CHAPTER THREE
Introduction to Vowels

Preparation for Vowel Production

Before we begin our work on producing specific vowels correctly, we must concern ourselves with body awareness and relaxation. Throughout the day, many develop tensions that must be released. Let's concentrate on isolated areas of the body. The entire body works better when it is aligned properly. The muscles surrounding the articulators—the jaw, lips, tongue, teeth, lips, soft palate, and hard palate—must not be tense. The diaphragm must be soft and pliable. Here are some exercises to release the tension in these areas.

1. Alignment of Spine: Concentrate on sitting or standing tall, with both feet on the floor and knees unlocked. Feel the neck elongated upward. When the head is aligned on the vertebrae of the neck, the jaw will drop easily and the tongue will function efficiently.
2. Facial Massage: Massage the hollows of the cheeks, upper lip, lower lip, temples and forehead.
3. Tongue/Neck Massage: Massage the tendons on the side of neck, walking your fingers upward toward your jaw. Walk your fingers along the lower jawbone toward the chin. The soft muscle under the chin is the base of the tongue. Push up gently with your thumbs, softening this muscle if it is tight.
4. Lip Buzz: Blow air lightly through your closed lips and let them flap on the air.
5. Tongue Stretch: Stick your tongue out as far as is comfortable. Point your tongue toward your left cheek, right cheek, chin and nose. Repeat this several times.

6. Cud Chew: Chew slowly and deliberately, moving your tongue all around your mouth. Pause to count "one" in an exaggerated fashion and continue chewing as you count to ten. When you are finished, the tip of the tongue should rest easily against the inside of the lower front teeth. The jaw should feel like it is hanging lower and is more released. The facial muscles should feel more pliable.
7. Neck Stretches: Tilt your head slightly forward, diagonally forward, and to the sides, holding in each for ten seconds. Be careful not to push head down in these positions, but rather let it hang from its own weight.
8. Shoulder Rolls: Roll shoulders one at a time forward and backward ten times each. Roll both shoulders together ten times forward and ten times backward.
9. Diaphragm Massage: Massage the diaphragm muscle with your fist in a circular motion. It is relaxed when it is soft enough that you press your fingers in under your rib cage to your second knuckle. Many hold tensions there. When one is angry, nervous, upset or tense, our diaphragm muscle is usually very rigid.
10. Puff Exercise: Take a full breath, purse your lips, and exhale the air with five puffs. The diaphragm should remain relaxed while you tuck in slightly for each puff.
11. Soft Palate Stretch: Encourage yourself to yawn several times. Lift and lower the soft palate by alternating the sounds [ŋ] and [ɑ].

Hopefully by now the articulators and the muscles directly involved with producing sound feel relaxed and activated. We need to be in a state of *active relaxation.* Inactive, flaccid muscles do not respond well to our brain impulses and tense muscles cannot respond well either.

This is the state of relaxation we need before beginning the vowel drill work. When the tongue is relaxed, the tip stays easily in contact with the lower front teeth, the front and back of the tongue will adjust easily to the required position of the specific vowels. Also, the throat will remain open since it is not crowded by a bulky, tense tongue.

These exercises should be included in your vocal warm-up routine everyday. With your diaphragm, shoulders, neck, facial muscles, and the articulators in a state of *active relaxation,* your singing and speaking voice will respond much quicker to your vocal warm-up exercises.

Although the native English speaker can make most of the tongue adjustments for various vowels almost automatically, it is often with stress or tension. It is hoped that studying the detailed analysis of the production of each vowel will help each singer to discover any problems with production that they individually carry over from their speech. The detailed vowel descriptions should also be very helpful to the non-native English singer who is perhaps approaching the study of English diction for the first time.

The Organs of Speech

Before we move on to vowel production, let's discuss some specifics about the articulators that we have been working with.

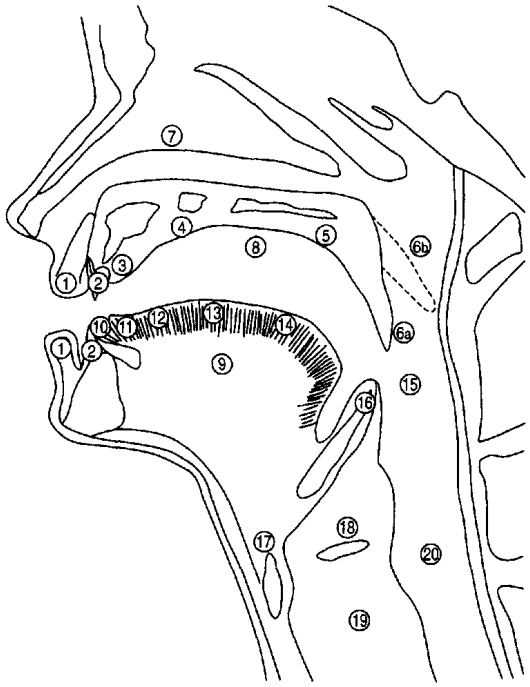


FIGURE 3.1
1 Lips (Labia)
2 Teeth (Dentes)
3 Gum Ridge (Alveolar Ridge)
4 Hard Palate
5 Soft Palate (Velum)
6 Uvula
a. relaxed
b. raised
7 Nasal Passage
8 Mouth (Oral Passage)
9 Tongue (Lingua)
10 Tip of the Tongue
11 Blade of the Tongue
12 Front of the Tongue
13 Middle of the Tongue
14 Back of the Tongue
15 Throat (Pharynx)
16 Epiglottis
17 Voice Box (Larynx)
18 Vocal Folds and Glottis
19 Wind Pipe (Trachea)
20 Food Passage or Gullet (Esophagus)

What Are the Essential Articulators?

They are:

- The jaw
- The lips
- The teeth
- The tongue
- The hard palate
- The soft palate

What Do the Articulators Do?

The articulators move in very precise coordination to form the consonants and vowel sounds that we speak and sing.

How Do They Work?

The Jaw

The jaw closes by contracting the jaw muscles. When you release the jaw muscles, the jaw will drop open. You do not need to pull the jaw open; gravity will do the work for you.

The Lips

The upper and lower lips are muscles that can work together to form a smile, a frown, a pucker, a whistle position, or work independently.

The Teeth

The teeth are connected to the jaw and are positioned closer or further apart by opening or closing the jaw.

The Tongue

The tongue is a flexible muscle that can be moved in many ways. The front can be lifted to touch the upper gum ridge or the teeth. The middle can be arched to bring it closer to the hard palate. The back can lift up closer to the soft palate. The entire tongue can move forward out of the mouth or can be drawn back and bunched in the back of the mouth. The tongue is a very long muscle and is problematic for many singers. The base of the tongue actually attaches just above the larynx or voice box, and if it is tense, it can distort the vocal quality.

The Hard Palate

The hard palate, or roof of the mouth, is actually bone cartilage and cannot be moved.

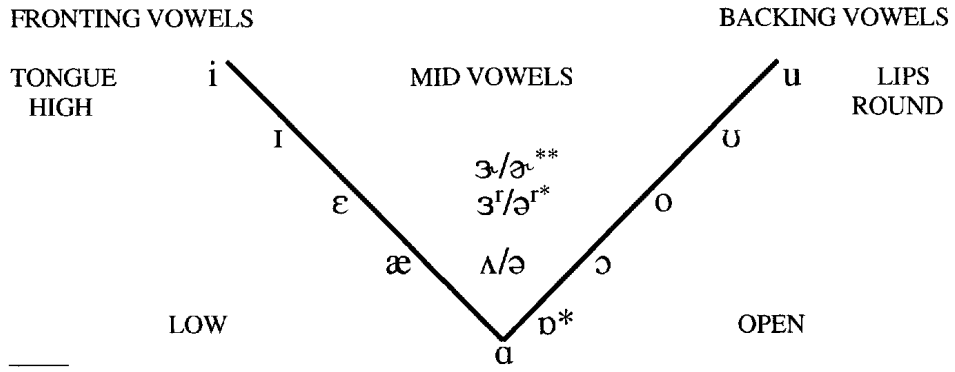
The Soft Palate

The soft palate is soft muscle tissue that is attached to the back of the hard palate. It can be raised and lowered to open or close off the passage from the throat into the nasal space.

As children, we learned to use our speech articulators by experimenting and imitating the speech of the people around us. It took several years to learn how to talk. We imitated our parents and picked up both their good speech habits and often also their tensions. As we become aware of the specific control we have over the articulators, we will be able to release negative tensions and produce more optimal vocal sounds.

Now let's look briefly at an overview of how the English vowels are produced.

The Vowel Chart



*RP/MA only, **AS only.

DIAGRAM 3.1

The Fronting Vowels: [i], [ɪ], [ɛ], [æ]

These require the fronting of the tongue. The middle of the tongue slides forward and rises toward the *hard* palate. The tip of the tongue should be in contact with the lower front teeth. The vowel [i] has the highest tongue arch; [æ] has the most relaxed arching of the tongue. Lips are spread.

The Backing Vowels: [u], [ʊ], [o], [ɔ], [ɒ]

The arch of the tongue is raised toward the *soft* palate; the tip of the tongue touches the lower front teeth. Lips are rounded. The vowel [u] has the highest tongue arch; [ɒ], the lowest.

[ɑ]

The tongue is in the lowest position—neither front nor back. The tongue is still slightly arched but in a relaxed, neutral position. Lips are relaxed and neutral.

The Mixed Vowels: [ɜ˞], [ə˞], [ɜr], [ər], [ʌ], [ə]

The mixed vowels have characteristics of both the fronting and backing vowels. They require the tongue position of one of the fronting vowels plus the lip position of the backing vowels. These will be described in depth later on.

A Word of Caution

The backing of the tongue in no way refers to pulling the tongue backward and bunching it in the throat. It refers to the forward arching of the tongue that, in relation to the soft palate, is slightly further in "back" of the hard palate. In any case, the tongue should *always* be felt in contact with the lower front teeth.

Tips for Vocal Ease

In general, when singing in the upper register or the passaggio, try shifting the vowel up toward the next closed vowel on the vowel chart for more vocal comfort.

For difficulty in the passaggio with:

Substitutions		*Examples*
[æ]	try [ɛ]	for "man" → sing m[ɛ]n
[ɛ]	try [e] without second vowel in diphthong	for "heaven" → sing h[e]ven
[ɑ]/[D]	try [ɔ]	for "body" → sing b[ɔ]dy
[ɔ]/[D]	try [o]	for "exalted" → sing exh[o]lted

For [i] and [ɪ], try using the umlauted or mixed vowels from French or German.

[i]	try [y]	for "dream" → sing dr[y]m
[ɪ]	try [ʏ]	for "hill" → sing h[ʏ]ll

A Word of Caution

If a vowel is modified or substituted for greater vocal ease, it must be done in such a way that the vowel change is not discernible to the listener. The listener needs to hear *real* vowel sounds and should not have to struggle with a text sung in "singerese." Use the modifications only in the passaggio or the extreme ranges of the registers. In the middle range, always use precise and correct vowels.

More suggestions for these vowel modifications can be found in the chapters for the specific vowel sounds.

Eliminating Glottal Attacks

Before we speak or sing these vowels, let's discuss the way they should be initiated for optimal vocal health. The initiation of a vowel is called an *attack* or an *onset.* In other