Using Singing Exercises to Decrease Snoring and Obstructive Sleep Apnea

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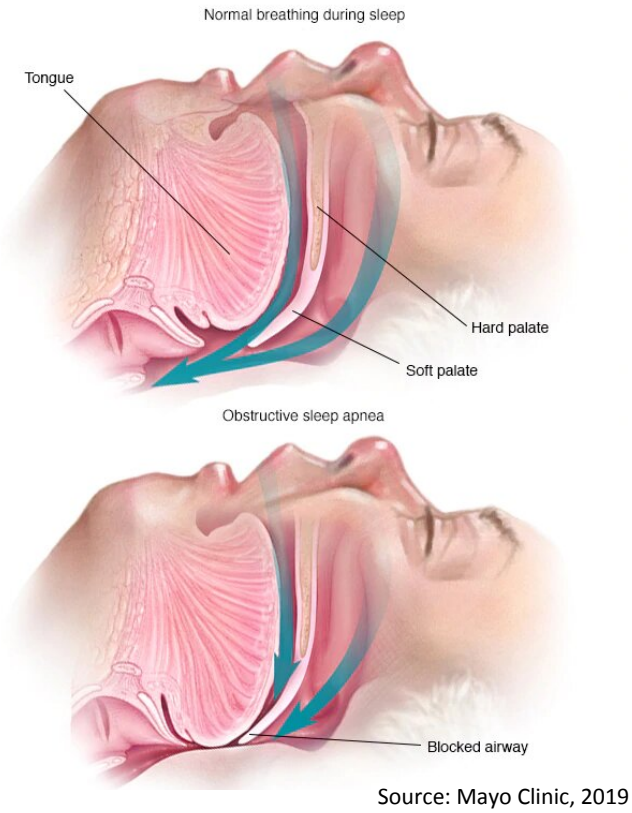
Approximately 40 percent of men and 30 percent of women have instances of mild snoring on any given night (Sleep Health Foundation [SHF], 2011). Snoring can lead to more than just a grumpy partner; disrupted sleep can cause fatigue to the point of making someone more “accident prone” (Ojay and Ernst, 2000). Snoring can also lead to the more serious problem of obstructive sleep apnea or OSA (SHF, 2011). A recent study concluded that more than 936 million people worldwide suffer from OSA (ResMed, 2019) which can cause severe health issues such as high blood pressure, heart attacks, stroke, and more (Mayo Clinic, 2019). Initiated after her husband’s continual snoring, researcher Alise Ojay began to investigate if singing exercises could cure snoring (Nguyen, 2014). After two studies, Ojay has found evidence that a daily singing program helps to improve the tone and strength of the pharyngeal muscles which can help reduce the frequency and severity of snoring as well as improve sleep apnea symptoms (Hilton et al., 2013).

To understand how singing exercises can help, we need to first look at how snoring and sleep apnea occur. Snoring happens specifically during sleep when the soft palate along with tissue in the upper airway (mouth, nose, and throat) vibrate during an in-breath (British Snoring & Sleep Apnoea Association). These vibrations can cause the airway to become narrower and cause blockages from other parts of your mouth (the tongue, soft palate, or walls of the throat; Ojay, 2018). Partial blockages cause snoring (Ojay, 2018). OSA, on the other hand, occurs when the relaxation of the muscle is so much one cannot breathe normally (Mayo Clinic, 2019). A person with OSA will “stop breathing, sometimes for many seconds, until their body's alarm system causes them to snort and partially wake themselves, enabling them to take a breath” (Ojay, 2018). Figure 1 shows the differences of an airway during normal breathing and someone with OSA (Mayo Clinic, 2019).



Source: Mayo Clinic, 2019

Figure 1: Comparison of the airway during normal breathing and OSA.

Programs like Ojay's "Singing for Snorers" specifically target the muscles used to sing and her research has shown that through toning and strengthening, subjects were less likely to experience a collapse of these muscles during sleep (Hilton et al., 2013). The exercises use "sounds and tunes" that cause the soft palate to rise and fall (Ojay and Ernst, 2000). For example, "if you make the sound "ung-gah" you will feel your soft palate come down and touch the back of your tongue on the "ung" and spring up and away on the "gah"" (Ojay, 2019). The "Singing for Snorers" program consists of three compact discs (CDs), each to be used for a month at a time. According to Ojay's website, the first CD can be completed in as little as 12 minutes a day once a person is comfortable with the exercises, while the second and third CD can be completed in 18 minutes each (Ojay, 2019). The program is designed to be used once a day for 3 months (Carberry et al., 2019).

Both the 1999 pilot study and 2013 controlled trial focused on a small subset of patients. Those who had a body mass index of less than 40 and those who had an apnea index of less than 40 (Ojay and

Ernst, 2000; Hilton et al., 2013). When asked if there was a reason for this, Ojay explained the consulting ear, nose, and throat doctor (ENT) felt those who were overweight would still experience the vibrations of snoring due to excess fat in their neck (Ojay, 2020). Regarding those with a more severe level of OSA, the ENT felt those under a set threshold would be more likely to see results within the 3-month trial period (Ojay, 2020). Three of the four pending clinical trials have been in the works but have fallen through for a variety of reasons (Ojay, 2020). Ojay continues to hope and work towards additional studies that will take additional people into consideration as well as use more advanced sleep studies for more concrete findings (Ojay, 2020).

While more research is needed to fully understand the benefits of singing exercises, the general evidence for both studies show positive possibilities for those who suffer from snoring and OSA. Subjects in both trials reported feeling less daytime fatigue, happier partners, and fewer occurrences of snoring (Ojay and Ernst, 2000; Hilton et al., 2013). It is important remember, however, if you or a loved one is experiencing symptoms of OSA, you should seek professional medical help to avoid serious long-term side effects such as heart complications or strokes. In the meantime, it never hurts to sing!

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