

Nasal cavity - Histology

The nasal cavity is anatomically one of the upper airways, which distributes air to the lungs. It can be divided into the **vestibulum nasi** – vestibule of the nasal cavity, **cavitas nasi propria** – the nasal cavity itself and the **nasopharynx**. These individual parts differ histologically and have different functions.

Vestibulum nasi

The vestibule nasi is lined in its proximal part with stratified squamous epithelium, keratinizing, as it is close to the skin ; non-keratinized in the distal part. It contains *vibrissae*, i.e. long, thick, coarse and moistened hairs, which have richly innervated hair follicles. There are also numerous sebaceous and sweat glands. More details in the article skin adnexa . The vestibule of the nasal cavity functions as a mechanical filter of inhaled air, capturing various particles.

Cavitas nasi propria

The nasal cavity itself has a classic histological structure. The *tunica mucosa*, or rather its *lamina epithelialis*, is constituted by the epithelium of the respiratory tract - a multi-row cylindrical epithelium with cilia and goblet cells. In addition, the olfactory epithelium, which houses the primary sensory cells, is also present along with supporting and basal cells. Bowman's serous glands extend from it into the mucosal tissue layer.

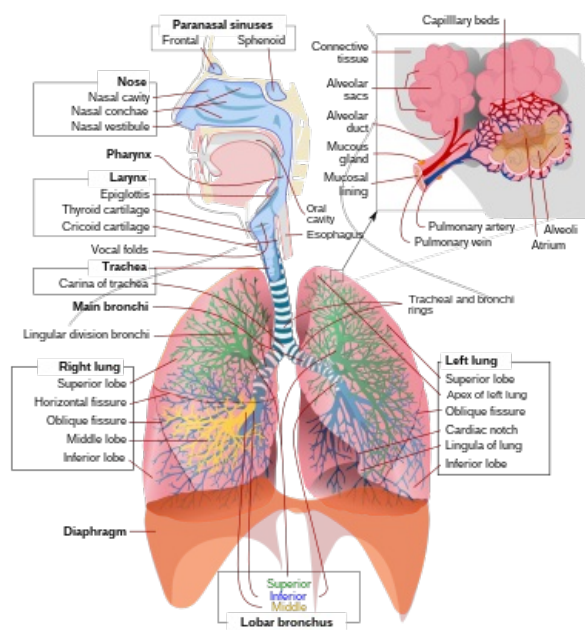
The *lamina propria mucosae* is formed by a sparse collagenous tissue, infiltrated by many vessels and nerves . Seromucinous glands (*glandulae nasales*) producing a thin secretion are observable here.

The vascular supply is very important, it is composed of a rich network of capillaries and venous plexuses (from which nosebleeds occur). It ensures humidification and adjustment of the temperature of the inhaled air.

Cavitas nasi propria also includes the nasal passages (**conchae nasales**).

Nasopharynx

Also referred to as **pars nasalis pharyngis** , it belongs to the digestive and respiratory system. In a very simple way, we can say that through it air gets through the laryngeal valve (and other parts of the pharynx) and the larynx into the trachea to the lungs. Again, it is lined with respiratory epithelium.



Respiratory system

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- Trachea (histology)
- Bronchi (histology)
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- Larynx, trachea and bronchi - structure and function
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- Lungs, structure and function

Bibliography

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