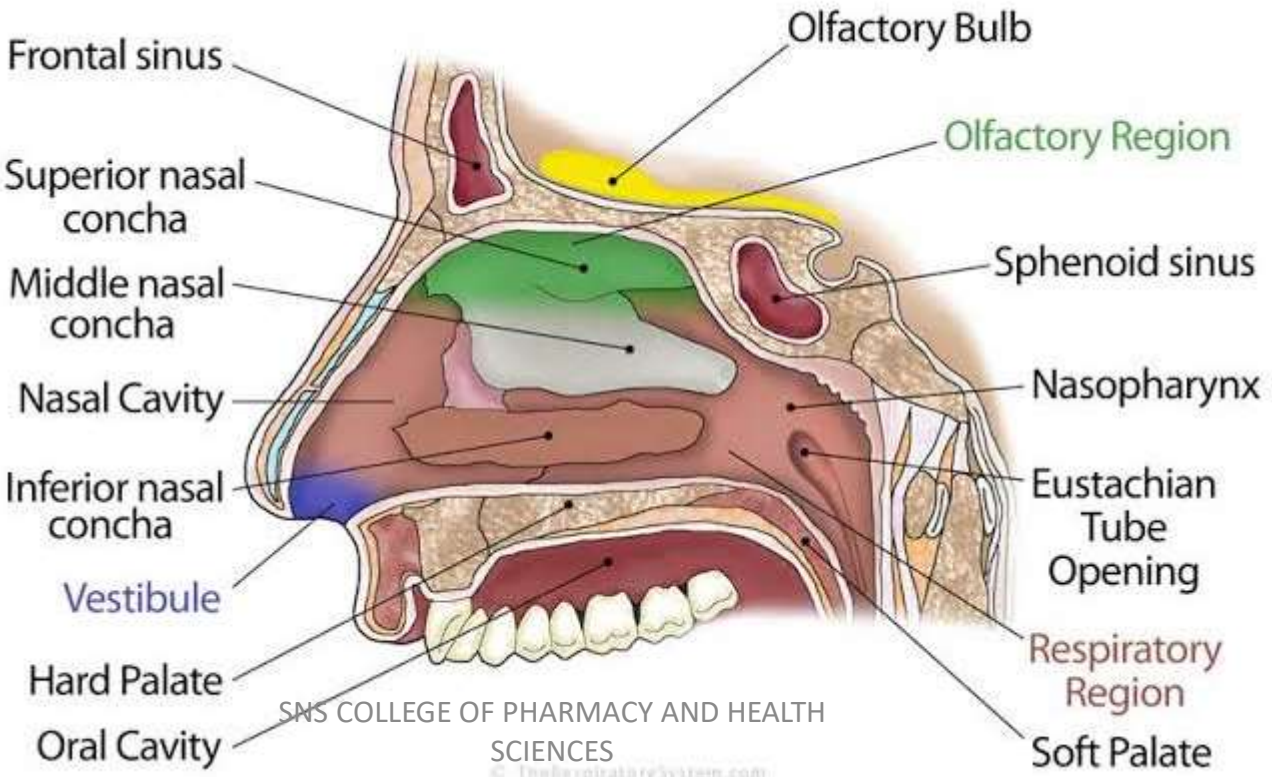
NOSE

Introduction:

The nose is the part of the respiratory tract superior to the hard palate

It contains the peripheral organ of smell



Composition:

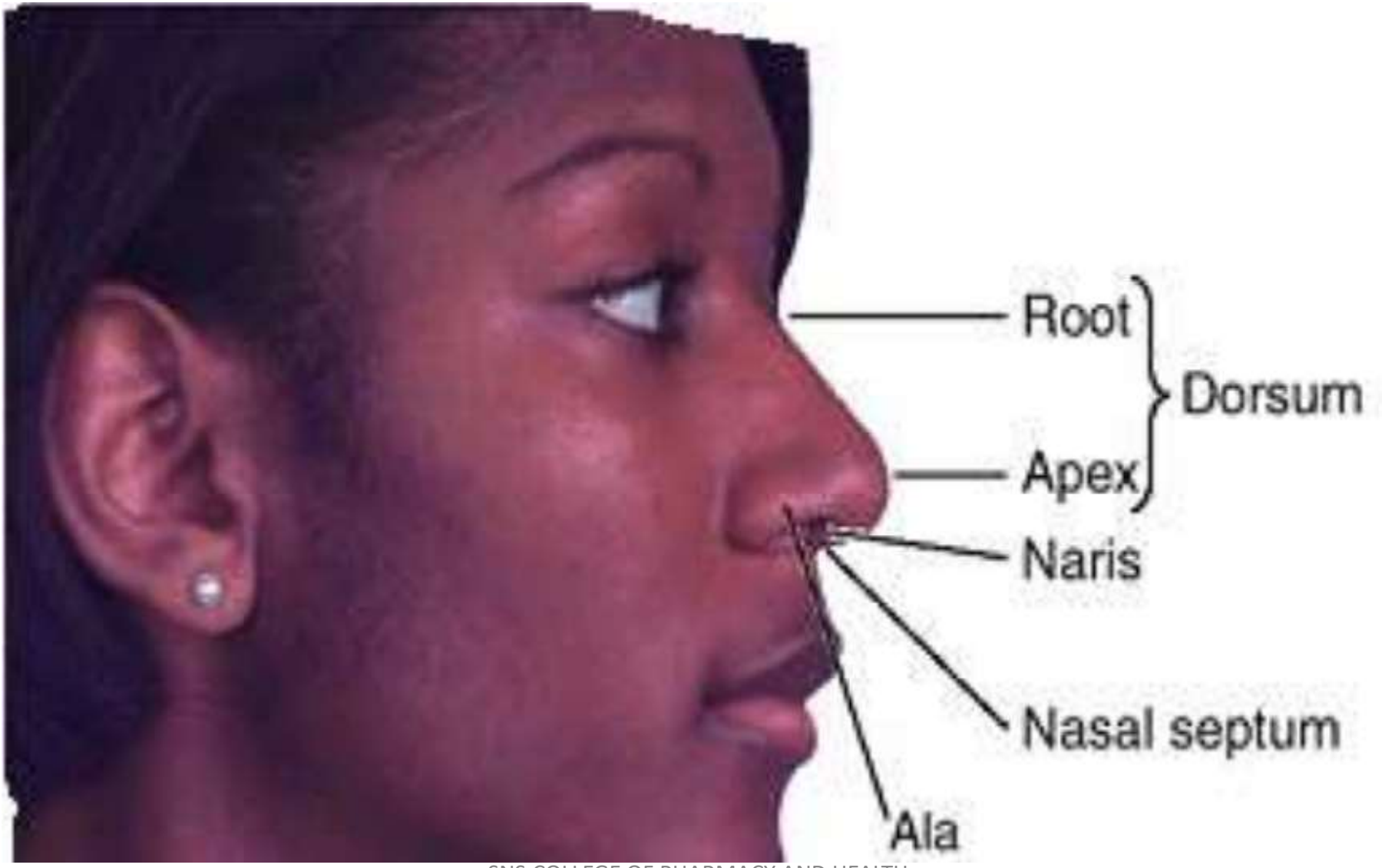
- External nose
- Nasal cavity (the nasal cavity is divided into right and left cavities by the nasal septum)

Functions:

- olfaction (smelling)
- respiration (breathing)
- filtration of dust
- humidification of inspired air
- reception and elimination of secretions from the paranasal sinuses and nasolacrimal ducts

EXTERNAL NOSE

1. Is the visible portion that projects from the face.
2. Its skeleton is mainly cartilaginous (small bony contributions are present) .
3. The part of the external nose that extends from the root of the nose to the apex (tip) of the nose is called the dorsum .
4. The inferior surface of the nose is pierced by two piriform openings called nares (nostrils, anterior nasal apertures).
5. The nares are bounded laterally by the alae (wings) of the nose.
6. The superior bony part of the nose, including its root, is covered by thin skin.
7. The skin over the cartilaginous part of the nose is covered with thicker skin, which contains many sebaceous glands.


Root
Dorsum
Apex
Naris
Nasal septum
Ala

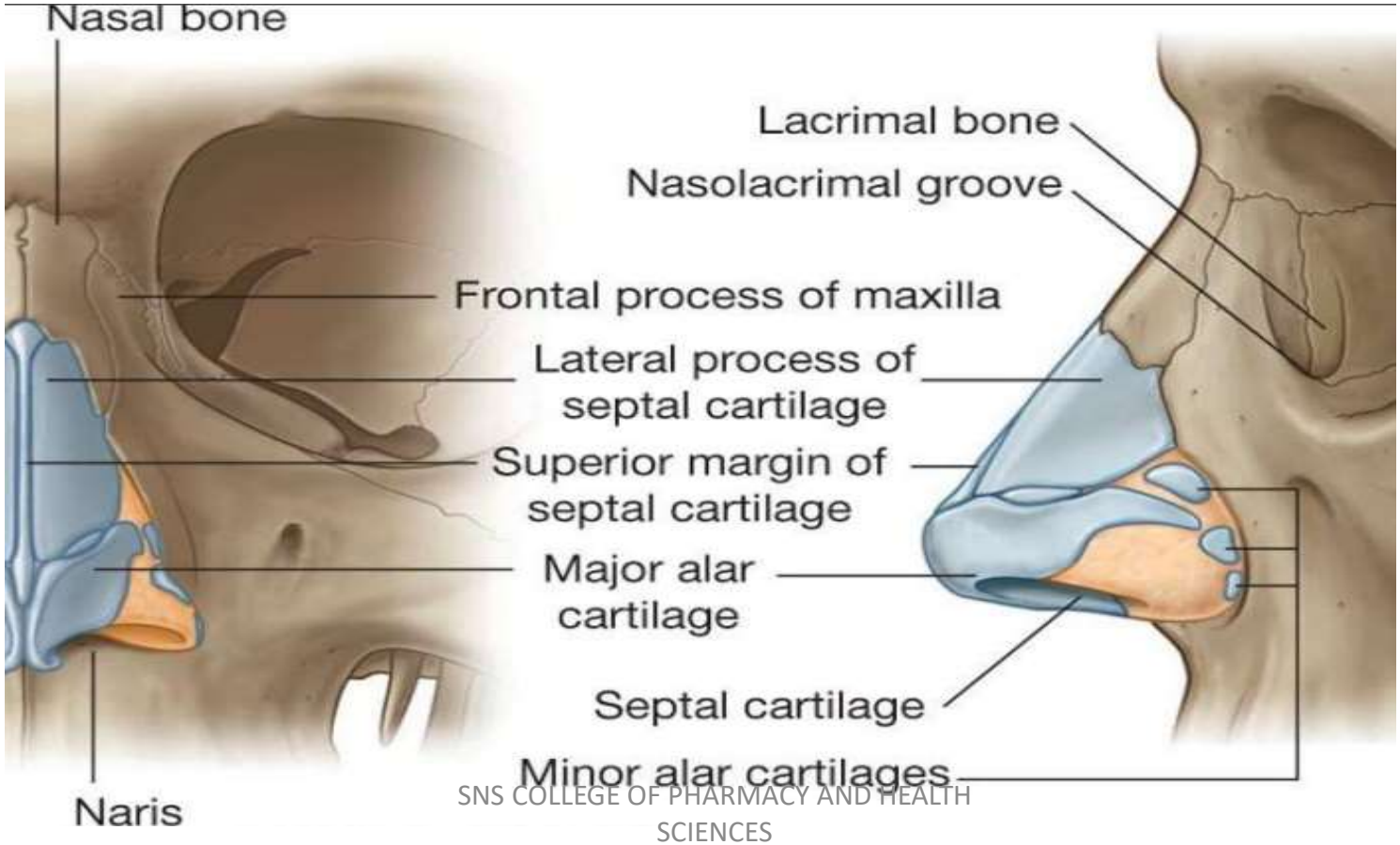
7. The skin extends into the anterior part of the nasal cavity called the vestibule of the nose
8. The vestibule of the nose has a variable number of stiff hairs called vibrissae
9. These hairs are usually moist and these help to filter dust particles from air entering the nasal cavity

Skeleton of the External Nose composed of:

I. bones

II. cartilages

I. The bony part consists of the: nasal bones,frontal processes of the maxillae ,nasal part of the frontal bone ,nasal spine , bony parts of the nasal septum



II. The cartilaginous part of the nose consists of five main cartilages and small minor cartilages: two lateral cartilages, two alar cartilages, and one septal cartilage.

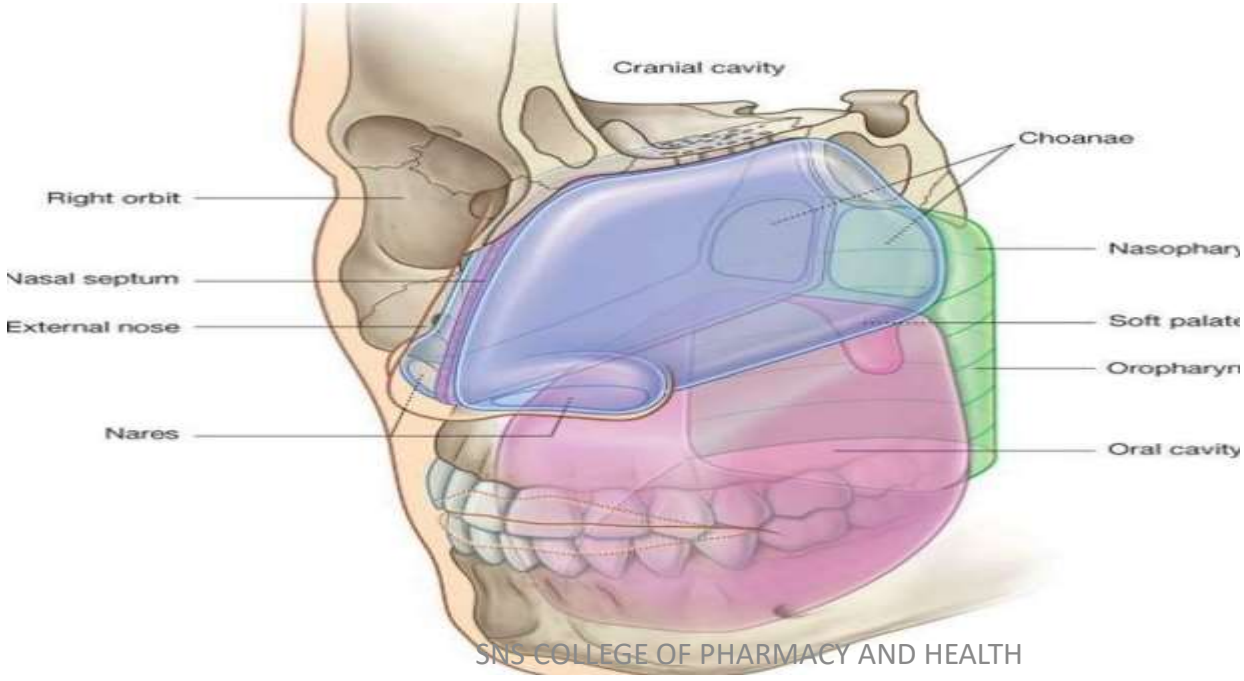
3 or 4 minor alar cartilages. The U-shaped alar cartilages are free and movable; they dilate or constrict the nares when the muscles acting on the nose contract.

Nasal Septum

It divides the chamber of the nose into two nasal cavities

It has a: bony part

a soft mobile cartilaginous part



NASAL CAVITY

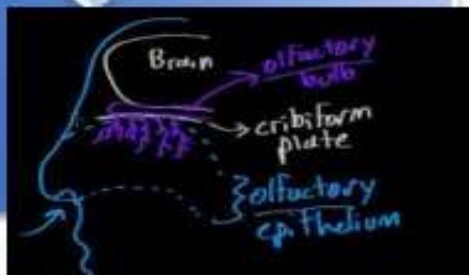
- Divided into right and left halves by the nasal septum.
- The nasal cavity is entered anteriorly through the nares.
- It opens posteriorly into the nasopharynx through the choanae.
- Mucosa lines the nasal cavity, except for the nasal vestibule, which is lined with skin.
- The superior one third of the nasal mucosa forms the olfactory area .
- The inferior two thirds of the nasal mucosa forms the respiratory area .
- The olfactory area contains the peripheral organ of smell; sniffing draws air to the area.
- Air passing over the respiratory area is warmed and moistened before it passes through the rest of the upper respiratory tract to the lungs.

PHYSIOLOGY OF SMELL

Air passes in to the nasal cavity ,and trickles around the nasal cavity

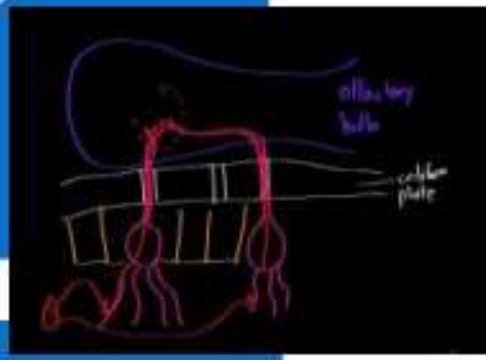
Smell molecules stick to olfactory mucosa(epithelial tissue located at sup.border of nasal cavity)

Olfactory mucosa is lined by olfactory mucus with olfactory receptor neurones with in it, which has" cilia" finger like projections extents down to mucus where smell molecules binds



Olfactory receptor neurons also extends superiorly up through cribiform plate,after passing it olfactory neurons joins olfactory bulb

Olfacory receptor neurones synapes to other neuron with in olfactory bulb,axons of this neuons joins togeher to form olfactory tract which also knows as olfactory nerve(CN 1)



Olfactory tract extends in to higher center of brain to give individual sense of smell.

DISORDERS OF NOSE

Rhinitis:

Inflammation of mucosa of nose is called rhinitis.

- Infectious rhinitis: caused by virus or bacteria.
- Allergic rhinitis: caused by allergic reaction to dust, cold, pollen etc.

  3) Non allergic rhinitis: caused by over use of nasal decongestant.

Epistaxis can be defined as the sudden bleed from one or both nostrils. It is not a disease but it can be warning sign for another body ailment.

Pharyngitis:

Inflammation of pharynx and infection is known as pharyngitis. It is of two type acute and chronic.

Sinusitis:

It is a common inflammation of the paranasal sinuses,the cavities that produce mucus necessary for the nasal passage to work effectively

Ansomia and hyposmia:

Ansomia is total loss of smell while hyposmia refers to dimnished olfactory sensitivity

Paraosmia or dysosmia:

It refers to distortion of smell.in it the person interepts the odor incorrectly