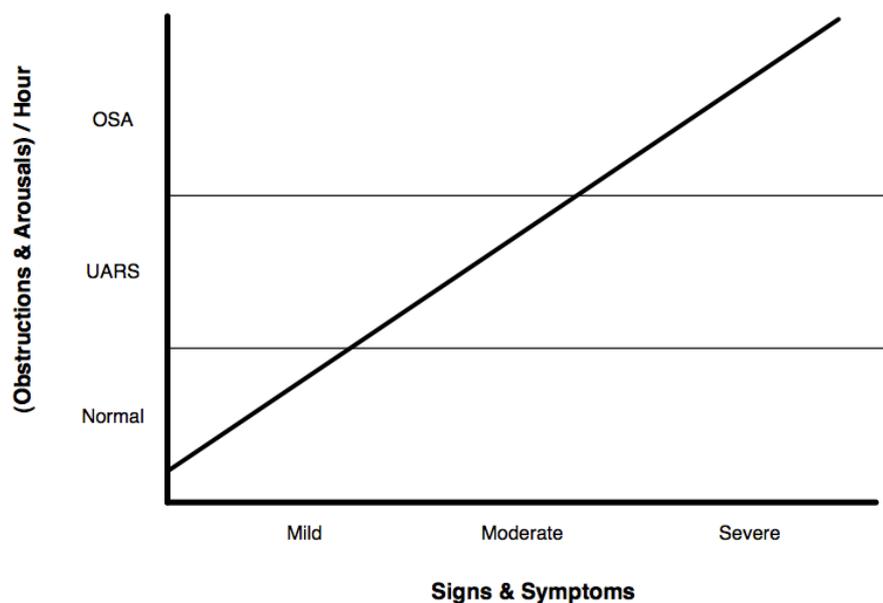


## Management of Sleep Breathing Disorders

BY DR JOHN UTAMA

Dentists are in a prime position to observe signs in their patients' mouth, which may give clues to the presence of sleep disorders. At my dental practice, I see daily, in both children's and adults' mouth the following signs and symptoms:

- Crooked teeth
- Mouth breathing – dry mouth
- Scalloping (tooth marks) on the sides of the tongue
- Abnormal swallowing
- Worn down teeth – grinding, acid reflux
- Missing teeth
- Bad bite
- Gagging
- Teeth leaning inwards
- Midline discrepancy/deviation



When questioned about their sleep, many patients confirm that they have 'sleep issues', which most attribute to stress.

I routinely advise these patients to undergo a sleep study with a portable sleep study monitor, the WatchPat\*.

The sleep study report will show the quantity and quality of sleep, measured and summarized in 3 main Indices, AHI (Apnoea Hypopnoea Index), RDI (Respiratory Disturbance Index) and ODI (Oxygen Desaturation Index).

If the patient has AHI greater than 5, they will be referred to a Sleep Physician for further investigation, as they may have the serious condition of OSA (Obstructive Sleep Apnoea).

Milder symptoms such as primary snoring, TMJ pain, grinding and in selected cases, mild to moderate OSA, can be treated with a mandibular advancing device (MAD).

### Treatment with MAD appliance in the dental chair

#### *Snoring and TMJ pain (TMD)*

I routinely run a WatchPat Sleep study, to establish the patient's baseline data, before treatment commences.

I then record the patient's EMGs of the Temporalis (temple), Masseter (jaw) and Genioglossus (tongue) muscles at rest.

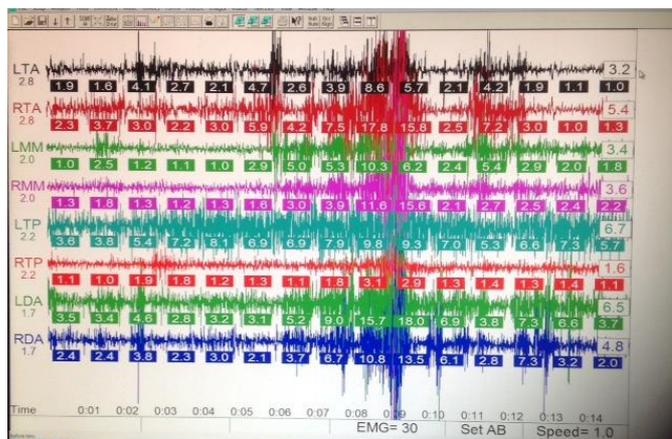


Fig. 1

The EMGs in Fig. 1 above, are typical of a patient who has sleep breathing disorders and/or TMD. These patients are fatigued due to their muscles being hyperactive, when they should be resting. One would expect similar EMGs even when the patient is asleep.

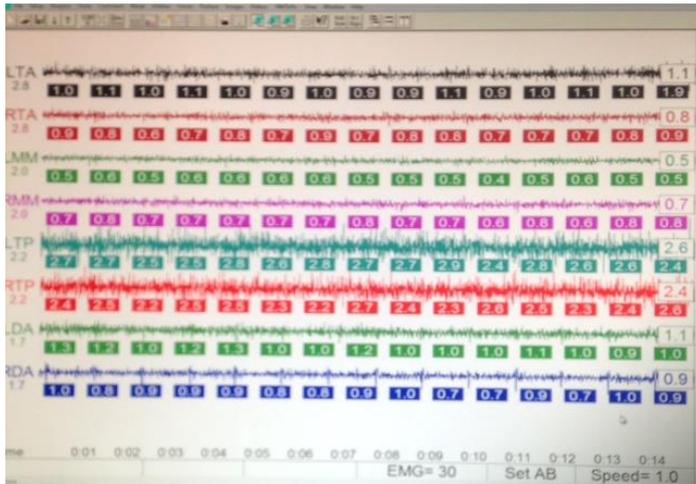


Fig. 2

Fig. 2 above shows the muscles of the same patient after TENSing. The muscles are at rest, which they should be, especially while asleep. When the muscles are relaxed, the lower jaw is usually positioned more anteriorly and the bite is more open.

From here, a bite record is taken, and the MAD appliance will be constructed in the 'TENS' bite position, which will at the same time open up the airway. We know that in this position, the patient's muscles are in the most relaxed position. All the steps taken to construct the appliance are based on objective data. The use of 'over the counter appliances' is not recommended. When these objects are blindly placed in patients' mouth, the signs and symptoms may get worse.

After the patient has been wearing the MAD appliance for two weeks, another sleep study will be conducted to monitor any changes in the 3 Indices mentioned above. The MAD device will then be 'titrated' according to the sleep data. The objective is to always have all Indices below 5 and of course to reduce or stop the snoring altogether.