

What is the Trachea and Bronchi?

Worksheet

The trachea is a cartilage-ringed airway tube that carries air from the larynx to the carina, where it splits into the right and left main bronchi supplying each lung.

Questions

1. At approximately which vertebral level does the trachea bifurcate?
 - A) C6
 - B) T1
 - C) T4/T5
 - D) T10
2. Why does the right main bronchus receive most aspirated foreign objects?
 - A) It's narrower
 - B) It's more horizontal
 - C) It's wider, shorter and more vertical
 - D) It has more cartilage
3. What forms the posterior wall of the trachea?
 - A) Cartilage rings
 - B) Trachealis smooth muscle
 - C) Esophageal mucosa
 - D) Pleura
4. How many C-shaped cartilage rings support the trachea?
 - A) 3-5
 - B) 8-10
 - C) 16-20
 - D) 30-40
5. A child aspirates a peanut. Which bronchus is it most likely lodged in, and why?
6. Why can a tracheostomy tube be placed safely between tracheal rings?
7. During swallowing, how does the trachea accommodate a food bolus in the esophagus right behind it?
8. Define: How long is the trachea?
9. Define: What shape are tracheal cartilage rings?
10. Define: Which main bronchus is more prone to foreign body aspiration?

Answer Key

1. C) T4/T5 - The carina sits at roughly T4/T5, the level of the sternal angle.
2. C) It's wider, shorter and more vertical - Its width, shortness, and steep angle make it the easier path for foreign bodies.
3. B) Trachealis smooth muscle - The posterior wall has no cartilage; it's the trachealis muscle.
4. C) 16-20 - The trachea is supported by about 16-20 incomplete cartilage rings.
5. The right main bronchus is wider, shorter, and more vertical (~25 from midline) Gravity and airflow favor foreign bodies entering it So aspirated objects usually lodge in the right lung.
6. The trachea has 16-20 incomplete C-shaped cartilage rings The gaps between rings are fibrous connective tissue An incision through the 2nd-3rd or 3rd-4th tracheal rings avoids cutting cartilage and preserves airway support.
7. The posterior tracheal wall lacks cartilage It's formed by the trachealis smooth muscle This flexible wall bulges slightly forward to let the esophagus expand during swallowing.
8. ~10-12 cm, from C6 (cricoid) to T4/T5 (carina/sternal angle).
9. C-shaped (incomplete), open posteriorly.
10. The right main bronchus (wider, shorter, more vertical).

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