



Department of Otolaryngology / Head and Neck Surgery  
*Center for Voice Disorders*

**Warming-up The Voice**

While singing may seem heavenly, vocal production itself is a down-to-earth physical experience, requiring athletic discipline as well as artistry. As any athlete knows, an effective warm up is essential for optimal performance.

**Why Should Singers Warm-Up?**

No one would expect a gymnast to stand up and perform back-flips after a full meal, but singers who are dinner guests are frequently asked to perform "on-the-spot entertainment," after dessert and coffee. The wise singer will politely decline, rather than reveal his raw vocal product, which is further hindered by a bloated stomach! Warming up allows the singer to "get-in-touch" with herself or himself, both physically and psychologically, and to experience that self-awareness which is the foundation of a secure vocal technique.

**Allowing Time to Warm-Up**

Ideally, the warm-up procedure should be unhurried -- a leisurely self-exploration that allows adequate time for gradual loosening and coordination of countless muscles, large and small, which contribute to vocal production. Warming-up should be an enjoyable experience, comparable to a luxurious massage. All too often, unfortunately, the singer is warming up while rushing to a rehearsal, or frantically trying to learn his music at the last minute. The pressure of "too little time" results in physical as well as mental tension, and a poor warm-up which is difficult, usually ineffective, or even counter-productive.

**The Warm-Up Procedure**

Singers develop distinctive warm-up regimens appropriate to their personal needs; these may vary considerably with changes in physical, mental, and emotional well-being. Nevertheless, consistency in the overall approach is most beneficial. Many singers begin by warming-up the entire body with gentle physical exercise (e.g., stretching, yoga, Tai Chi). This helps to alleviate the muscular tension that interferes with vocal production, as well as to stimulate the deep breathing which is necessary for good support of the voice. The muscles of articulation, which include the jaw, tongue, lips, and soft palate can be loosened with appropriate exercises, which also can help to activate the singer's expiratory air-flow.

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Stony Point Surgery Center  
8700 Stony Point Parkway, Suite 220  
Richmond, Virginia 23235  
804-323-0830

MCV Hospitals / A.D. Williams Building  
1201 East Marshall Street, Suite 401  
Richmond, Virginia 23298  
804-628-4ENT

Before beginning to explore the day's potential for vocal resonance, the singer should be relaxed, yet vital. If the singer is fatigued, or not feeling well, it will be necessary to "energize" him or herself, so that he/she can provide adequate breath support for singing. It is wise to begin vocalizing in the most comfortable mid-range of the voice, and gradually work out to the higher and lower extremes of pitch. High notes (faster vocal cord vibration) may require substantial air-flow and increased pharyngeal space. Low notes, which use a "heavier" mode of vocal cord vibration (thicker vibrating mass), also require appropriate support. Recent biomechanical studies have shown that singing at the extremes of pitch -- both the highest and lowest notes of the vocal range -- can strain the laryngeal muscles, and can result in undesirable (and potentially harmful) patterns of muscle tension. Therefore, it is good common sense to avoid the "outer extremes" of the voice until one is well warmed-up. In the mid range, the singer may safely begin the daily search adjustments in the size and shape of the pharynx. Considering the countless possible configurations of the vocal tract, the process of developing a resonant tone is an on-going one, even for seasoned professionals. Most of a singer's warm-up is devoted to the objective of obtaining a beautiful vocal timbre through the use of an enormous variety of vocal calisthenics.

Finally, the singer is likely to test his or her vocal register transitions during the warm-up. Exercises that "blend" the "chest" ("heavy" laryngeal adjustment) and "head" ("light" laryngeal adjustment) registers eventually produce a smooth *passaggio*, resulting in an "even scale" from the "bottom" to the "top" of the vocal range.

### **Warming-Down**

The long-distance runner will spend a good amount of time stretching and massaging muscles after a marathon, and likewise, the singer who has extended himself should "warm-down" the voice, with exercises that "soothe" the vocal cords (vocalizing on "oo," for example). If the singer has been using a "belting" voice, it is especially helpful to sing in the "head" register (or falsetto), which stretches the vocal cords and alleviates laryngeal tension caused by the "heavy adjustment," or thick vibrating mass. Re-loosening the articulatory muscles, even without phonation, is therapeutic. Massaging the jaw -- the *masseter* ("chewing") muscles -- as well as other muscles of the neck and shoulders, particularly the *trapezius* (which arise from the back of the head and vertebrae in the neck and chest, and extend to the collarbones and shoulder blades) provides welcome relief to the singer.



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**Andrew J. Heller, MD**

**Laurence J. DiNardo, MD**

**Evan R. Reiter, MD**

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