

Getting Rid of Snoring and Sleep Apnea

How snoring happens: We all breathe by sucking air in through our mouth or nose, through the back of our throats, down the main airway (the trachea), and then to the lungs. Because we move the air by *suction*, all of the piping has to be stiff enough to withstand the suction during a breath –otherwise it will collapse. However, the back of our throats has to be soft and flexible when we swallow. To be soft when we swallow, and stiff when we breathe, the backs of our throats are made of muscle. Our brains tell the muscle to tighten just as we start to suck air in.

If the muscles *don't* get the signal to keep the walls of your throat tight, the walls start to loosen and vibrate: *snoring*. We don't understand why the signal from the brain to the upper airway muscles sometimes fades during sleep, but we know that half of all adult men and over a third of adult women snore. At the moment we don't think snoring by itself is dangerous to your health. However, snoring makes it hard for someone to sleep with you, and *many people who snore have a more serious problem, though they are often not aware that anything is wrong.*

How sleep apnea happens: If the muscles in your throat really don't get the message to tighten, it won't just vibrate, *it will collapse*. When your airway collapses, you stop breathing. The part of your brain watching over things notices something wrong, and interrupts your sleep to get you breathing again. We call this problem "*sleep apnea*". Over time sleep apnea causes irritability, drowsiness, decreased energy, poor memory and lower sex drive. People with sleep apnea are more likely to have high blood pressure, heart attacks, strokes, and accidents. Most people are not aware there is a problem until their airways are collapsing more than 15 times per hour through the night. Your partner may notice only a few of the events. Sleep apnea is more common in men and in people that are overweight, but we often see it in women and in people who are thin.

What you can do: Your best choice to get rid of snoring depends on whether your airway is just a bit loose: "simple snoring", or if it is loose enough to collapse more than a few times per hour of sleep: "snoring with sleep apnea." You can't tell if you have sleep apnea by how your throat feels, and we can't tell just by looking. The more symptoms you have; the more people who notice you snore; and the more people who have heard you stop breathing in sleep: the more likely you are to have sleep apnea rather than just simple snoring. To sort out if you have sleep apnea we almost always need to look at your breathing while you sleep - an overnight sleep study.

Treatment for simple snoring just needs to make your airway vibrate less.

Treatment for sleep apnea has to stiffen your airway a lot so it will stay open while you sleep.

1. you can leave it and do nothing:

Because *simple snoring* may not cause any significant trouble *you can ignore it if you wish*. Don't forget that it can be REALLY annoying to your partner. Many people go to bed together to talk and be intimate, but then go to different rooms to sleep. Many people use ear plugs, or cover the sound with "white noise" (like surf sounds).

This approach is NOT a good choice if you have sleep apnea, because it causes serious consequences in time even if you are not aware of any symptoms.

2. a surgeon can shorten or tighten your soft palate (the flap at the roof of your mouth at the back)

This is a *reasonable* choice to treat *simple snoring*. It takes away snoring in ~5 out of 10 people.

This is *not a good choice for sleep apnea*. About 8 /10 people with sleep apnea *still have* airway collapse during sleep after surgery on their palate. There are several ways of doing surgery: the 2 most common are:

- standard surgery (the technical name for this is a UvuloPalatoPharyngoPlasty: "UPPPP")

The surgeon cuts your palate with a knife while you are under a general anesthetic. OHIP covers all the costs of the hospital stay and surgery. It is somewhat painful, and takes several months to arrange. You need to be away from work for ~2 weeks.

We highly recommend both the ENT surgeons in Thunder Bay who do the procedure: Dr. Turner & Dr. Hamid.

- laser surgery (Laser Assisted UvulopalatoPlasty: "LAUP"):

Instead of using a knife, the surgeon burns your palate with a laser. When it heals your palate is shorter and tighter. This procedure is *less painful* than standard surgery, and can be done quickly if a sleep study shows you don't have sleep apnea. It does not require a general anesthetic, and you can be back at work within about a week. However it costs \$1700, and this is NOT covered by ANY health plans.

We highly recommend Dr. Wintermans (a local oral surgeon) who does this procedure.

3. a surgeon can stiffen your soft palate (the flap at the roof of your mouth at the back) (the Pillar™ procedure)

A doctor freezes the back of your throat with a small needle and then inserts several small pieces of plastic into your palate to stiffen it. It may be a good choice to treat *simple snoring* - and will probably work in ~ 6 – 7 /10. It *may be a reasonable choice for sleep apnea*, working in ~5/10 people. However, it is very new procedure that is not being done locally, and for which we have very little long term results. We have no cost information yet.

4. a dentist can make a dental splint that pushes your lower jaw out to tighten the back of your throat

(a dental orthotic: e.g. Klearway™ Silencer™ TAPS™ etc)

You wear a splint that covers your upper and lower teeth while you are sleeping. It pushes your jaw forward, stopping snoring and apnea in ~4-5 out of 10 people. They are more successful in people who are clearly worse when they sleep on their backs. It doesn't involve surgery, and the devices are more effective than surgery if you have sleep apnea. They are expensive: \$300 – 1200 (some dental plans cover part of cost). A splint takes a few months to be made and fitted, and you must have upper and lower teeth that are in good shape.

5. you can use a small amount of air pressure through a mask to hold your airway open CPAP

(Continuous Positive Airway Pressure)

This is the best treatment available for sleep apnea, but it is not usually used for simple snoring. It works very simply: a small electric compressor delivers air to a mask that you wear over your nose. The pressure splints the airway open from the inside. It controls sleep apnea and snoring in more than 9/10 people, but only about 6- 7/10 use it long term, because it is not very convenient to use. The government pays much of the cost of CPAP. Your cost is between \$250 – 800, and this is usually covered by supplemental health plans.

6. other treatments, and the future

If you only snore on your back you can use a bolster or something on your back to keep you on your side.

If your snoring got worse when you gained weight, losing weight may solve the problem, but this is usually not easy.

Decreasing your alcohol intake may help, especially if you drink more than occasionally.

If you have *really large* tonsils that you or your doctor can see easily, removing them may be very helpful.

Lubricant sprays do work for some people for a few hours - long enough for the partner to fall asleep. They are expensive and we have no information on long term safety.

Some centres are injecting a chemical into the palate to cause it to scar and tighten - it seems to work as well as the surgeries I described, but it isn't clear how long the effect lasts.

Nasal dilator strips and nasal surgery usually do not help snoring.

Homeopathic therapies do not work, and neither do special pillows, magnetic pillows or other special mattresses.

There is a lot of research being done around the world to find a better approach. I predict that there will be a medication that can control sleep apnea within 10 years (and we all hope it will be sooner).

If you hear about a treatment I haven't discussed, or have questions about any of the above: always ask!

For *simple snoring* your best choices are → do nothing; surgery; dental devices.

For *snoring & sleep apnea* your best choices are → CPAP; dental devices.

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