

SNORING, SLEEP APNOEA and BUTEYKO BREATHING

Snoring is not only disruptive and annoying for your loved ones and anyone in earshot, but it can also indicate poor breathing health and lead to serious health problems if it continues over time.

Snoring generally results in poor quality sleep and is a precursor to, and prime indicator of sleep apnoea. When sleep is not restorative, it results in daytime sleepiness, greater risk of accidents and reduced productivity. It heightens the risk of developing high blood pressure at a younger age than people who do not snore.

Almost everyone snores at some time and the latest figures from Southern Cross (NZ: June 2020)¹ indicate that approximately 50% of New Zealand adults snore occasionally and around 25% will be habitual snorers. Snoring is more common in men than women and whilst the severity of snoring tends to worsen with age, about 25% of children also snore!



What is Snoring?

Snoring is noisy breathing caused by the vibration of the soft tissues in the airway walls at the back of the throat, and air turbulence.

Breathing volume should drop 25% when we sleep, however when breathing is in excess of what we need, in volume and in rate during the day, this will likely continue at night. The higher volume and speed creates greater force and resistance when inhaling. This causes the tongue to suction back against the throat, vibrating and causing the snoring noise.

Why does it occur?

It may be the result of any or a combination of the following risk factors:

- **weak musculature** – muscle tone reduces as we age
- **narrowed airway** as a result of being **overweight** and breathing more heavily. Excess tissue in the neck can contribute to blockage of the upper airways. Fatty deposits around the abdomen can restrict diaphragmatic breathing resulting in faster, bigger volume upper-chest breathing.



¹ Southern Cross statistics: <https://www.southerncross.co.nz/group/medical-library/snoring-causes-treatment-surgery>

- **narrowed airway** at the back of the throat, as a result of **dental problems** including tooth extraction, malocclusion, overbite, high dental arch and a narrow jaw.
- having a **respiratory disorder such as** asthma, allergic tendencies, sinusitis, allergic rhinitis, recurrent colds, bronchitis, tonsillitis or adenoid enlargement.
- **breathing poorly during the day** – many of us are breathing more heavily or bigger volumes than is healthy and unfortunately this continues and worsens at night when volume should drop.
- **poor sleeping position** - Sleeping flat on your back is the worst position for snoring in particular because of gravity.
- **age** - snoring incidence is highest in 50 to 60 year olds.
- **alcohol and some medications** - Alcohol and some medicines (such as beta agonist asthma medications or sleeping pills for example) stimulate the breathing and this is what helps trigger loud snoring and increases the possibility of sleep apnoea* episodes. This is why we often hear people say they only snore when they have had a 'few' drinks, and, snorers are always worse after alcohol.
- **smoking**
- **illness** such as having a cold or flu which clogs up and narrows airways, making breathing more difficult and a greater likelihood of snoring. Snoring during a cold will then further inflame and narrow airways.

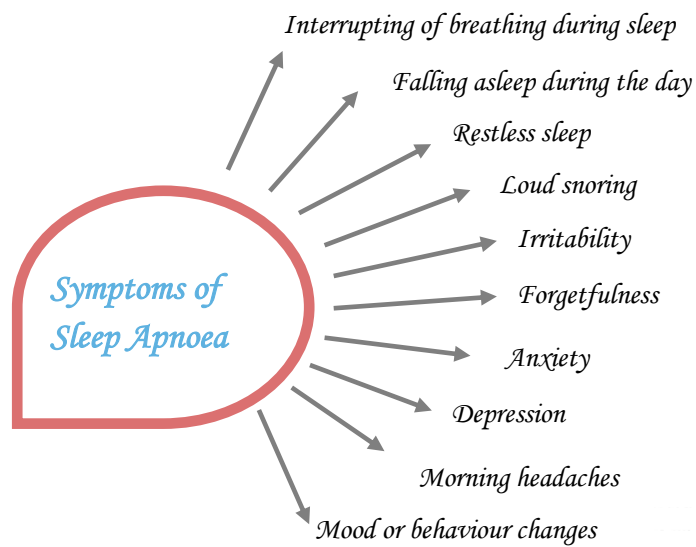
Why do some people who snore go on to develop sleep apnoea?

Studies have found that snoring is harmful for your health and usually leads to apnoeas, long or short, and is ultimately likely to progress to clinically diagnosed sleep apnoea if unchecked.¹

When breathing volumes are higher than about an eighth of your lung capacity (total lung volume) at rest, airways become inflamed and dehydrate, which can cause them to reduce in size. If you are open mouth or big volume breathing then you heighten the risk of obstruction even more because the tongue is more likely to be sucked back against the throat causing an apnoea. If the snorer is on their back, gravity can also cause the tongue, uvula, tonsils, epiglottis and soft palate to fall backwards partially blocking the airway.

People with obstructive sleep apnoea (OSA) experience repeated episodes during sleep when their throat closes and they cannot suck air into their lungs (apnoea). This happens because the muscles that normally hold the throat open during wakefulness lose their tone during sleep and allow it to narrow. When the throat is partially closed, add to this heavy or fast breathing, it will only be a matter of time before the throat sucks completely closed, preventing any air from passing. This is an obstructive sleep apnoea episode.

* Apnoea: the temporary cessation or stoppage of breathing, usually occurring in sleep



Why Does this Matter?

Most people are aware they snore however many people may not be aware they have obstructive sleep apnoea (OSA) which so often accompanies or follows snoring. Sleep apnoea is responsible for thousands of people feeling constantly tired and lethargic, putting them at risk of accidents and other serious health problems including hypertension, diabetes, cardiovascular disease, stroke, cognitive decline and respiratory failure. In New Zealand, truck drivers can lose their license unless they get sleep apnoea under control as a result of the risks it poses to themselves and others.

Numerous studies have been done in recent years serving to illustrate the risks. Some of these are listed below:

A 2005 Yale University School of Medicine study² found that people with sleep apnoea are three times more likely to have a stroke or die than people of similar health who do not have the breathing disorder.

In a 2008 Hungarian study³, scientists conducted interviews with 12,643 patients. According to the results, loud snorers had 40% greater risk of having hypertension, 34% greater risk of having a heart attack and 67% greater risk of having a stroke, compared with people who do not snore, after statistical adjustment for sex, age, body mass index, diabetes, level of education, smoking, and alcohol consumption.

A 1999 study (www.pubmed.ncbi.nlm.nih.gov/10522651/⁴) found that snoring may increase risk of hypertension in women, independent of age, body mass index, waist circumference, and other lifestyle factors.

A Sydney University study found in 2008 that 60% of heavy snorers aged 45 to 80 years had evidence of cholesterol plaque formation compared to 20% of light snorers. The study showed that heavy snoring is a risk factor for early carotid atherosclerosis, a leading cause of stroke ⁵.

The relationship between Obstructive Sleep Apnoea (OSA) and Alzheimer's Disease is discussed in a 2018 US Journal of Medicine paper ⁶, concluding that OSA increases the likelihood of developing, and potential earlier onset of Alzheimer's Disease.

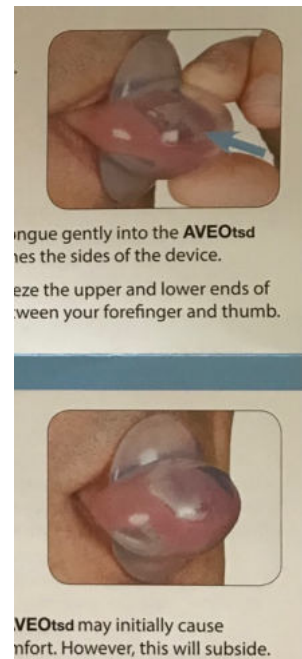
Another written in March 2016 in Medical News Today ⁷, suggests that sleep apnoea may drive tumor growth by promoting blood vessel formation.

The Prevalence of obstructive sleep apnea in Alzheimer's disease patients with an average age of 75 was found to be over 90% in a 2020 study ⁸.

What Can you do about this?

So often those diagnosed with sleep apnoea are told that the only way to stop having apnoeas is to use a device such as a CPAP machine (see photo below), mouthpiece such as the AVEOtsd (photo right) or wear an oral device.

These are often intrusive and annoying to wear. Sometimes even surgery is recommended.



What is less known is that if you learn to breathe correctly, you can restore your sleep to being healthy, restful and snore-free.

Learn to Breathe Well

Breathing patterns are habitual, so much so, that we rarely think about our breathing until it is obviously dysfunctional. This is why it takes awareness and practice to alter breathing patterns. At the Breathe Free Clinic we teach you how to do this, by first assessing your breathing, and then taking you through a course of education and practice to retrain your breathing habits.

The Buteyko Method of breathing retraining can help you to stop snoring and can reduce or prevent sleep apnoea from occurring without the need for any of the anti-snoring devices available today, or even surgery.

If you are a snorer, you can check out your sleep patterns and snoring levels for yourself at night by running one of the sleep apps now available, such as Snore Lab (android phone app) or Sleep Cycle (iPhone). The screen shot to the right shows the kind of data collected.



Many of our clients achieve significant improvement in their snoring and a reduction of sleep apnoea episodes within the first two weeks of the programme. Functional breathing restores normal sleep patterns.

If you would like to book a consultation, contact **the Breathe Free Clinic** at:
www.breathefreeclinic.co.nz or by email: info@breathefreeclinic.co.nz

REFERENCES

- 1 Whiteman, Honor Apr 2015: Heavy Snoring, Sleep Apnoea Linked to Earlier Cognitive Decline: www.medicalnewstoday.com/articles/292359.php
- 2 Yaggi et al. 2005: Obstructive Sleep Apnoea..Risk Factor for Stroke and Death: www.nejm.org/doi/full/10.1056/nejmoa043104
- 3 Dunai, A. et al. 2008: Cardiovascular Disease and Health-Care Utilization in Snorers: a Population Survey: www.ncbi.nlm.nih.gov/pmc/articles/PMC2276748/
- 4 Hu, F B; Willett, W.C. et al: Prospective study of snoring and risk of hypertension in women: <https://pubmed.ncbi.nlm.nih.gov/10522651/>
- 5 Lee et al 2008: Heavy Snoring as a Cause of Carotid Artery Atherosclerosis: www.ncbi.nlm.nih.gov/pmc/articles/PMC2542975/
- 6 Andrade, Andreia et al 2019: The relationship between Obstructive Sleep Apnea and Alzheimer's Disease: www.ncbi.nlm.nih.gov/pmc/articles/PMC6542637/
7. Whiteman, Honor Mar 2016: Sleep apnea may drive tumor growth by promoting blood vessel formation: www.medicalnewstoday.com/articles/307751
- 8 Gaeta, Anna Michaela et al Apr 2020: Prevalence of obstructive sleep apnea in Alzheimer's disease patients: <https://pubmed.ncbi.nlm.nih.gov/31832828/>