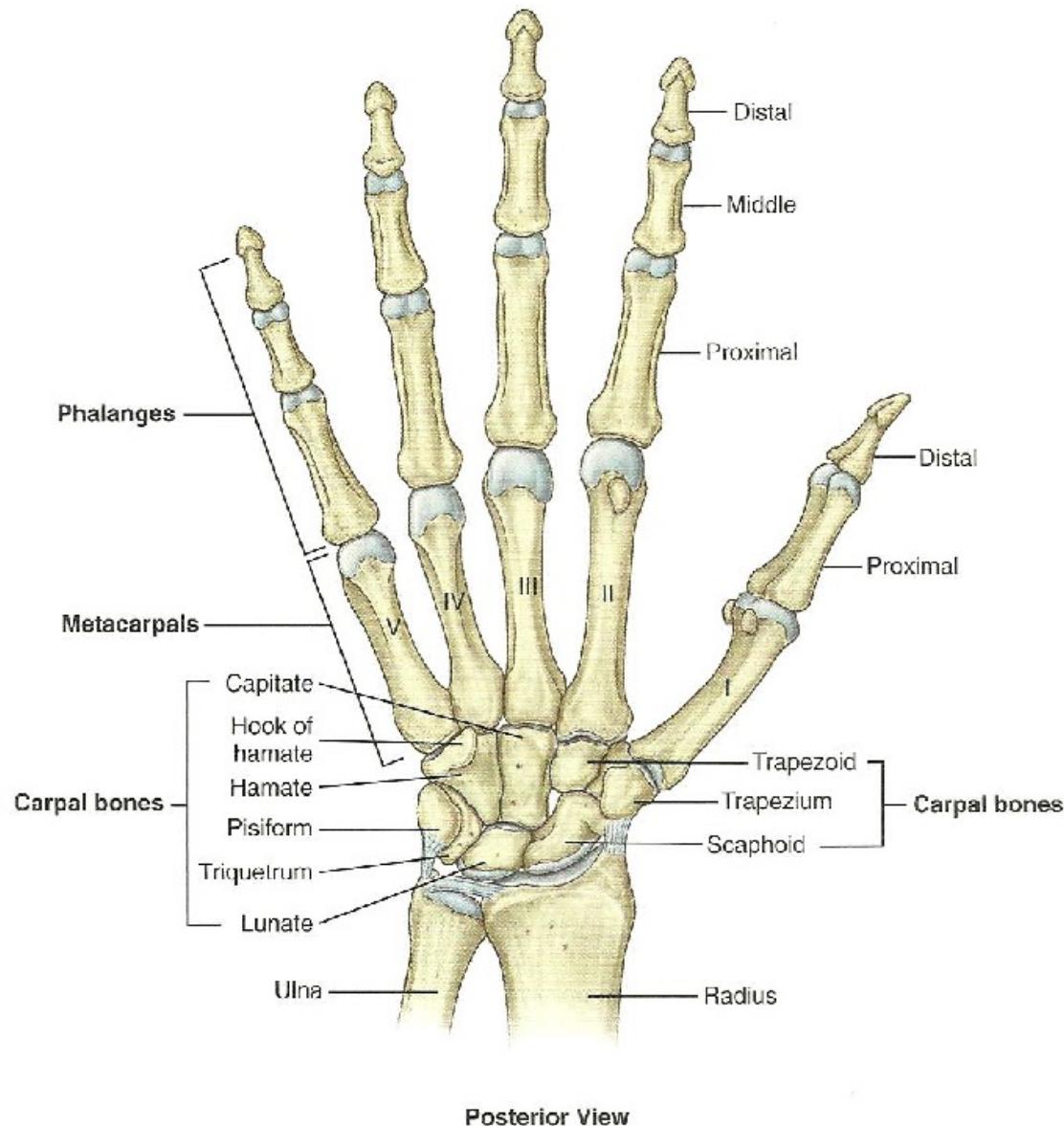
Intermediate phalanges

Proximal phalanges

Metacarpals

Carpals

126 Appendicular Skeleton



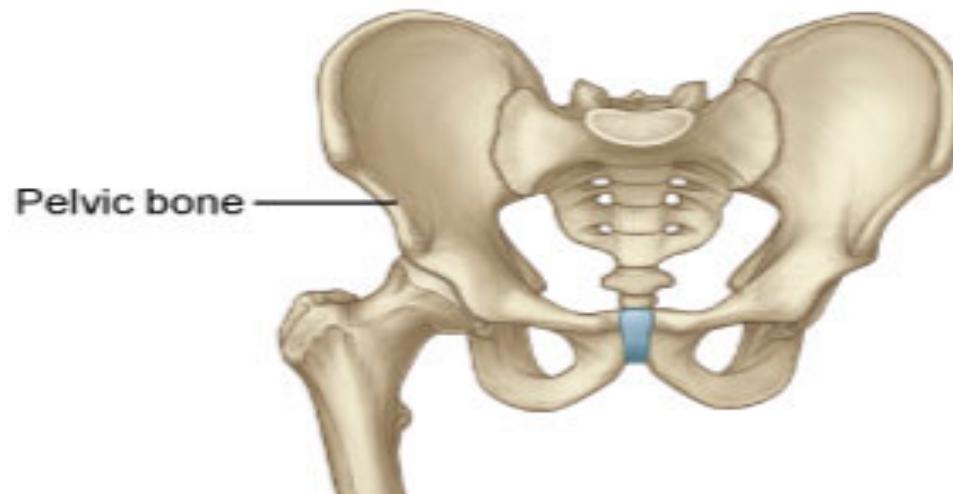
126 Appendicular Skeleton

2 Pelvic Girdle

pelvic bone

AKA: innominate bone

AKA: os coxae or coxal bone

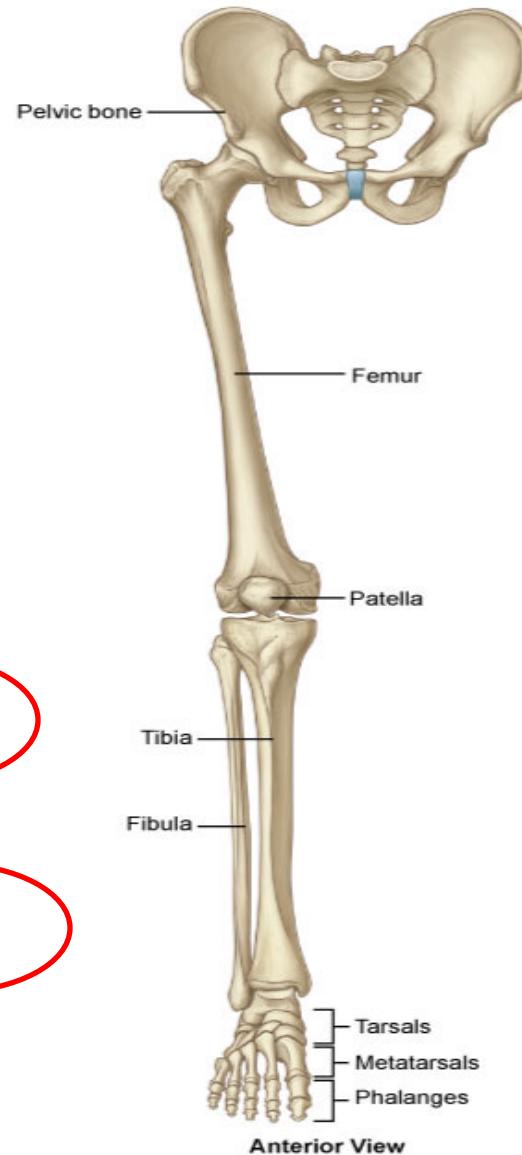
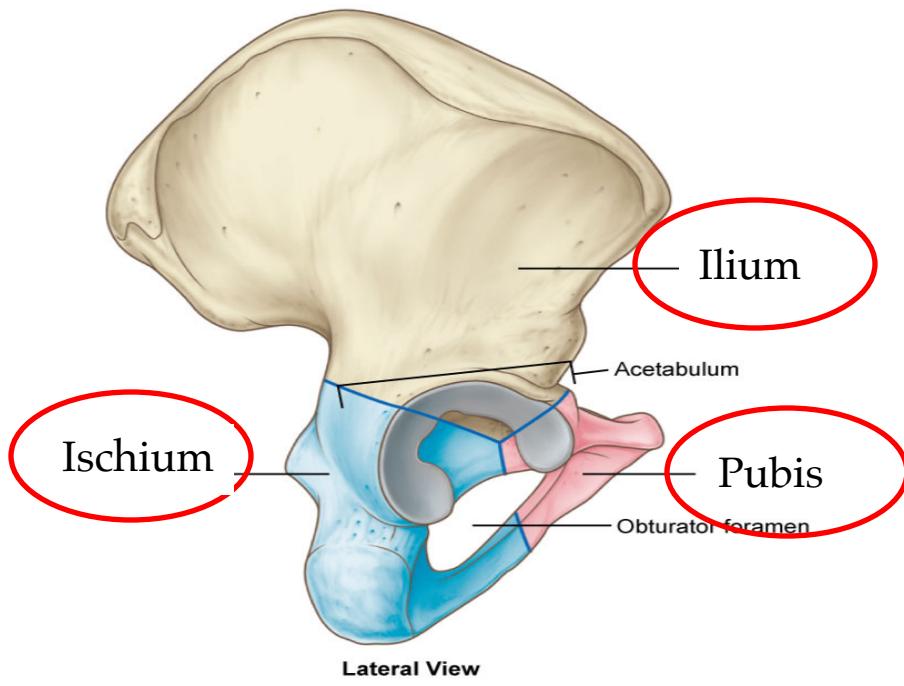


126 Appendicular Skeleton

2 Pelvic Girdle

pelvic bone

ilium
ischium
pubis



126 Appendicular Skeleton

60 Lower Extremity

femur 2

patella 2

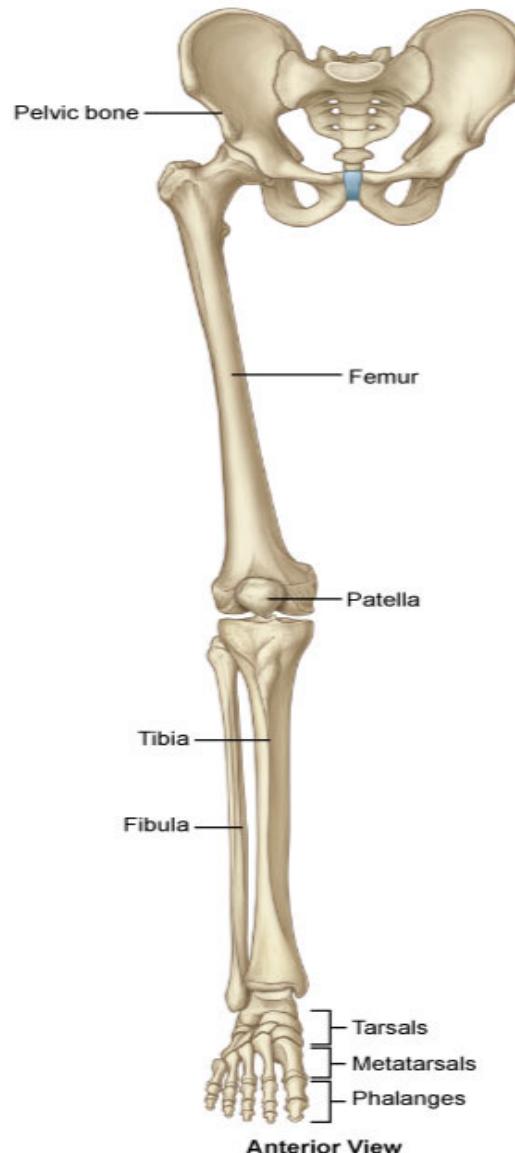
tibia 2

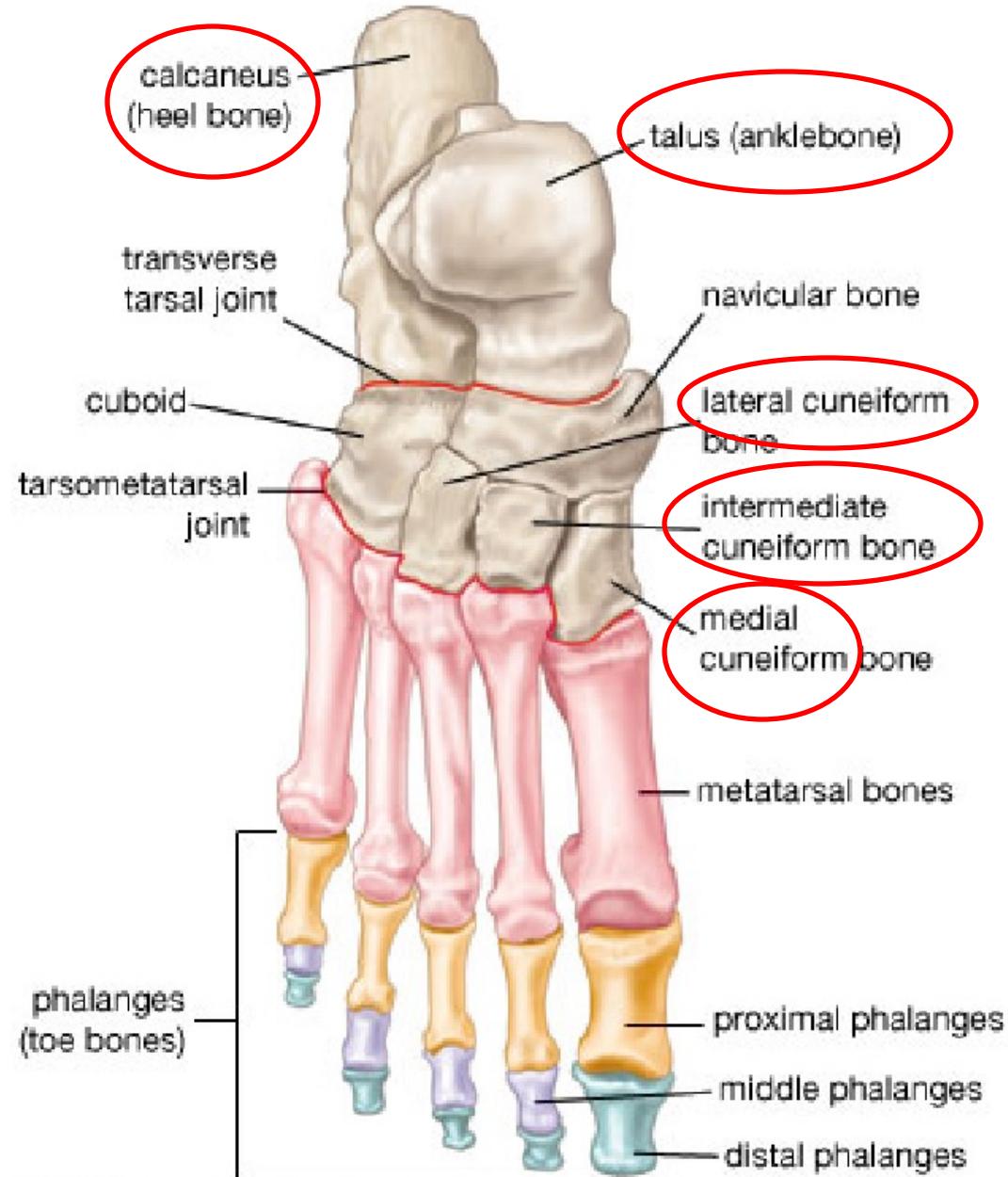
fibula 2

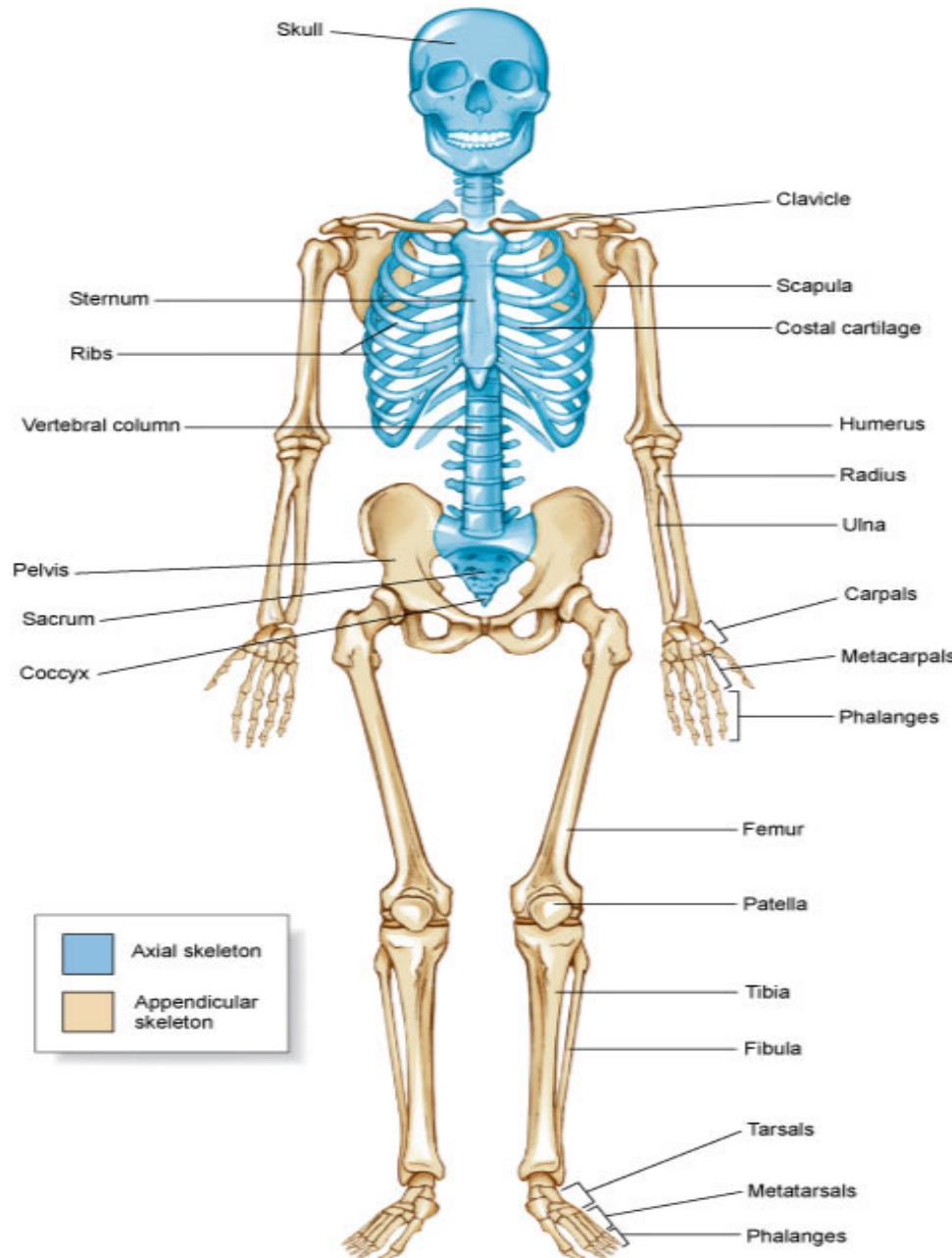
tarsals 14

metatarsals 10

phalanges 28







A

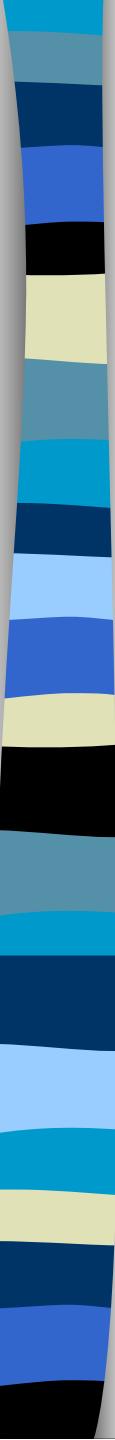
ANTERIOR VIEW



1a Health & Hygiene (H&H) Disease and Prevention

H-3

*** The following information will not be on tests
unless it is repeated in a future class.***

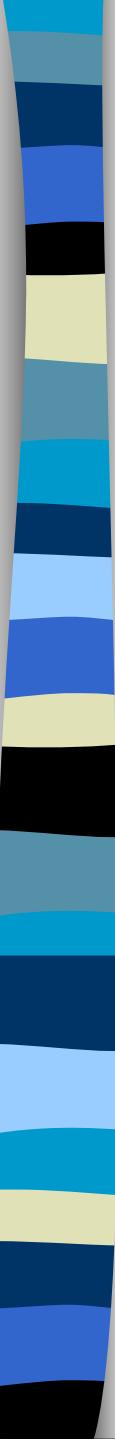


Introduction

Massage is one of the safest, least intrusive, and most effective treatments for pain and discomfort in health care and self-care.

However, clients are susceptible to infection and injury from massage, and they may present with contraindications, or experience medical emergencies such as hypoglycemia or a heart attack.

To reduce the risk of infection, a system of infection control is needed to protect clients and massage therapists and to minimize disease transmission.



Minimizing Disease Transmission

- Handwashing, including nails
- Disinfecting contaminated linens, surfaces, and reusable objects (like your table, lubricant container, etc.)

Hippocrates, the father of Western medicine, is frequently quoted as saying physicians should “do no harm”. Likewise, massage therapists across the globe must adopt policies of impeccable cleanliness and adherence to standard precautions to safeguard against infection.

Definitions

Disease is a condition of abnormal function involving anatomic structures or body systems. Diseases are characterized by a recognizable set of signs and symptoms and can be caused by heredity, infection, diet and lifestyle, and environmental factors.

Pathology is the study of disease.

Syndrome is a group of signs and symptoms that occur together and characterize a particular condition, suggest an underlying disease, or increase the risk of disease development.

Definitions

Prognosis is a prediction of how the disease will progress and the chances of recovery based on the person's condition and the usual course of disease as observed in similar situations.

Signs are objective evidence obvious to someone other than the affected individual. Signs can be observed and measured. For example, fever, swelling, rashes, high blood pressure, pulse, etc.

Symptoms are subjective evidence perceived by an individual, and examples include stomachache, headache, nausea, pain, anxiety, etc.

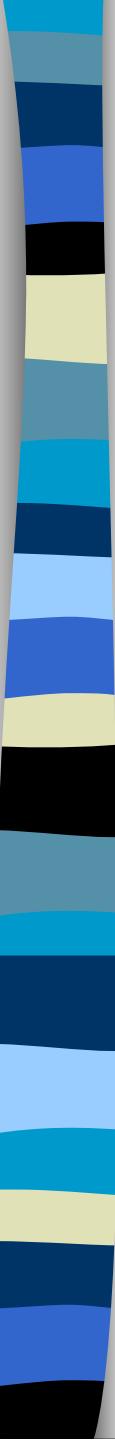
Definitions

Etiology means the causes or origins of disease.

Idiopathic is a disease that does not have a known cause.

Complications are conditions that arise as a disease progresses.

Epidemiology is the study of occurrence, distribution, and transmission of diseases in human populations.

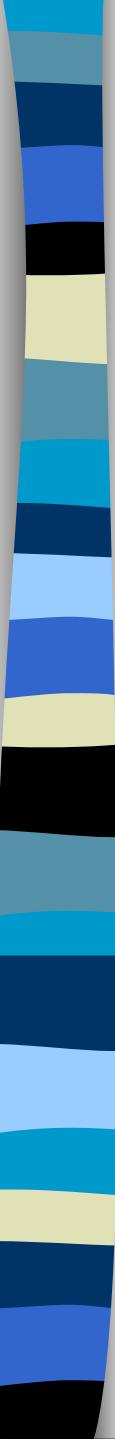


Definitions

An **endemic disease** is one that is found regularly in people within local geographic regions or specific races of people. For example, malaria, which is more common in certain parts of Africa.

Epidemics are reported occurrences of disease that affect a large number of people at the same time within a geographic region, but, unlike a endemic, epidemics eventually subside. For example, in 2010, California had a whooping cough/pertussis epidemic.

Pandemics are reported occurrences of disease that affect a large number of people in many geographic regions, often worldwide. For example, HIV infection.



Definitions

Morbidity has 2 definitions.

1. It indicates the number of individuals affected by a particular disease within a certain population or geographic region. For this definition, examples are the numbers of elderly citizens with Alzheimer disease and the number of Native Americans who have type 2 diabetes.
2. The disease state. Alzheimer disease and type 2 diabetes are each examples of morbidities.

Which definition of morbidity is being used is determined by its context.



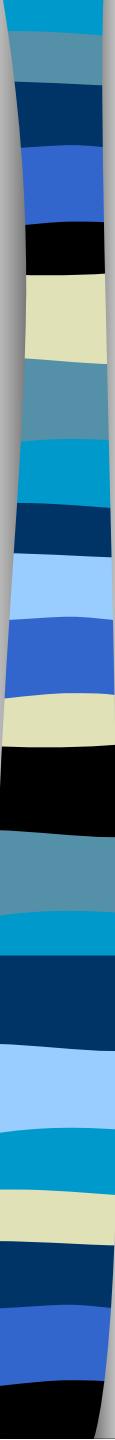
Definitions

A person can have several morbidities. When this occurs, the person is said to have **comorbidities**. An example of a comorbid disease is a person diagnosed with diabetes and later diagnosed with high blood pressure.

Mortality indicates the number of deaths within a certain population or geographic region.

Incidence is the number of new cases in a particular population during a specific period, usually a calendar year.

Prevalence refers to the number of all existing cases (new and old) of a disease within a particular population.



History of Disease (short stories)

Early humans had shorter life spans, but not because of epidemics: their primary problem was just finding enough food to eat.

Some lived in small groups and moved frequently. They had few problems with accumulating waste or contaminated water or food.

The shift from the hunter-gatherer mode of living to an agricultural model provided a more secure supply of food.

Domesticated animals provided food and labor but they also carried diseases that could be transmitted to humans and additional waste.



History of Disease (short stories)

Living in larger groups and staying in the same place meant more opportunities for the transmission of diseases.

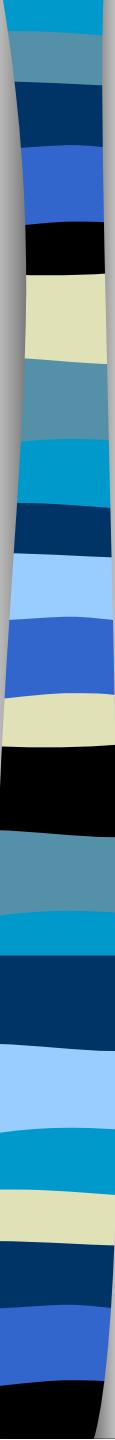
Garbage and waste accumulated, and rodents and insects were attracted to these settlements, providing more sources of disease.



History of Disease (short stories)

Leprosy was the first or one of the earliest recorded diseases, spread by humans departing to other countries. Hundreds of thousands of people around the world still suffer from leprosy, which attacks a person's skin and nerves.

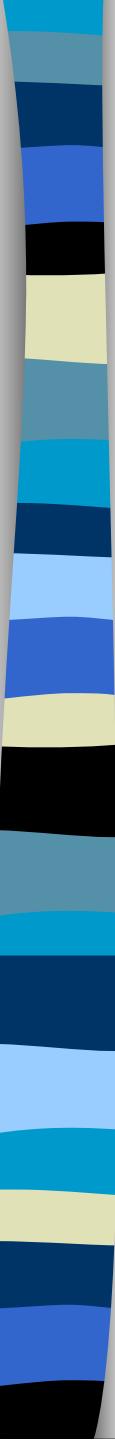
The bubonic plague (1347-1700s) was caused by the bacteria that lived in the intestines of fleas. It was transmitted to rats by flea bites. It spread to humans who would experience headache, high fever, delirium, and sometimes death.



History of Disease (short stories)

Typhoid 'Mary' Mallon (1869-1938) worked in various domestic positions for families prior to settling into her career as a cook.

As a healthy (asymptomatic) carrier of *salmonella typhi*, her nickname had become synonymous with the spread of disease, as many were infected due to her denial of being ill.



History of Disease (short stories)

In 1907, about 3,000 New Yorkers had been infected by salmonella and it's thought that Mary was the reason for the outbreak. Immunization was not developed until 1911, and antibiotic treatment was not available until 1948.

If Mary Mallon had washed her hands diligently (most did not at this time), she may have never infected so many people.



1a Introduction to the Human Body and Health & Hygiene (H&H): Disease and Prevention