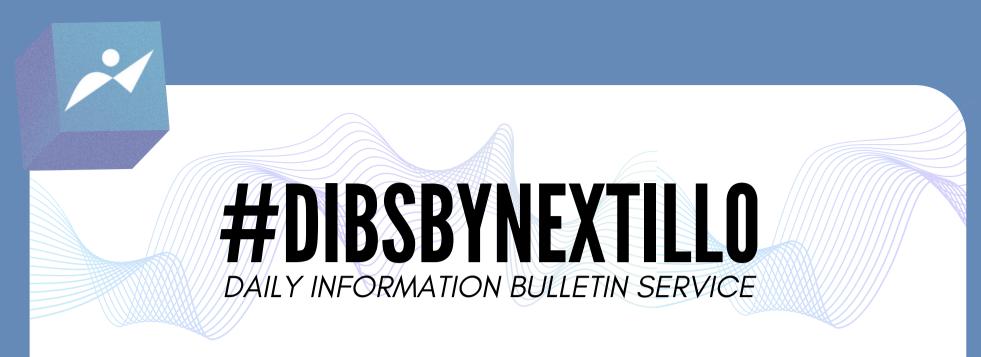




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ARTICULATION OF RIBS

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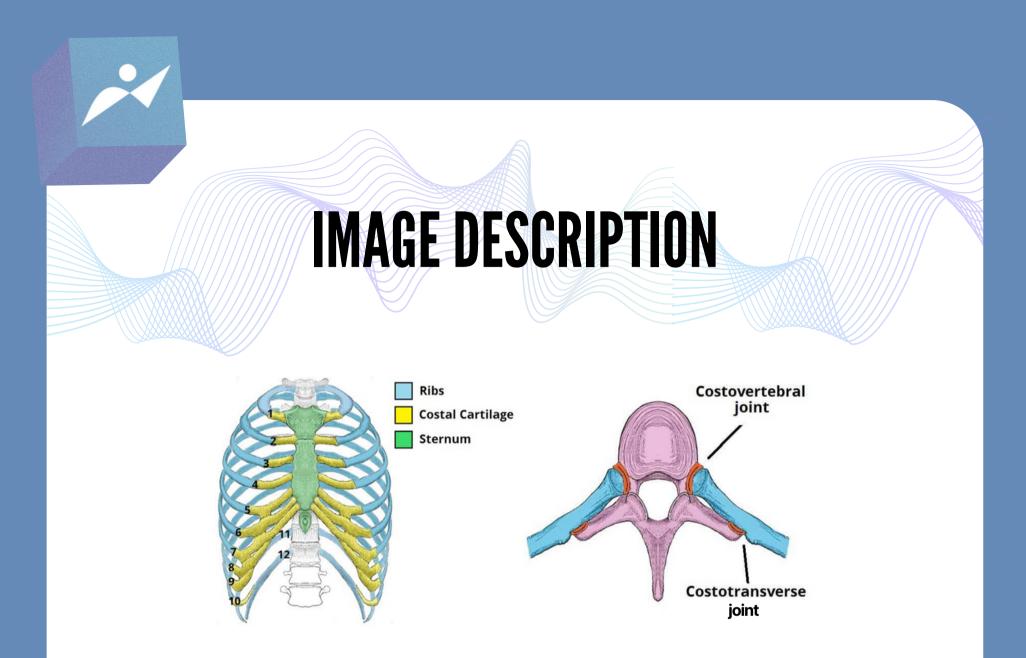


ARTICULATION OF RIBS

Generally, there are twelve pairs of ribs. Each rib articulates posteriorly with two thoracic vertebrae; by the costovertebral joint.

An exception to this rule is that the first rib articulates with the first thoracic vertebra only 10.





A detailed anatomical illustration illustrating rib articulations, showcasing costovertebral, costochondral, costotransverse joints, and sternal connections of true, false, and floating ribs within the thoracic cage.

- Costovertebral joints offer rib-vertebra connections crucial for thoracic flexibility.
- Costochondral articulations support rib cage dynamics during breathing movements.
- Costotransverse joints reinforce rib structure, aiding in respiratory processes.
- True ribs directly articulate with individual costal cartilages, ensuring structural integrity.
- Floating ribs, ribs 11 and 12, provide flexibility without sternum attachment.



COSTOVERTEBRAL ARTICULATIONS

Type:

Costovertebral joints connect ribs to vertebral bodies.

Locations:

- Rib heads articulate with the inferior costal facets of vertebrae.
- Rib tubercles articulate with transverse processes of corresponding vertebrae.

Number of Articulations:

- Ribs 2 to 9 have three articulations each with the vertebrae.
- Rib 1 has two articulations.
- Ribs 10, 11, and 12 have one articulation each.

Specifics:

Varied articulations provide stability and flexibility to the thoracic cage. Each rib's unique connection contributes to respiratory movements.



COSTOCHONDRAL AND COSTOTRANSVERSE JOINTS

Costochondral Joints:

- Connect ribs to costal cartilages.
- Integral in rib cage flexibility during breathing.

Costotransverse Joints:

- Link ribs to transverse processes of vertebrae.
- Reinforce rib structure and facilitate movement.

Significance:

- Essential for rib movement during inhalation and exhalation.
- Balances rigidity and flexibility within the thoracic region.



ARTICULATIONS WITH STERNUM

True Ribs (Ribs 1-7):

- Direct articulation with individual costal cartilages.
- Forms a solid connection contributing to chest structure.

False Ribs (Ribs 8-10):

- Articulate with a common costal cartilage.
- Demonstrates a shared connection, enhancing flexibility.

Floating Ribs (Ribs 11 and 12):

- Do not articulate with the sternum.
- Allow flexibility in the lower thoracic region.

Structural Adaptations:

- Varied sternal connections accommodate respiratory and postural needs.
- Collective articulations create a dynamic yet stable thoracic framework.





Question:

What type of joint connects the head of ribs to the inferior costal facet of the vertebral body above?

a) Costochondral joint
b) Costotransverse joint
c) Costovertebral joint
d) Dorsal rib articulation

Answer: c) Costovertebral joint

