

The Organs of Speech.

The organs of the human body which produce speech sounds are together called organs of speech. The organs of speech, and their speech functions, can best be described under three systems; the respiratory system, the phonatory system, and articulatory system.

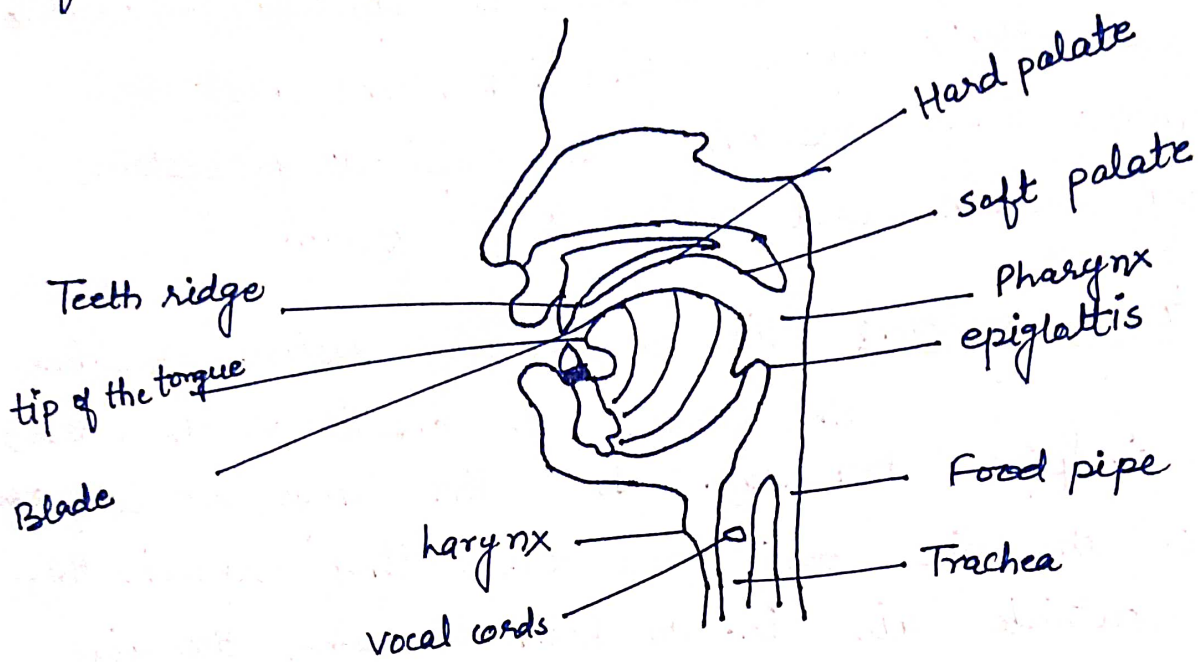
1. The Respiratory System: The respiratory system comprises the lungs, the muscles of the chest, and the windpipe (trachea). When the lungs are compressed they throw the air out; and when they expand, they draw the outside air in. In both the cases, the air passes through the trachea.

The airstream mechanism is called pulmonic egressive airstream mechanism. English and all other European languages, as also all Indian languages except Sindhi, use only the pulmonic egressive airstream mechanism.

2. Phonatory System: The airstream released by the lungs undergoes several modifications before it goes out into the atmosphere. The first such modification is effected in the trachea. This system mainly comprises the larynx and the vocal cords. We shall study here both the body organs:

(a) The larynx: In the upper part of the trachea is a structure called the larynx, its primary functions

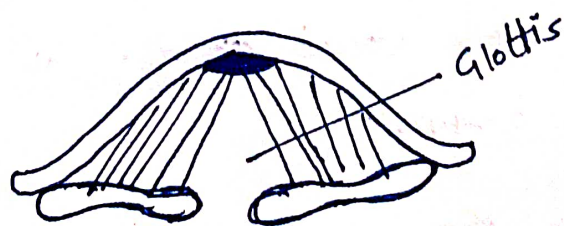
It acts as a valve: when necessary, it closes off air from and to the lungs and also prevents food from entering the trachea.



2- Vocal cords: situated inside the larynx is a pair of lip like structure, called the vocal cords.

These are placed horizontally from front to back, joined at the front, but separated at the back. There are mainly two positions of the vocal cords.

(a) Vocal cords Drawn wide Apart: When the vocal cords are drawn wide apart, there is a wide opening between them. So the lungs air pass through without any friction. These sounds are called voiceless sounds.

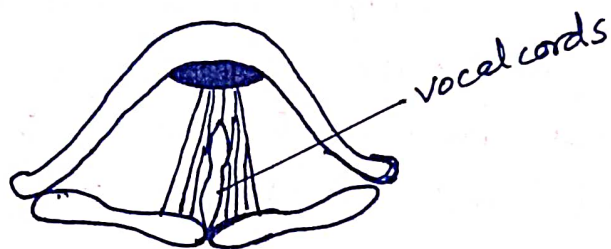


Vocal cords Drawn wide apart.

are nine sounds in English RP known as voiceless sounds. These sounds are p, t, k, f, θ, s, ʃ, tʃ, h.

(b) Vocal cords held loosely together: When the vocal cords are held loosely together,

the air from the lungs can escape only by setting them into vibration. Such vibration imparts a 'hum' to the sounds produced, which are then called voiced sounds.



vocal cords held loosely together.

Examples of voiced sounds are all English vowels and the initial consonants in the English words w, b, d, g, m, r, l, z, dʒ, θ etc are some voiced sounds.

3- Articulatory system: After passing through the larynx, the airstream is further modified by the various shapes assumed by the organs of speech lying above the larynx, before it passes out into the atmosphere; and every such modification affects the quality of the sound produced. These organs of speech, together constituting the articulatory system, are now described.

(a) The lips: The lips play an important part in the production of certain speech sounds. The initial sounds in English words pot, boat, man are bilabial sounds.

(b) The teeth: Certain sounds are produced with the help of teeth. Such are initial sounds in English words. think, that, fan, van.

(c) The Teeth Ridge: The teeth ridge (alveolar ridge) is the convex part of the roof of the mouth lying immediately behind the upper teeth. Many consonant sounds are produced at teeth ridge, as t, d

(d) The Hard Palate: Lying immediately behind the teeth ridge is a hard bony surface, called the hard palate. An example of the sounds produced at the hard palate is the initial sound in the English word 'yes' or Hindi word 'हाँ'.

(e) The soft Palate: The soft portion of the roof is called the soft palate or the velum. It is responsible for the production of a large number of sounds such as initial sounds in English words king & go.

Source: A course in Phonetics & spoken English by J. Sethi & Dharmija