

The Articulation of Vowels

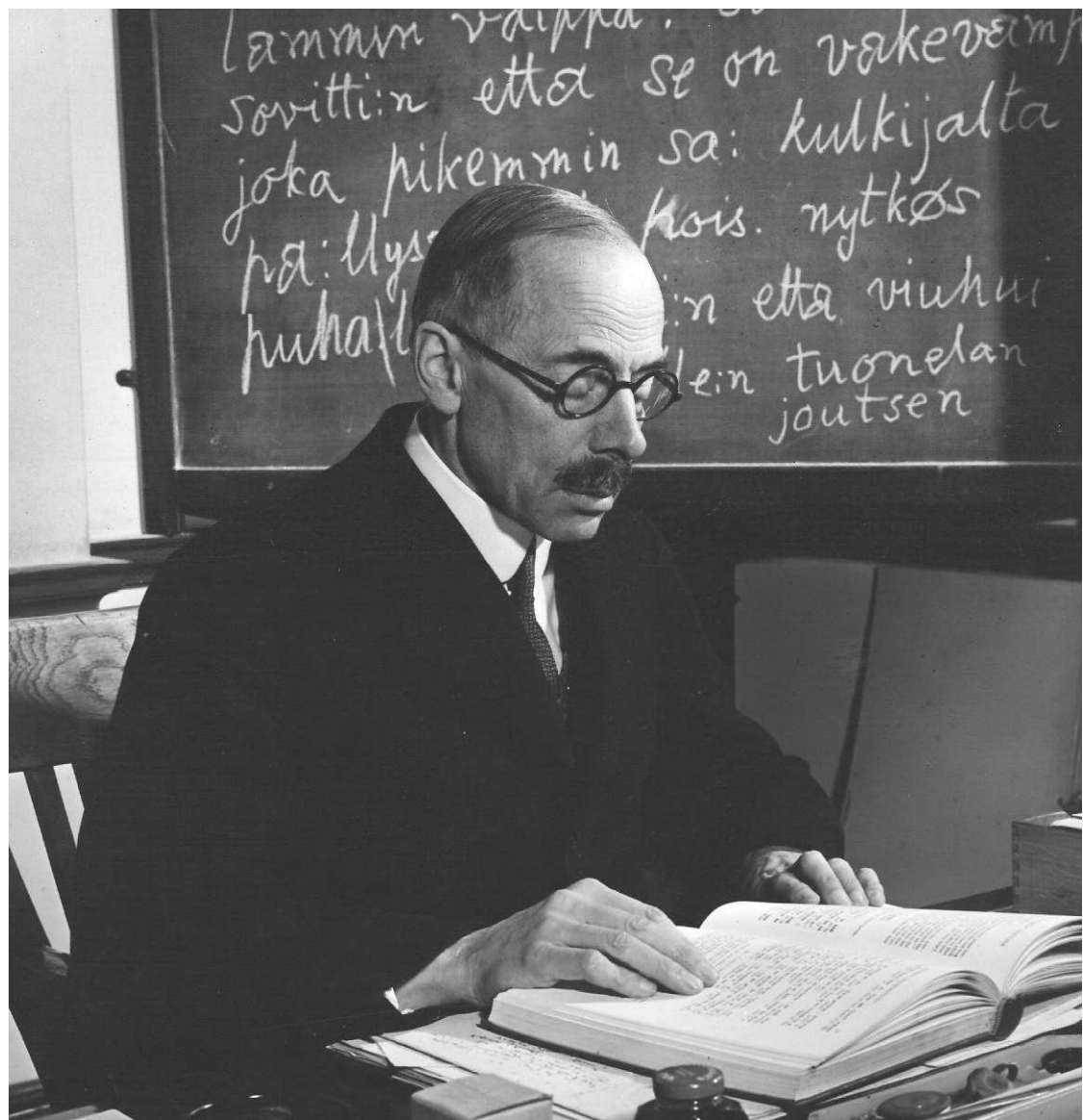
Vowels are produced when the air stream is voiced through the vibration of the vocal cords in larynx, and then shaped using the tongue and the lips to modify the overall shape of the mouth. The position of the tongue is a useful reference point for describing the difference between the vowel sounds.

Cardinal Vowels

The cardinal vowel is a set of standard reference points based on a combination of articulation and auditory judgments.

The front, center and back of the tongue are distinguished, as are four levels of tongue height

- a) The highest position the tongue can achieve without producing audible friction.**
- b) The lowest position the tongue can achieve; and**
- c) Two intermediate levels, dividing the intervening space into auditory equidistant areas.**



Daniel Jones, the British phonetician, distinguished vowels into primary series (1-8) from secondary series (9-16).

Each of these vowel points was given a phonetic symbol. it is based on lip position.

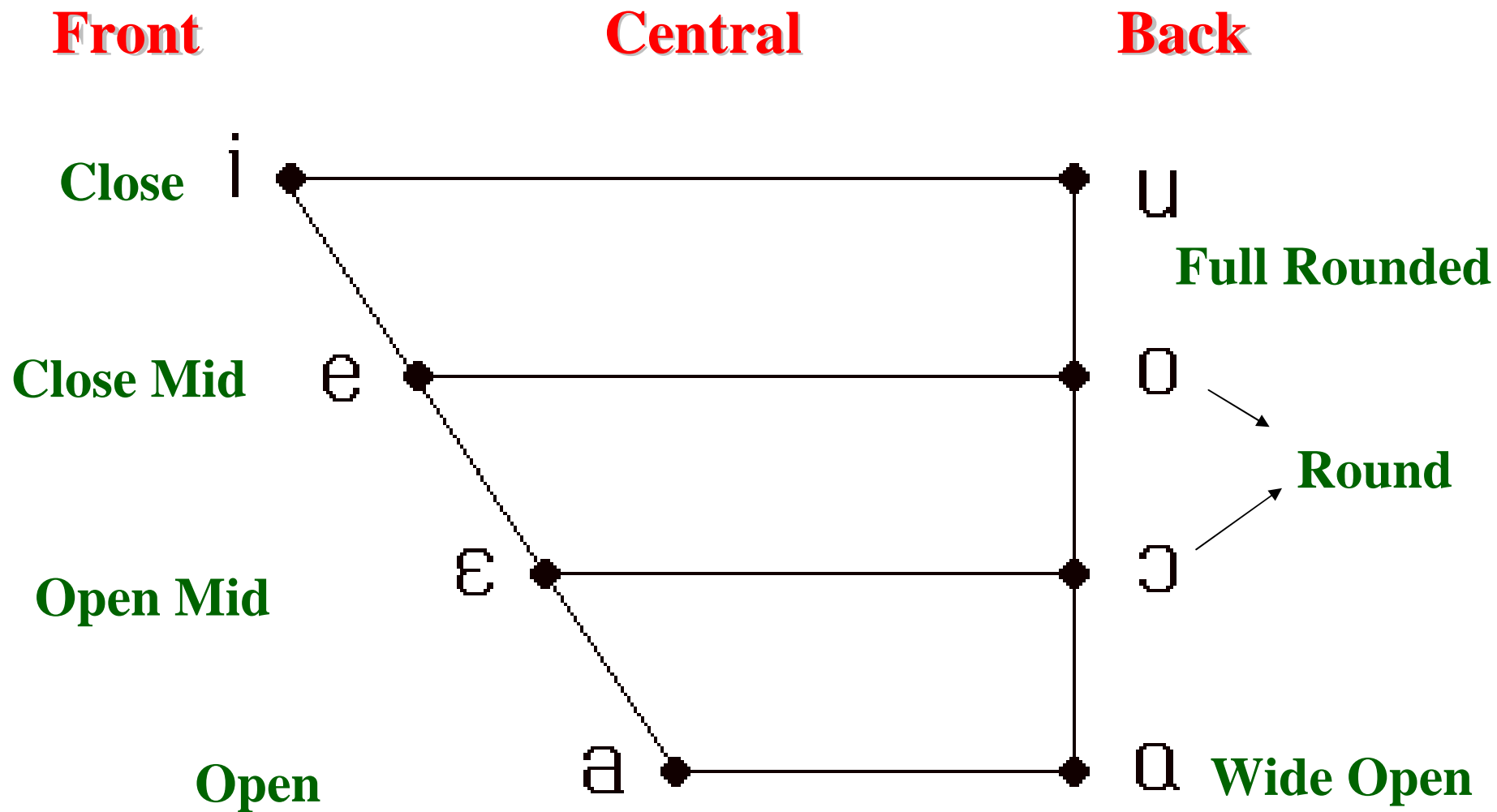
The first five primary ones are all unrounded front

[i], [e], [ɛ], and [a], and back [ɔ].

The remaining three back vowels are rounded:

[ɔ], [o], and [u].

Cardinal vowels must be printed within square brackets to distinguish them from English vowel sounds



Primary Cardinal Vowels

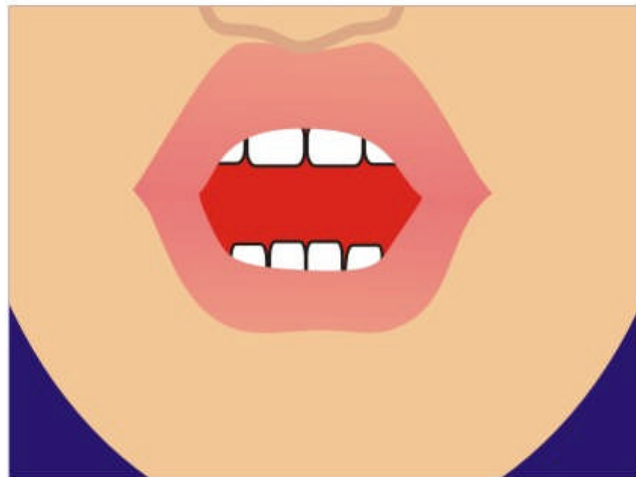
Types of Lip-rounding



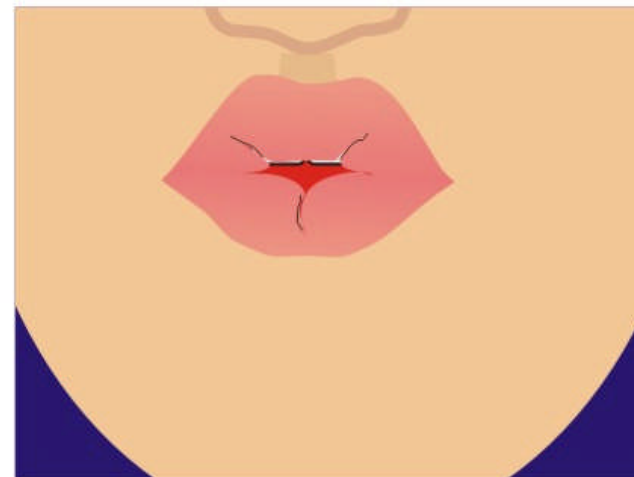
Close Lip-spreading



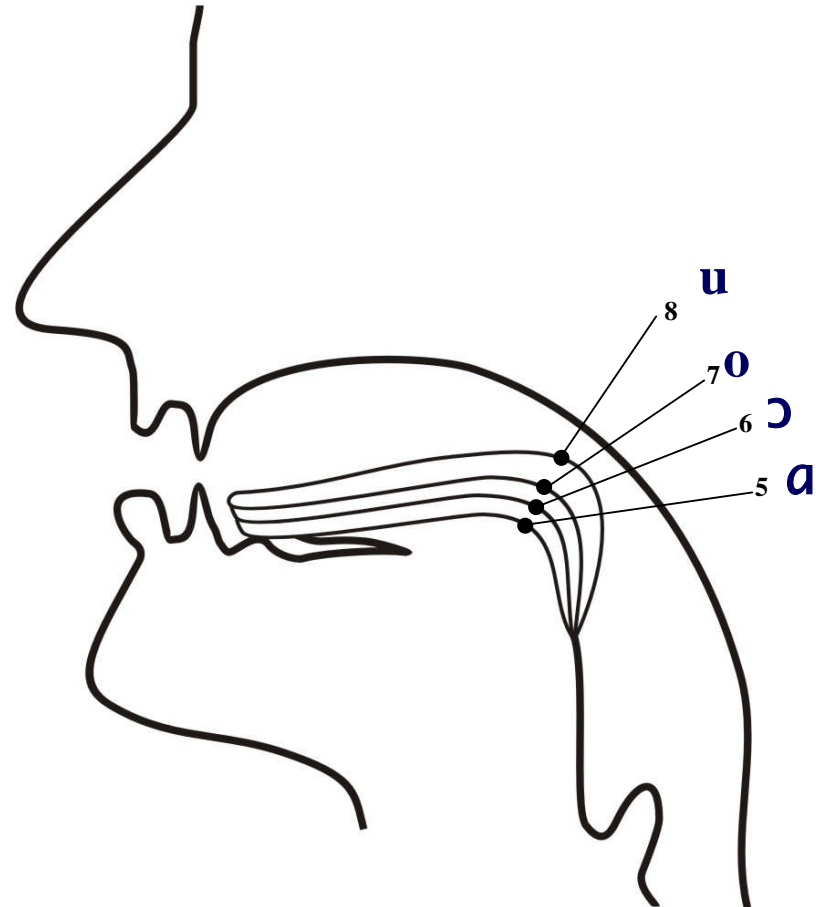
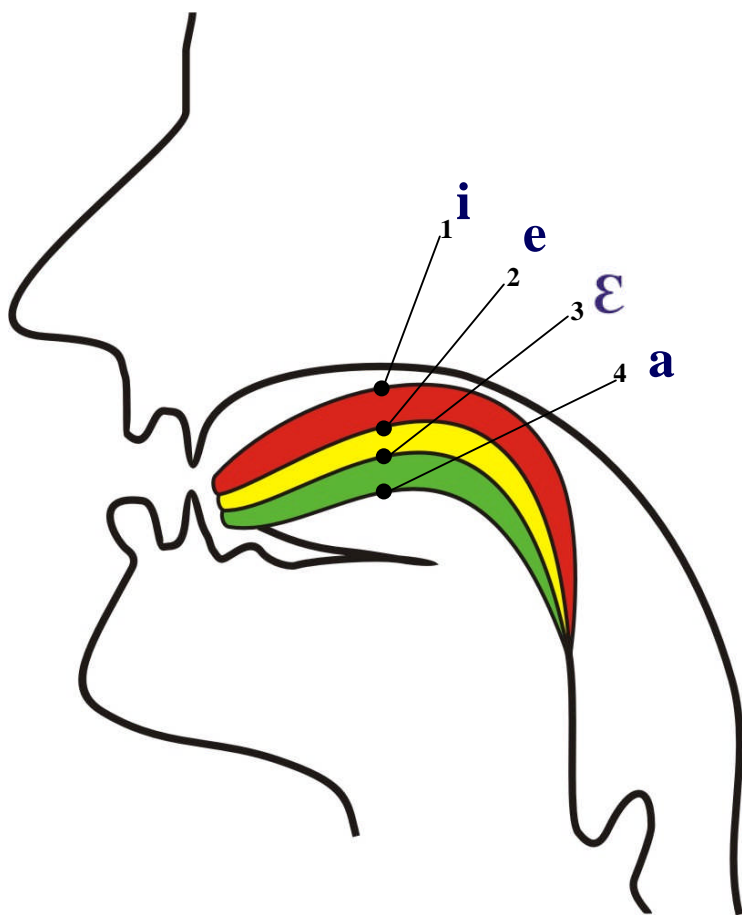
Neutral Lip-position



Open Lip-rounding

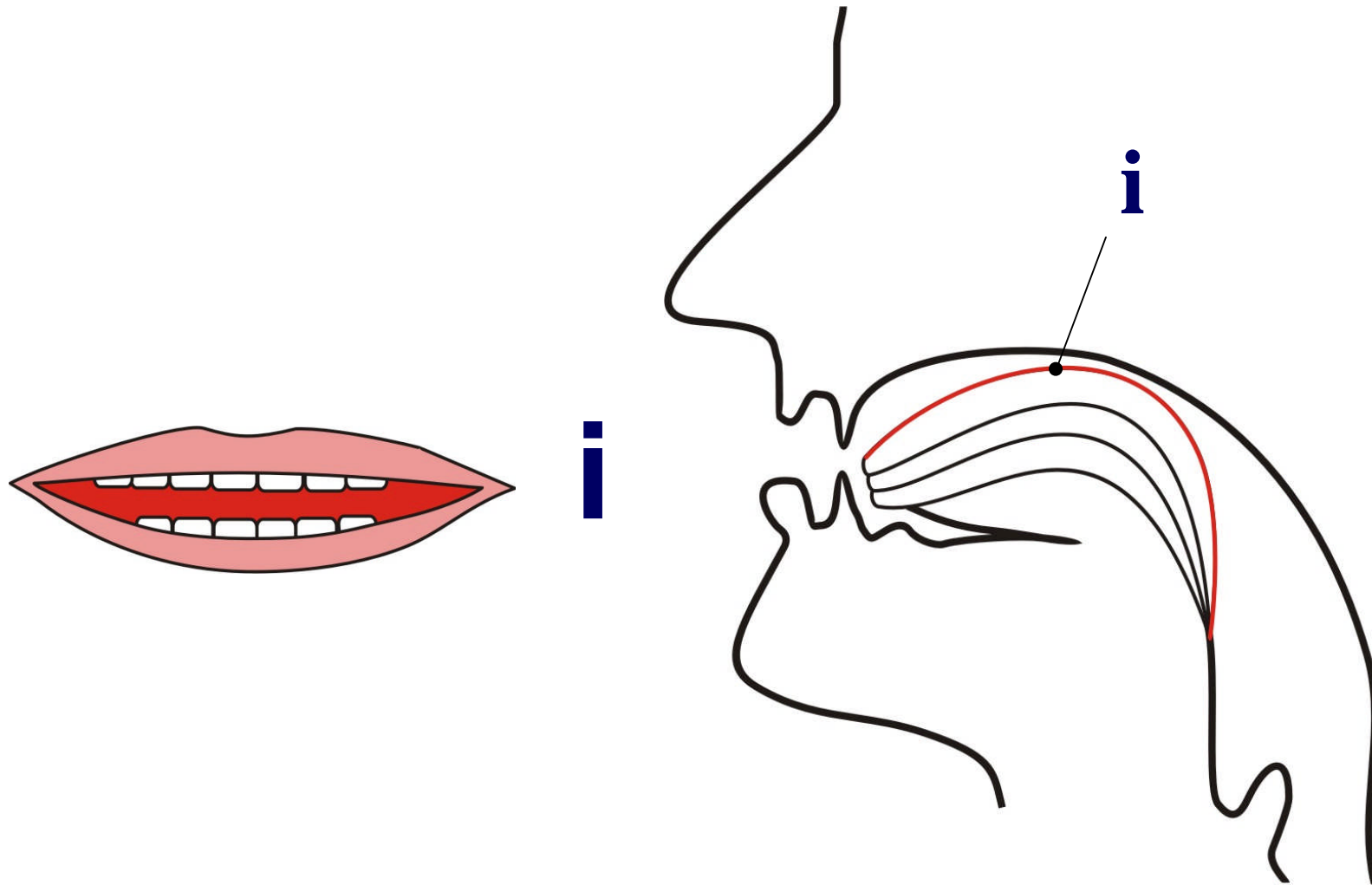


Close Lip-rounding

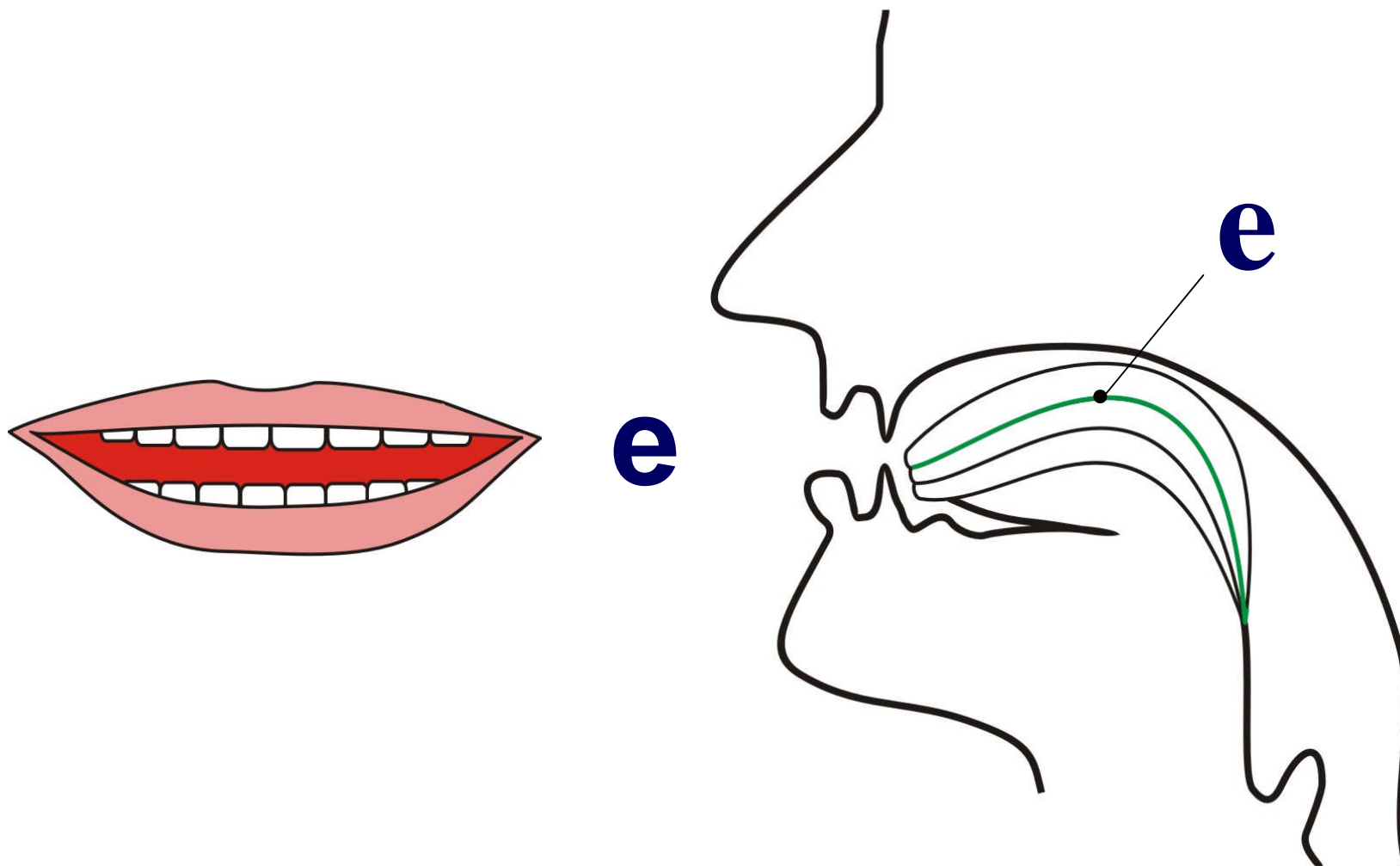


Cardinal Vowel Chart – representing tongue position

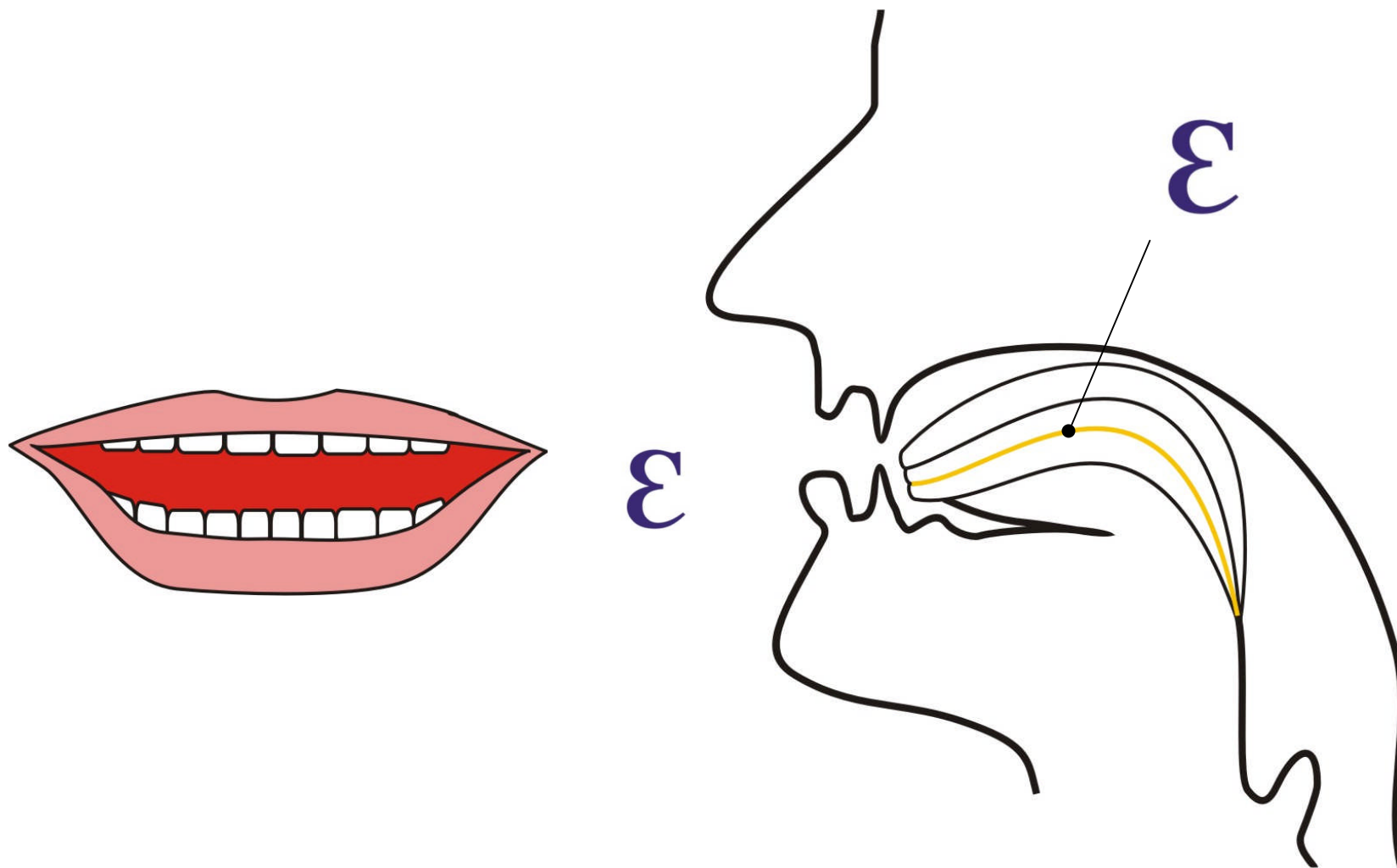
Look and listen to the following primary cardinal vowels 1 – 8 :



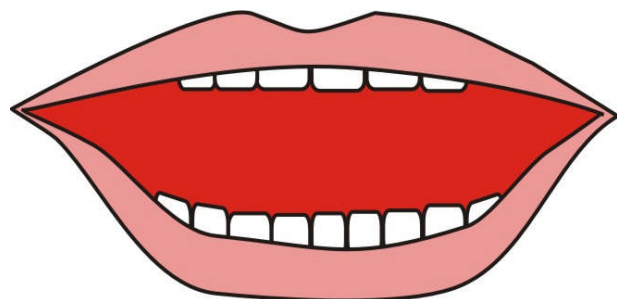
1 close front unrounded vowel



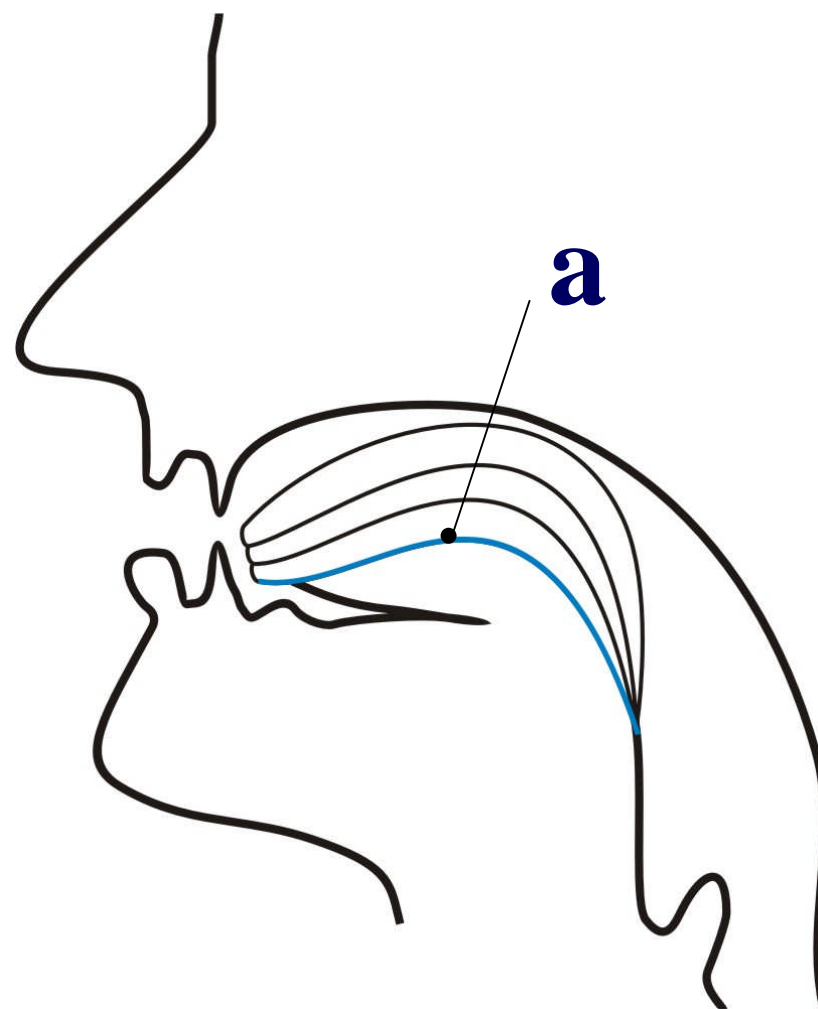
2 close-mid front unrounded vowel



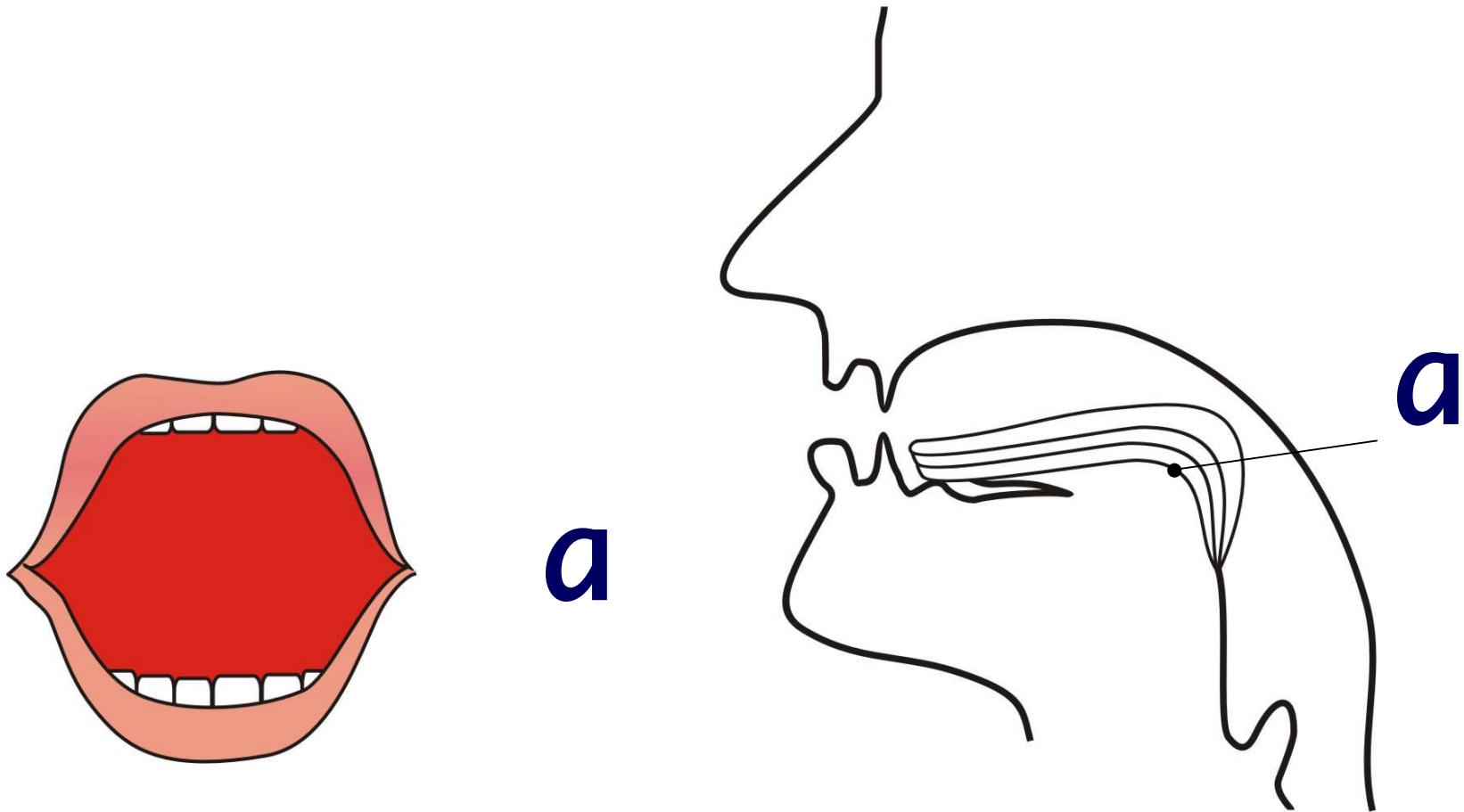
3 open-mid front unrounded vowel



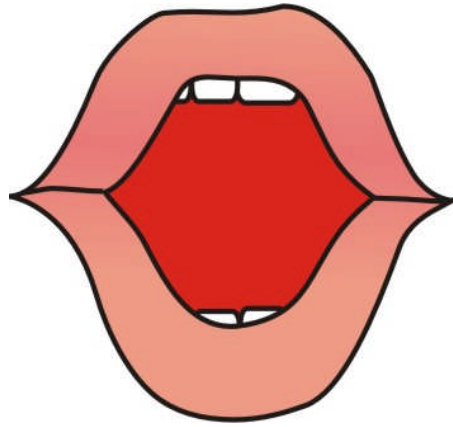
a



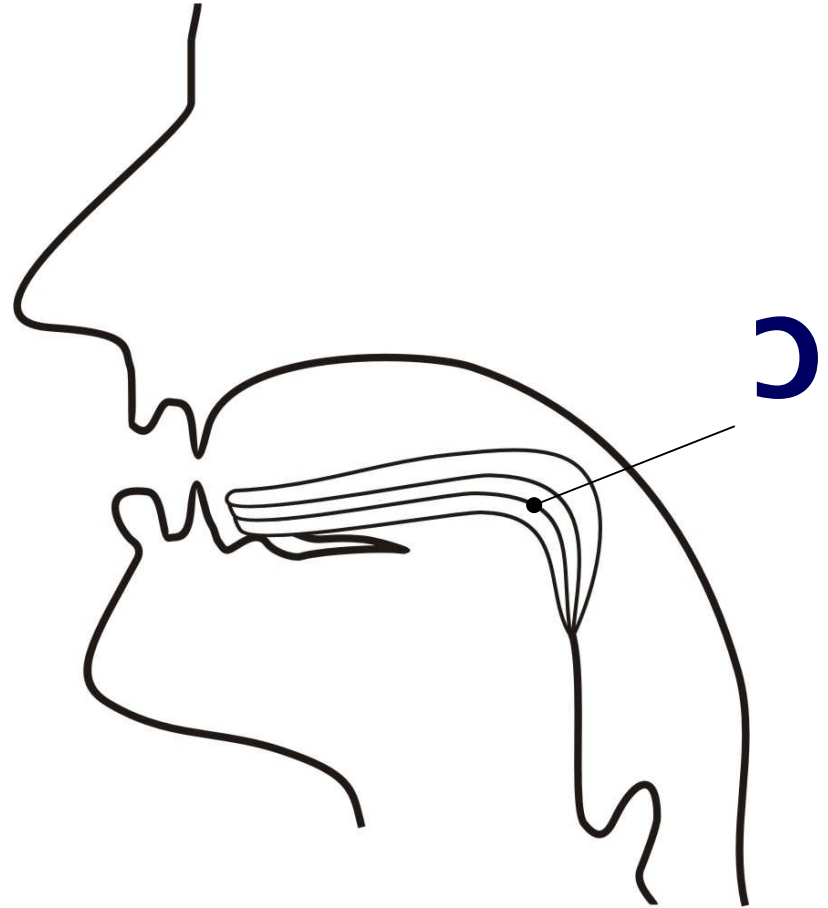
4 open front unrounded vowel



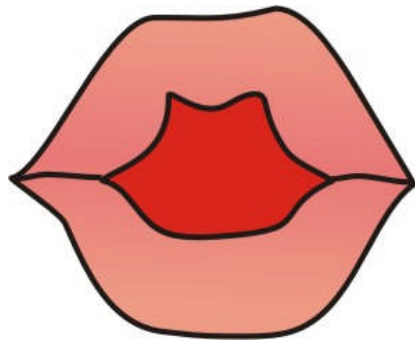
5 open back unrounded vowel



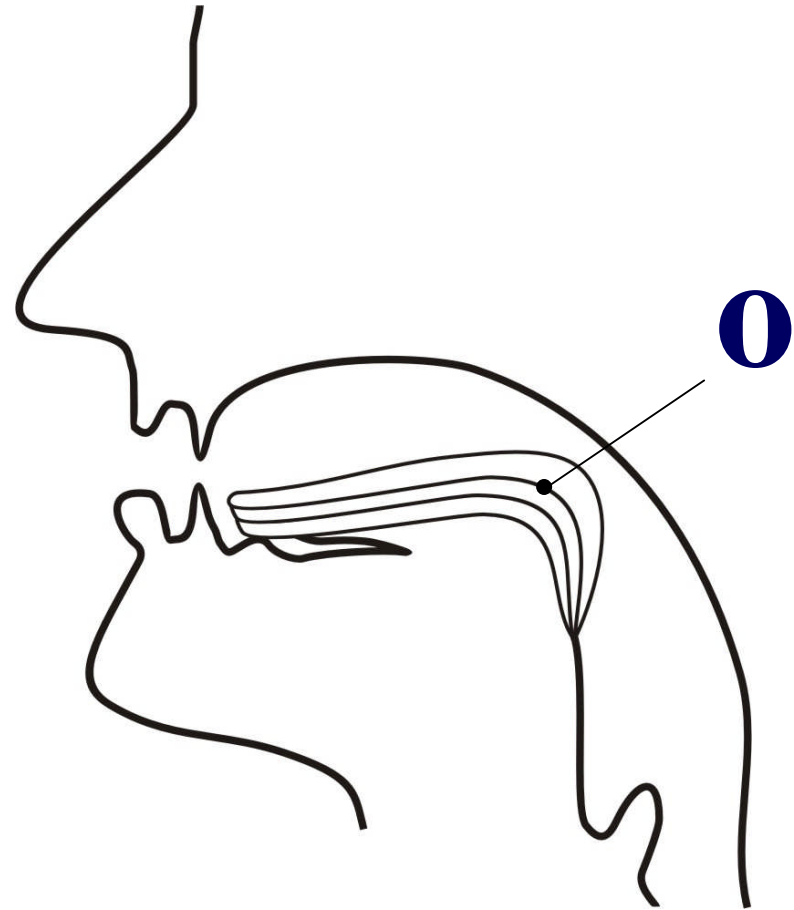
ɔ



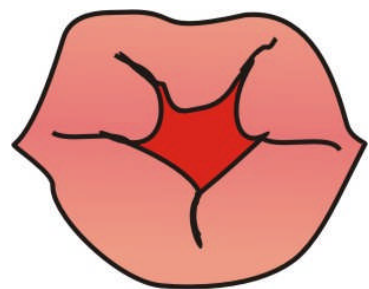
6 open-mid back rounded vowel



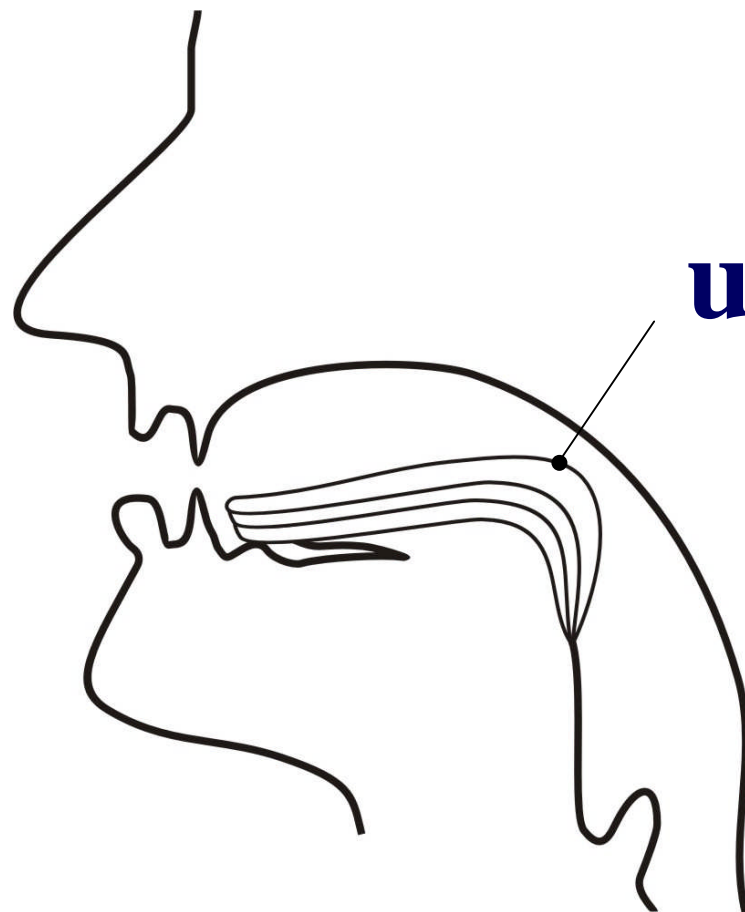
o



7 close-mid back rounded vowel



u



u

8 close back rounded vowel