



*Anatomy
Passion*



Lecture: 3

Done By: Lina Imar



General Anatomy

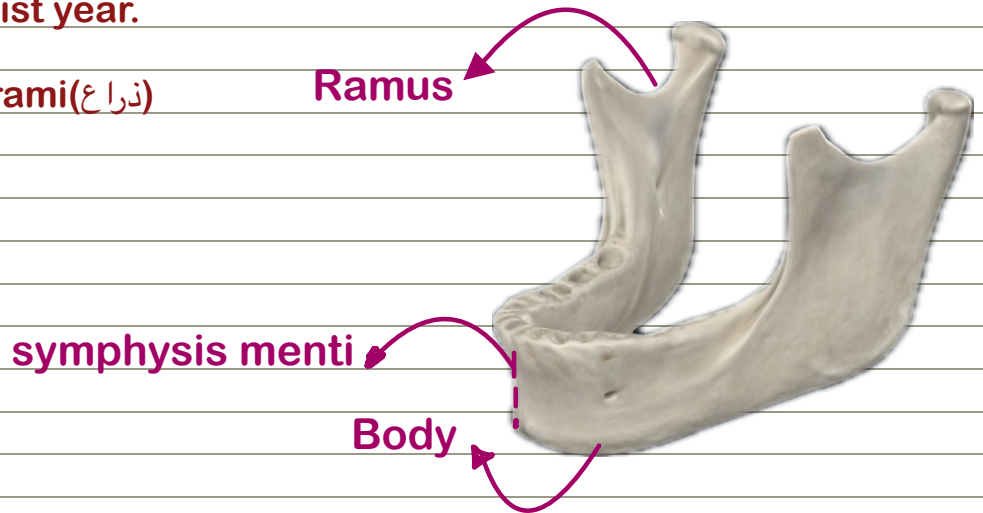
Lecture 3: Mandible & Vertebral Column

Dr. Mohamed Fathi Elrefai
Ass. Professor of Anatomy & Embryology
mohamed@hu.edu.jo

Mandible

* Is formed of two bones, (right and left) which unite at the symphysis menti (2nd cartilaginous joint) after the first year.

* is formed of a body and two rami (ذراع)



A. The body

* 2 surfaces : External & internal

* It presents: The mental foramen, mylohyoid line, 2 fossae (submandibular & sublingual)

* External surface: The mental foramen lies midway between upper & lower borders, below 2nd premolar tooth, Gives passage to mental nerve & vessels

* Internal surface :

• It shows the:

mylohyoid line: which separates between (submandibular fossa) below it and (sublingual fossa) above it



B. Ramus of mandible

* 2 surfaces : medial (inner) & lateral (outer)

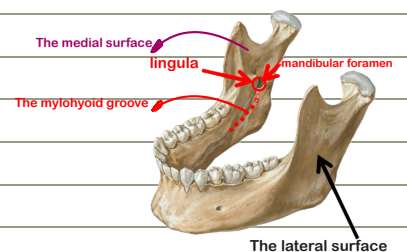
1. The medial surface: shows

A) mandibular foramen which leads to mandibular canal.

B) Projecting over the foramen is the lingula

C) The mylohyoid groove starts at the lower border of the foramen.

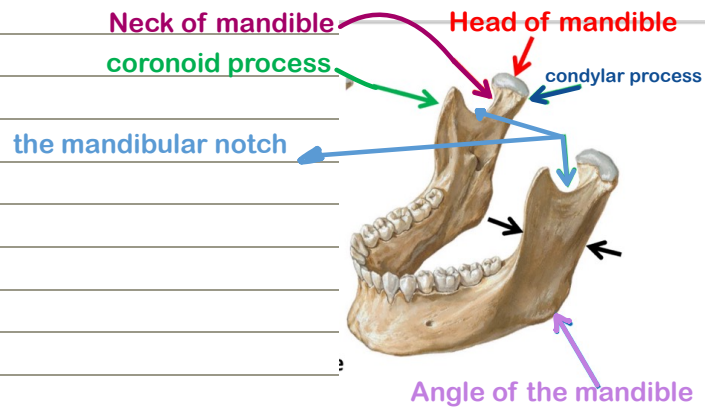
2. The lateral surface: is flat & smooth & forms (the angle of mandible) with the base of mandible



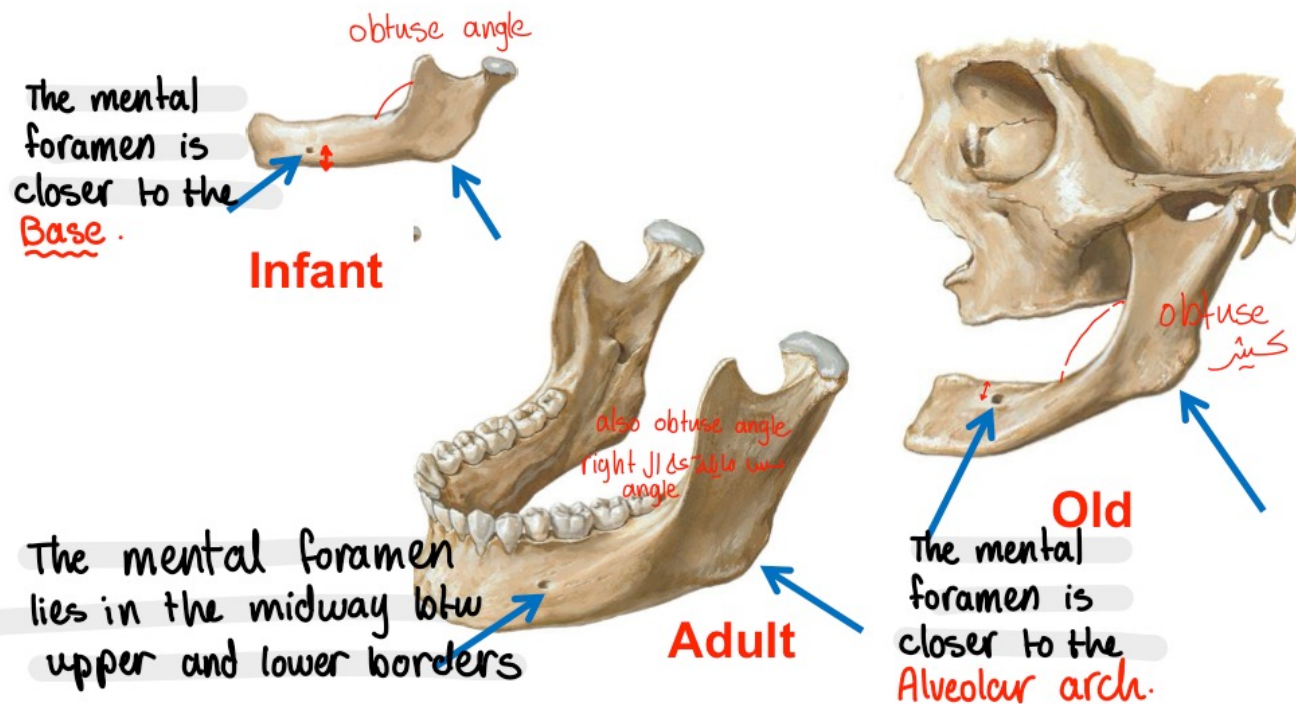
Upper border

*the mandibular notch separates between coronoid process anteriorly and condylar process posteriorly

- The condylar process is expanded to form the head of the mandible. It articulates with the base of skull by temporomandibular joint
- The constricted area below the head is the neck.
- Angle of the mandible is the area of meeting of body and the ramus .



Age changes of the mandible



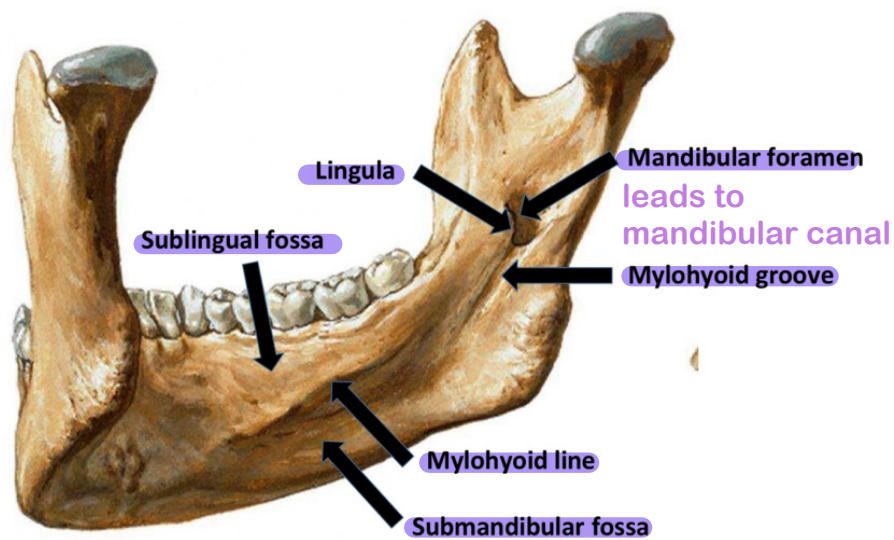
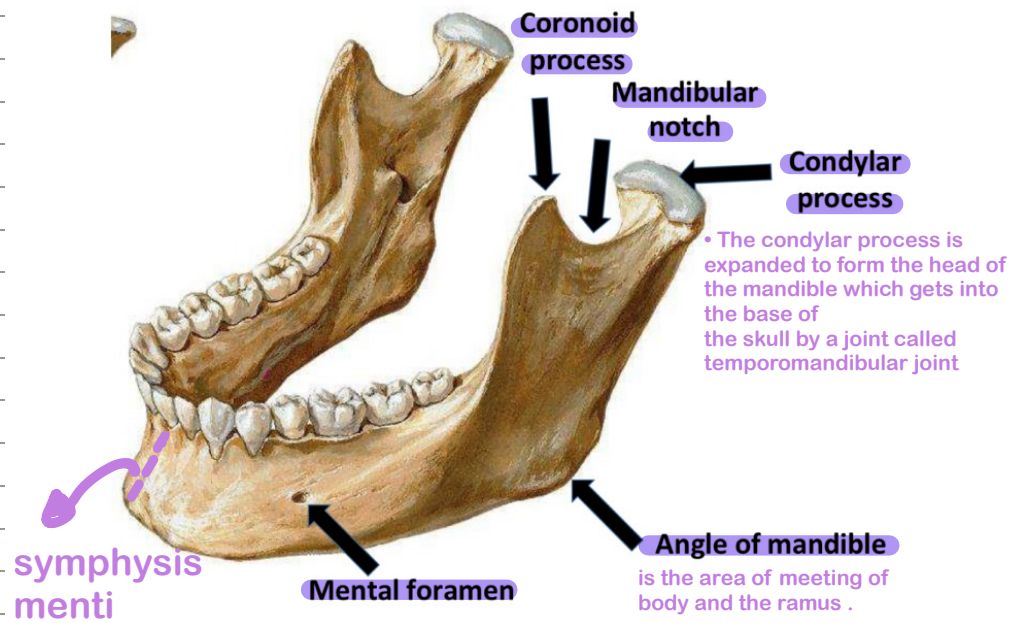
Lab 2

Mandible
Thoracic cage
Vertebral Column

Mandible

*Movable part of skull

*Is formed of two bones, (right and left) which unite at the symphysis menti after the first year.



33 vertebrae

7 cervical - 12 thoracic - 5 lumbar - 5 sacral (fused to form the sacrum) - 4 coccygeal (fused to form the coccyx)

cervical

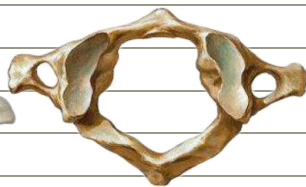
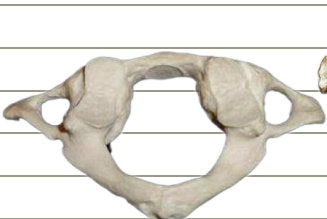
Its transverse process shows a foramen transversarium

Typical Cervical Vertebra (3-6)

Its spine is bifid.

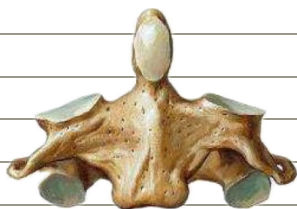
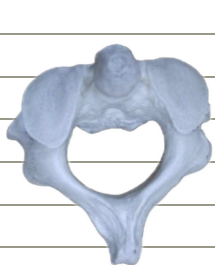
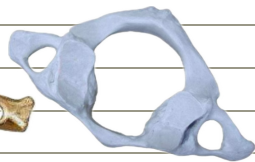
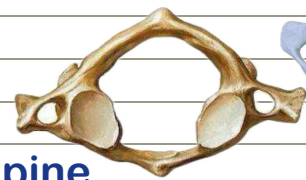


Atypical cervical vertebra (1 [Atlas] + 2 [Axis] + 7)



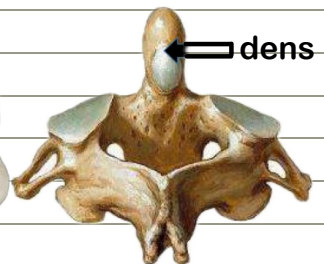
Atlas

- No body
- No bifid spine

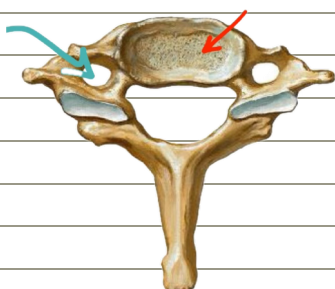


Axis

- Has a dens



dens

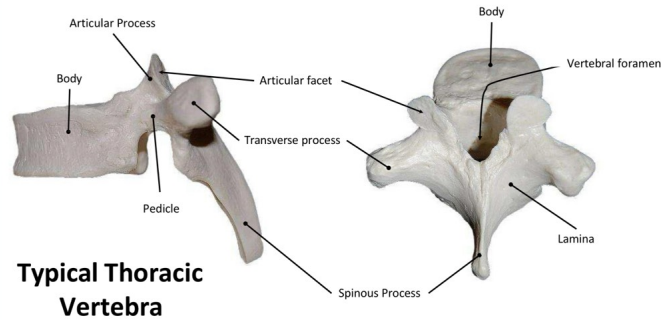
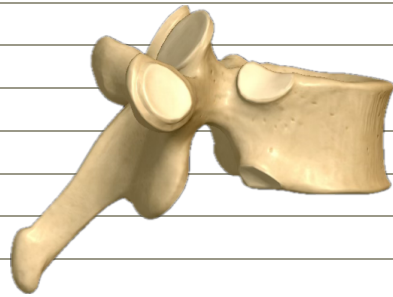


7th cervical vertebra

- Long and non bifid spine

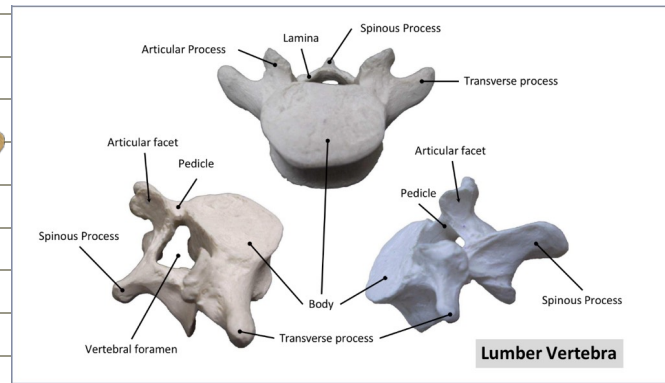
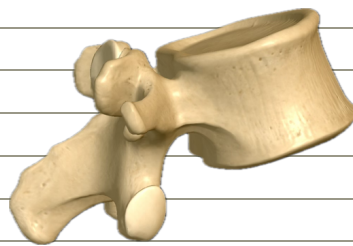
Thoracic

- long , pointed , directed downward and sharp spine
- Its transverse process doesn't have a foramen transversarium



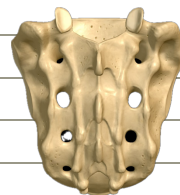
Lumber

- Its transverse process doesn't have a foramen transversarium
- Short spine
- largest body



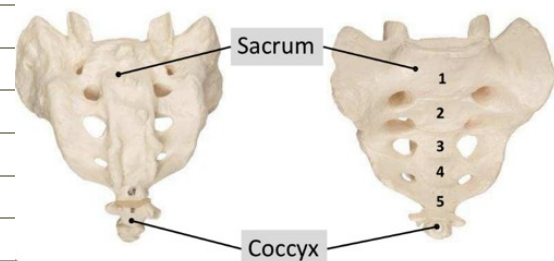
sacral

- Its transverse process doesn't have a foramen transversarium
- 5 vertebrae fused to form the triangle sacrum



coccygeal

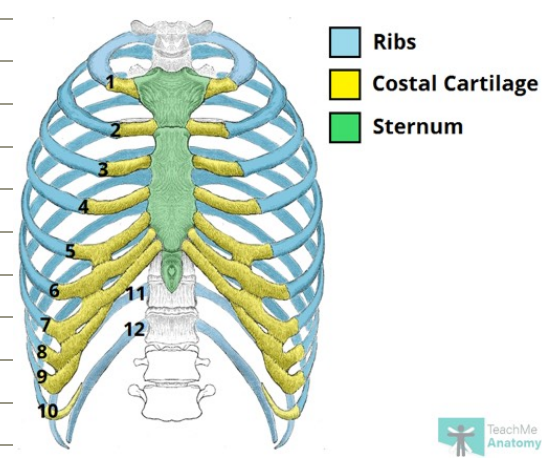
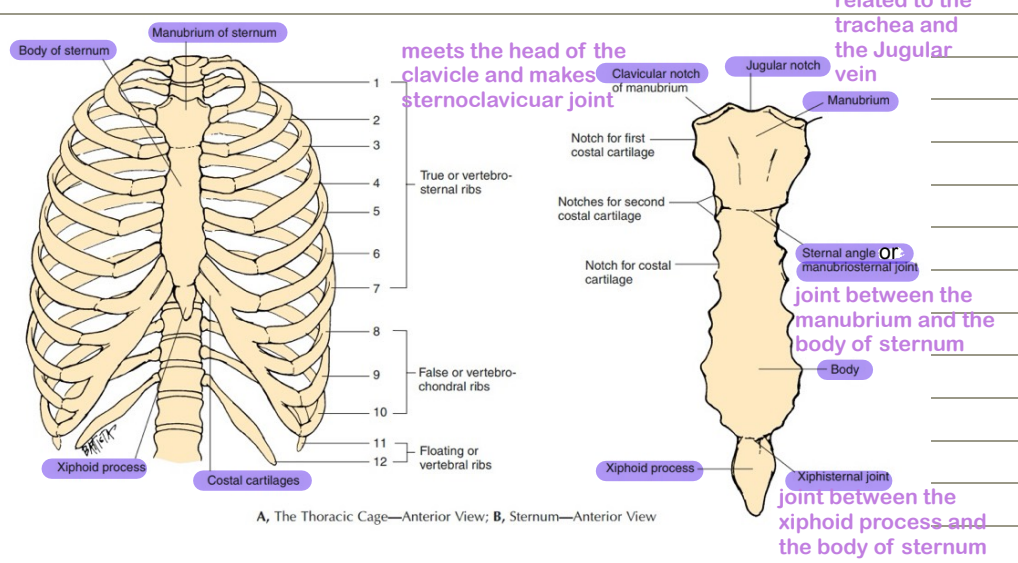
- 4 vertebrae fused to form the coccyx



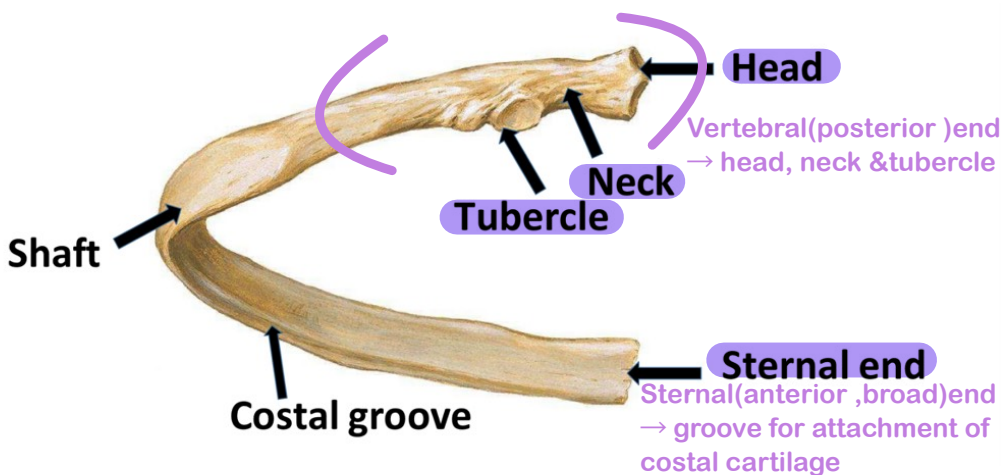
Thoracic cage

• Formed of:

- 1) Anteriorly → sternum (manubrium, body & xiphoid process). It is joined to the upper 7 costal cartilages
- 2) On each side → 12 pairs of ribs separated by intercostal spaces.
- 3) Posteriorly → 12 thoracic vertebrae.



Typical Rib



Quiz

- 1) which of this formed the internal surface of Mandible :
A. mylohyoid line B. submandibular fossa C. sublingual fossa D. all of the above
- 2) the Ramus of mandible has three surfaces one of them The medial surface that shows the mandibular foramen which leads to mandibular canal :
a. true b. false
- 3) the Upper border of mandible that appear anteriorly :
a. mandibular notch b. condylar c. coronoid d. Angle
- 4) the number of vertebrae bone that formed vertebral column :
A.35 B.36 C.33. D.32
- 5) the vertebrae bone that fused to form sacrum :
A. thoracic B. cervical C. lumbar D. none of them
- 6) the sternum It is joined to the upper ----- costal cartilages :
A.8 B.9 C.7. D.6
- 7) the 1st Cervical Vertebra is :
A. Atlas. B. Axis. C. xiphoid process. D. none of the above
- 8) the fossa which lies above the mylohyoid line of the mandible is:
A. submandibular fossa B. supramandibular fossa C. sublingual fossa D. supralingual
- 9) the right order of these parts of the upper border of the mandible is:
A. coronoid process anteriorly, condylar process posteriorly, and in between is the mandibular notch
B. coronoid process superiorly, condylar process inferiorly, and in between is the mandibular notch
C. coronoid process posteriorly, condylar process anteriorly, and in between is the mandibular notch
D. coronoid process inferiorly, condylar process superiorly, and in between is the mandibular notch
- 10) the mental foramen on the external surface of the body of mandible lies :
A. above first premolar tooth B. below first premolar tooth C. above second premolar tooth D. below second premolar tooth
- 11) all of the following are not located on the medial surface of the ramus of mandible except:
A. mylohyoid line B. mylohyoid groove C. mental foramen D. sublingual fossa
- 12) the vertebra which has bifid spine, and its transverse process shows foramen transversarium is:
A. atlas B. axis. C. (3-6) cervical vertebrae D. 7th cervical vertebra
- 13) the cervical vertebra which has a well defined process called dens is atlas
A. axis B. third cervical vertebra C. seventh cervical vertebra. D. Atlas

14)the largest vertebrae in the body are :

A.cervical B.thoracic C.lumbar. D.sacral

15)the foramen transversarium is found only in:

A.cervical vertebrae. B.thoracic vertebrae C.lumbar vertebrae. D.sacrum

16)the right order of the parts of the sternum (from down to up) :

A.manubrium, body, xiphoid process B. xiphoid process, body, manubrium

17)the sternum articulates with which of the following:

A.upper 7 costal cartilages B.thoracic vertebrae C.the two clavicles D. A+C

18)all of the following are parts of the vertebral end of a typical rib except :

A.tubercle B.costal groove C.head D.neck

19) The number of the thoracic vertebrae is:

A. Five. B. Seven. C. Eight. D.Twelve

20) The number of the lumbar vertebrae is:

A. Five. B. Seven. C. Eight. D. Ten.

21)The number of the cervical vertebrae is:

A. Five. B. Seven. C. Eight. D. Ten.

Answers:

1)D

2)B

3)C

4)C

5)D

6)C

7)A

8)C

9)A

10)D

11)B

12)C

13)A

14)C

15)A

16) B

17) D

18)B

19)D

20)A

21)B

Done by: Lina Imar