

# ORAL APPLIANCES (Mouthguard)



Example of mandibular advancing device (mouthguard) used for snoring and mild sleep



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# ORAL APPLIANCES

## *Nasal CPAP or Oral Appliance?*

Nasal CPAP (Continuous Positive Airway Pressure) is a device which keeps the airways open by applying continuous pressure. Air is pumped through a mask which is placed over the nose. This effectively reduces sleep apnoea and snoring. One study has compared nasal CPAP with oral appliances. The results suggest that nasal CPAP is more effective than oral appliances in controlling sleep apnoea. However, oral appliances are better tolerated than nasal CPAP.

## *Side effects of Oral Appliances*

Excessive salivation and transient discomfort in the morning have been reported during the initial use of oral appliances. Oral appliances may cause temporomandibular joint discomfort and dental misalignment. Follow-up progress of treatment should be undertaken within two or three weeks initially and two or three months after regular use.

## *Oral Appliances for treatment of Snoring and Obstructive Sleep Apnoea*

### *Indications:*

Oral appliances are indicated for use in patients with primary snoring (snorers only) and mild sleep apnoea who do not respond to other treatment. Oral appliances can also be used in patients with moderate to severe sleep apnoea when treatment with nasal CPAP is unsuccessful or cannot be tolerated. For both snoring and sleep apnoea, weight reduction remains the most important step to be considered. There are many dental appliances which have been described and used in patients with snoring and sleep apnoea.

### *Mechanism of Action*

Oral appliances are likely to work through different mechanisms. It is proposed that they modify the position of the lower jaw together with the base of the tongue and the soft tissue structure of the throat. The forward and slightly downward repositioning of the lower jaw may bring about an increase in space in the back of the throat as well as altering the mechanical property of the soft tissue of the palate.

### *Efficacy of Oral Appliances*

*Snoring:* Current experience suggests that snoring decreases in the majority of people who use oral appliances. Complete abolition of snoring has also been reported in up to 80% of the patients studied. The severity of snoring has also been reported to decrease in patients in whom snoring is not completely abolished.

*Sleep Apnea:* During the use of oral appliances in sleep apnea patients the number of times a person stops breathing per hour has been reported to be significantly reduced, even though complete abolition of the disturbed breathing may not be achieved.

## **Recommendations for the use of oral appliances**

1. The use of oral appliances should be discussed with the sleep physician as one possible strategy in the management of snoring and sleep apnoea.
2. When a trial with an oral appliance is undertaken particular attention should be given to oral hygiene. Restoration and dental work should be undertaken beforehand by your dentist. If any temporomandibular (jaw) discomfort occurs it should also be discussed and the oral appliance may have to be modified accordingly.