

The "Rules" of Singing

Does caffeine affect the voice? Enjoy this article that points out some of the common misconceptions about the voice. Finding the right type of training for your opera career can be very difficult. Check out our [Guide to Opera Training](#) to help you along your way!

The "Rules" of Singing: Mythbusters Edition

By Caitlin Vincent

When I was fourteen years old, my voice teacher warned me never to drink milk before a performance. "Milk produces phlegm," she told me sternly, "and phlegm will ruin your high notes."

At the time, I didn't realize that I was being introduced to one of the "rules" of singing. Still, my teacher's warning was sufficiently intimidating: I promptly swore off all dairy products and became convinced that eating even the tiniest piece of butter would doom my high C to failure.

As I continued my vocal studies, I was introduced to many more "rules," each one promising to help me avoid yet another pitfall of performing. Which foods to avoid, how to prevent phlegm, how to calm nerves...the "rules" have all the answers, sort of like a neurotic opera-singing version of the Code of Hammurabi.

"Always memorize your music before you go to sleep," one fellow soprano told me after hearing my concerns about learning a song cycle. Another spotted me with a cup of tea and cautioned me against caffeine, citing a horror story about a tenor who drank coffee before an audition at the Met and was never heard from again.

My collection of "rules" continued to grow—no caffeine, no lemon, no dairy, no wheat—until I started to wonder about my blind allegiance to these regulations. I had heard these "rules" repeated verbatim by dozens of other singers and had even passed along a few of them myself. Yet, no one ever seemed to know if the "rules" were actually true. Or who came up with them in the first place.

Of course, it's not surprising that there hasn't been an outpouring of volunteers to test these "rules." Few singers are willing to risk phlegm or dehydration on the day of an important performance, just for the sake of playing mythbuster. But, with another audition season looming in the near future (and dairy product sales continuing to plummet among singers), it may be time to finally tackle some of these old opera wives' tales.

So, for the sake of all those opera-singing dairy-lovers, I hit the library and tackled five of the most frequently-repeated "rules" of singing.

Rule #1: Don't eat or drink dairy before you sing.

According to theory (and my high-school voice teacher), dairy products produce copious amounts of phlegm. So, a singer who avoids milk, cheese, and butter in the hours before a performance will have a better chance of nailing his or her high notes.

The verdict:

As it turns out, dairy products do not produce phlegm in the majority of people (the exception is the tiny group of people who are allergic to casein, the protein in some types of milk). Instead, the high fat content in dairy products thickens the mucous that is already present in a person's airway, making it seem like there is more phlegm to deal with. Of course, having thicker phlegm can be just as problematic as having more phlegm. Luckily, this thickening sensation can be diminished simply by eating dairy products that have a lower fat content.

Rule #2: Eat a banana to control your nerves.

Beta-blockers have become increasingly popular in recent years as a way to prevent performance anxiety. Bananas are lauded as natural beta-blockers, making them a perfect solution for an opera singer who has sweaty palms but no prescription for Inderal.

The verdict:

Bananas are primarily made up of potassium, magnesium, and tryptophan. Magnesium is, indeed, a natural beta-blocker and inhibits the hormones that provoke the “fight-or-flight” response (clammy hands, increased heart rate, trembling, sweating, etc.). Though it isn’t technically a beta-blocker, tryptophan adds its own benefits to the mix by triggering the release of serotonin and reducing stress.

Singers who aren’t fond of bananas can snack on apricots and spinach, both of which contain high levels of magnesium, or turkey, red meat, and tuna to get an extra dose of tryptophan. Another anxiety-reducing option is gamma-aminobutyric acid, or GABA, which works as a natural tranquilizer and is found in raw spinach, parsley, almonds, and citrus fruits.

Rule #3: Drink 8 glasses of water a day.

Every elementary-school child has heard the 8 x 8 adage: in order to stay properly hydrated, the average adult should drink 8 ounces of water, eight times a day. For the sake of hydrating their vocal folds, singers are often recommended to increase this requirement to 8 ounces of water, ten times a day.

The verdict:

The 8 x 8 rule first came into vogue in 1945 after the Food and Nutrition Board of the National Research Council recommended that every person drink approximately 2 to 2.5 quarts of water each day. However, what your 4th grade teacher forgot to mention is that a large portion of this requirement (at least 20%) is automatically fulfilled by daily food intake, especially with a diet high in fruits and vegetables. Non-water beverages like juice, milk, and coffee also contribute to a person’s level of hydration. In 2002, the American Society of Physiology debunked the 8 x 8 rule completely and simply recommended that people drink water when they are thirsty.

Rule #4: Don’t drink caffeinated beverages

Caffeine is a major no-no for opera singers: it causes dehydration and can be damaging to vocal folds.

The verdict:

Unfortunately for the anti-Starbucks crowd, caffeinated beverages are not a cause of dehydration. For a person who drinks coffee or tea regularly, 8 ounces of coffee/tea will provide approximately the same amount of hydration as 8 ounces of water. At the same time, caffeine is still a diuretic, which means that a person will lose water more quickly than if they were drinking something else. However, according to a 1999 study on the effect of caffeine on vocal folds, caffeine can have a negative impact on a singer’s vocal quality, but the effects vary greatly from person to person.

Rule #5: Memorize music before you go to bed.

The theory is that if a person studies music or memorizes lines immediately before going to bed, his or her memory will improve during sleep.

The verdict:

Sleep has been scientifically established as the key to memory improvement. During sleep, the brain cells that were active during the day release neurotransmitters and establish strong synaptic patterns; the cells that were most active release the greatest number of neurotransmitters and create the strongest connection. Memories are then consolidated and converted into long-term memories during REM (Rapid Eye Movement) sleep, which is the final and deepest stage of the sleep cycle.

However, there is little evidence to suggest that pre-sleep memorization is the way to go. Adrenaline plays a crucial role in memory formation, and most people have very low levels of adrenaline before going to sleep. Some scientists suggest that the early morning is actually the best time to ensure strong memory formation (and a swarm of neurotransmitters) during REM sleep.

Sources:

S. Akhtar, G. Wood, JS Rubin, PE O'Flynn, and P. Ratchliffe, "Effect of caffeine on the vocal folds: a pilot study," in J Laryngol Otol, Vol. 113, No. 4 (April 1999): pp. 341-345.

Allen J. Dozor and Christina Lee, "Do You Believe Milk Makes Mucus" in Archives of Pediatrics & Adolescent Medicine, Vol. 158, No. 6 (June 2004): pp. 601-603.

"Food and Nutrition Board, National Academy of Sciences: Recommended dietary allowances, revised 1945" in National Research Council, Reprint and Circular Series No. 122 (August 1945): pp 3-18.

Avi Karni, David Tanne, Barton S. Rubenstein, Jean J.M. Askenasy, Dov Sagi, "Dependence on REM Sleep of Overnight Improvement of a Perceptual Skill," in Science, Vol. 265, No. 5172 (July 1994): pp. 679-682.

Heinz Valtin, "'Drink at least eight glasses of water a day.' Really? Is there scientific evidence for '8 x 8?'" in Am J Physiol Regul Integr Comp Physiol (283: R993-R1004), 2002.

Matthew A. Wilson and Bruce L. McNaughton, "Reactivation of Hippocampal Ensemble Memories During Sleep," in Science, Vol. 265, No. 5172 (July 1994): pp. 676-679.