

Sleep Appliance Therapy

Sleep appliances are indicated for individuals with obstructive sleep apnea, with a physician's prescription, or snoring.

Sleep Apnea: When you fall asleep the muscles that are usually firm relax. In a case of obstructive sleep apnea, the muscles are so relaxed that when you breathe the airway can collapse partially or even completely. This collapse is the obstruction in obstructive sleep apnea. The tongue can also move back posteriorly, especially in the supine position, and prevent breathing. The blockage eventually wakes you up, you gasp a few breaths, fall asleep again, then repeat the process over and over. This creates a horrible night's sleep.

Because the tongue and mandible (lower jaw) connect to the muscles in the oropharynx, sometimes movement of the jaw in a more forward position can help splint the airway open enough to allow the obstruction not to occur, an appliance can be fabricated to maintain this position during sleep and allow breathing.

Sleep Apnea Oral Appliances are made by dentists, but must be prescribed by a sleep physician. These are medical devices and coded as such. Sleep problems can be a very complex diagnosis and a sleep study, called a polysomnography, should be performed to properly diagnose the extent of the problems. Once a CPAP (Continuous Positive Airway Pressure) machine has been used, but failed to be tolerated, then the physician can prescribe for the dentist to fabricate an oral appliance to see if this would be effective. Sometimes both are indicated, where the patient uses the CPAP but the pressure is too high and some reduction may be made by the simultaneous use of an oral appliance with the CPAP.

The disadvantages of oral appliances is that they can cause permanent changes to the "bite" or the way the teeth fit together. These changes are noted early in therapy and after waking you will notice the initial change in your bite, which returns to "normal" after a short period of time. Long term use will almost certainly cause permanent changes. While there are other minor problems associated with wear, this is the most significant contraindication or side effect of sleep appliance therapy.

There are two types of sleep appliances made in my practice:

Adjustable: This is an appliance that has two screw mechanisms built in to titrate the use of the appliance. Titrating is a way of adjusting the appliance to maximize the effectiveness of it. This appliance requires a hot water (tap water hot, not boiling hot) immersion for 30 seconds to soften slightly and allow easy placement. Sometimes a hot water rinse helps in removal.

Fixed: This appliance has a fixed interarch position and is useful for most cases. The outside is harder than the inside, and the inside (area next to the teeth) is made of a

laminated softer material. This softer material is more comfortable to the fit to the teeth and does not require and heating to place or remove.

If you have any questions about sleep appliance therapy, please feel free to ask us.