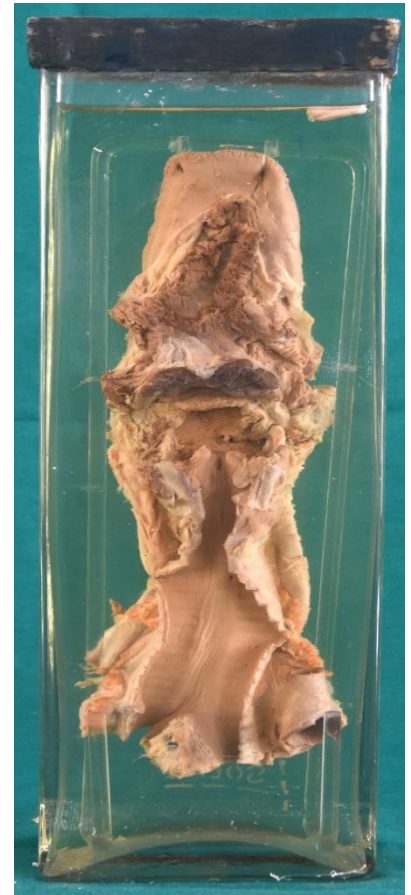


## 1. R.S: 2.2 Trachea

- A specimen of cut section of 12 cm trachea is shown
- Epiglottis present in the midpart of the whole specimen
- Tracheal rings are viewed on the cut surface

### General description

- The trachea is a hollow, tube-like structure that runs from the larynx, or voice box, to the bronchi — the two passageways that connect the trachea to the lungs.
- A mucous membrane, similar to those in the nasal cavity, lines the interior of the trachea. Cells in this membrane, called goblet cells, release mucus to help prevent microorganisms and debris from entering the lungs.
- The trachea is also lined with tiny hair-like structures called cilia. These help push mucus that contains debris or pathogens out of the trachea. A person then either swallows or spits out the mucus.
- The trachea also helps regulate the temperature of the air coming in and out of the lungs.
- On cold days, the trachea helps warm and provide humidity to the air before it reaches the lungs. On hot days, the trachea helps cool the air through evaporation.
- The trachea consists of four layers: an inner mucosal layer, a submucosal layer, cartilage, and muscle as well as an outer adventitia.
- It is supported anteriorly and laterally by 18 to 22 semi-circular incomplete rings of cartilage connected by annular ligaments of fibroconnective tissue; this corresponds to two cartilage elements per centimetre of tracheal length.



### Conditions that can affect the trachea

- **Tracheomalacia**- a condition in which the cartilage of the trachea has broken down, causing weakness or floppiness of the trachea that can affect breathing.
- **Tracheal stenosis**- narrowing of the trachea that causes mild to severe breathing problems. If the narrowing is severe, a person may require a tracheal tube.
- **Tracheal tumors**- which are rare. Whether or not these tumors are cancerous, they can cause the trachea to narrow, making breathing more difficult.

