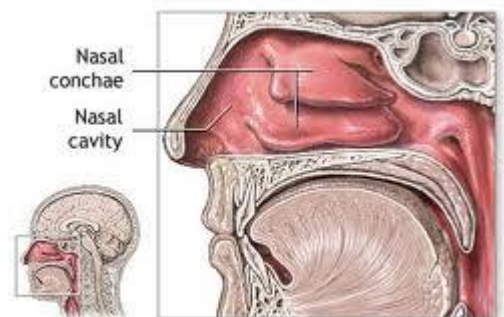


## The Human Nose

The human nose is a sense organ which allows us to smell. Another word for smell is olfaction. The olfactory receptors in the nose help to identify food, mates, predators, and provides both sensual pleasure in the odour of flowers and perfume, as well as warnings of danger, for example spoiled food, fire or chemical dangers. For both humans and animals, it is one of the important means by which our environment communicates with us. Another function of the nose is the conditioning of inhaled air, warming it and making it more humid. Hairs inside the nose prevent large particles from entering the lungs.

### Anatomy and Physiology

- ❖ The nasal passages allow the passage of air for respiration through the nose and also warm and filter the air.
- ❖ The nasal concha/turbinate bone is a long, narrow and curled bone shelf that protrudes into the breathing passage of the nose. In humans, the turbinates divide the nasal airway into four groove like air passages, and are responsible for forcing inhaled air to flow in a steady, regular pattern around the largest possible surface of cilia and climate controlling tissue.



### How do we smell?

Specialised receptor cells of the olfactory epithelium detect and recognize smells. The air passes through the nasal cavity and through a thick layer of mucus to the olfactory bulb. The olfactory bulb is situated in the forebrain. The smells are recognized here because each smell molecule fits into a nerve cell like a puzzle piece. The cells then send signals to the brain via the olfactory nerve. The brain then interprets those molecules as the sweet flowers, or the curdling milk that you have held up to your nose.