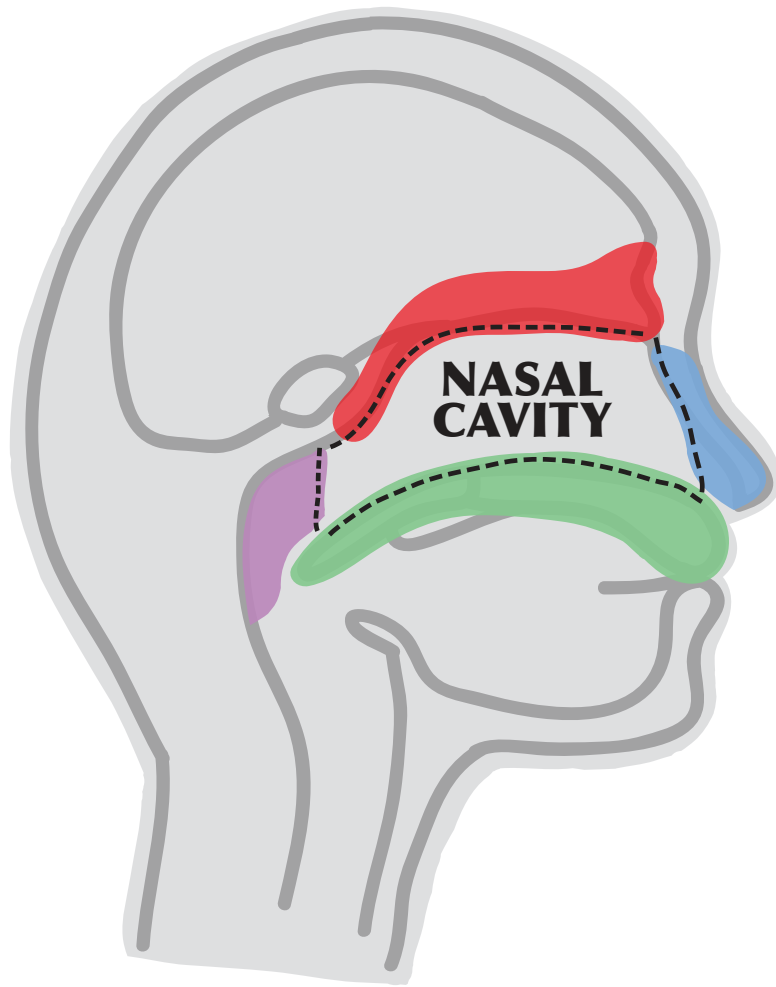


THE NASAL CAVITY

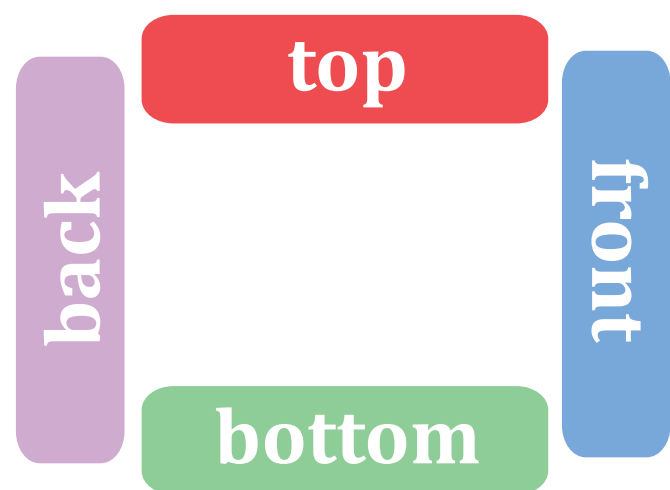
The amazing structures and spaces in our nasal cavity allow us to filter the air that comes through our nostrils, buffer pressure changes in the environment, create resonance in our voices, smell our surroundings, and protect against foreign particles that may cause disease.

Created by Michael Guo
with help from
Michael Markos

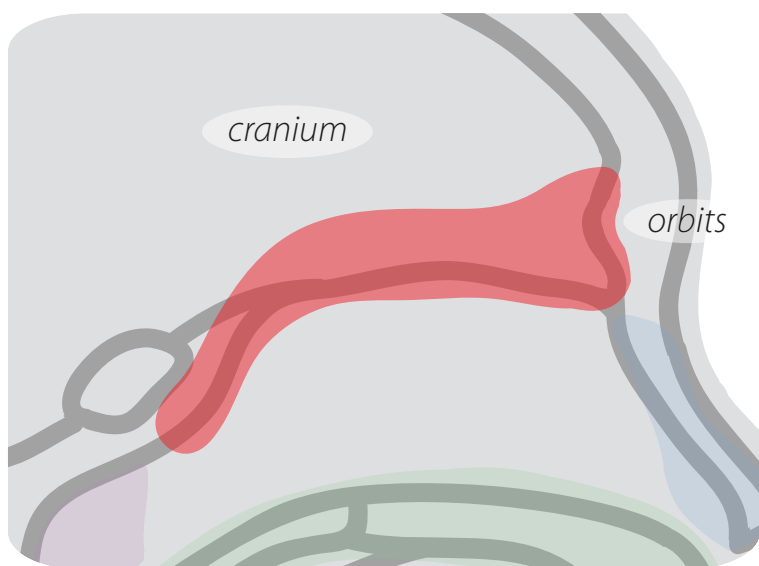
Designed by Erin Lee



The nasal cavity can be thought of as a box, with important anatomical landmarks that act as borders:

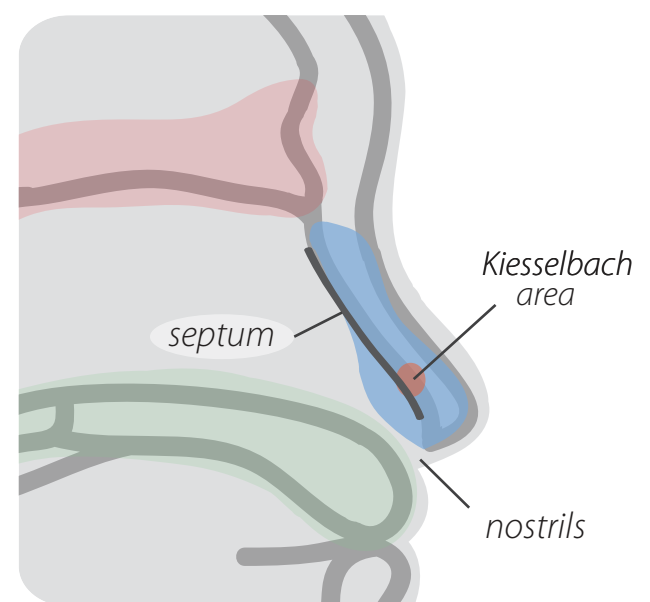


Top



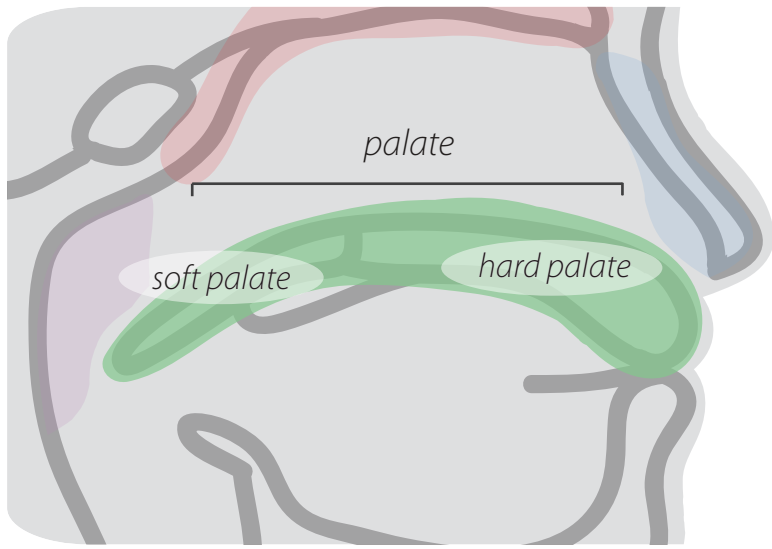
At the roof of this box is the floor of our **cranium**, a bony box where the brain resides. The top of the nasal cavity is enclosed on both sides by your **orbits**, which contain your eyeballs and the muscles, nerves and blood vessels essential for your vision. Complications of the nasal cavity in direct contact with these structures may affect your vision and brain, such as double vision, headache, and altered mental state.

Front



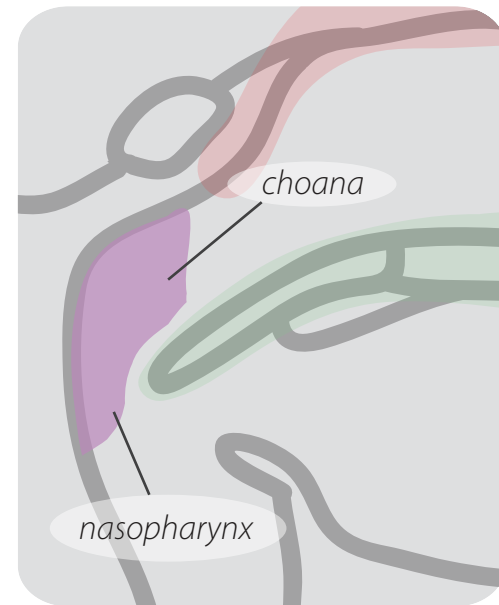
Air comes in through the **nostrils**, which are a very small portion of the nasal cavity. A wall of cartilage that separates the nasal cavity into two sides, each fed by one nostril. The **septum** provides flexibility for your nose and may break during trauma. A deviated septum, when the septum diverges away from the middle, can result in problems in breathing, facial pain and nose bleeds. There are many tiny blood vessels in this space, which cause bleeding if damaged (ie. during nose picking). A densely-packed region of blood vessels, known as the **Kiesselbach area**, is a common origin of nose-bleeds.

Bottom



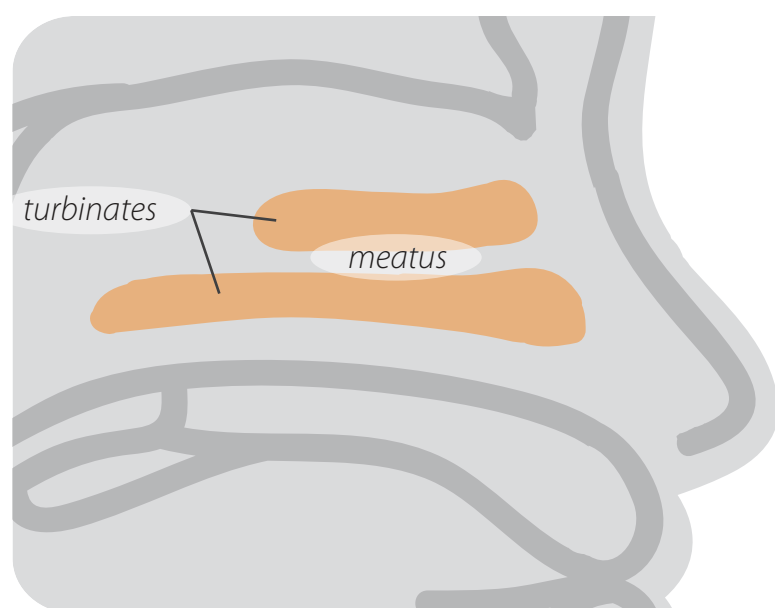
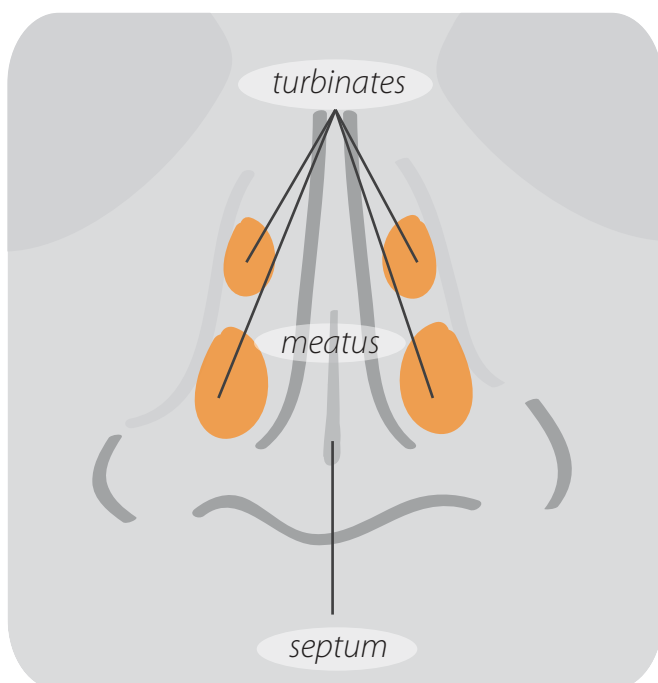
Below the nasal cavity is the “**palate**”, a bony layer separating the mouth from the nasal cavity. The palate is composed of the “**hard palate**”, made of bone, the soft palate, made of soft tissue. The “**soft palate**” moves up to separate the nasal cavity from the rest of the pharynx, allowing us to breathe through our nose and eat at the same time. During development, the palate may not fully close (also known as “cleft palate”), leading to open communication with the nasal cavity. This can be surgically repaired by an ENT specialist.

Back



The back of the nasal cavity is an opening called the “**choana**” that leads into an area called the **nasopharynx**, the upper portion of your pharynx. Inhaled air passes through the choana, through the pharynx, and is directed into your lungs. The sinuses produce ~1L of mucous every day, which drain in this direction to be swallowed. An excess amount of mucus creates an overflow running down the back of your nose into your throat, resulting in post-nasal drip. This may lead to frequent throat clearing, sore throat, and coughing.

Turbinates



Three (sometimes four) bony ridges that grow out of the bony borders of the nasal cavity are called “**turbinates**”. The turbinates are responsible for filtering and warming the air that comes into the nose before it enters the lungs. The space between the turbinates is called a “**meatus**”, which is where polyps and inflammation may occur to block the drainage of your sinuses, leading to pain and fullness. If inflammation permits the middle meatus to be congested for example, the sinuses that drain into the middle meatus would be blocked, resulting in fluid back-up in those sinuses.