



## IntraOral Devices (IOD)

If you are diagnosed with simple snoring or mild sleep apnoea, you may be treated using an Intra-Oral Device (IOD), also known as a Mandibular Advancement Device (MAD) or a Mandibular Repositioning Splint (MRS). It can also be used by patients with more severe sleep apnoea who are unable to tolerate continuous positive airway pressure (CPAP).

Snoring is noise produced during sleep, caused by the vibration of the back of the mouth or upper palate. It is a common problem amongst both men and women and whilst not seen as serious, it can interrupt the sleep of the sufferer and those around them. Obstructive sleep apnoea occurs when there is partial or complete closure of the airways when sleeping. This can cause a drop in oxygen levels and disrupted sleep, resulting in daytime sleepiness, concentration problems and irritability, as well as relationship issues.

There are certain risk factors that can make you more likely to develop significant snoring and sleep apnoea. Some of these are:

- Being overweight
- Being male
- Having a large neck size greater than 16 inches (40 cm)
- Alcohol: particularly drinking late in the evening prior to bedtime
- Smoking
- Family history

### What is an IOD?

IODs are plastic devices specially designed to be worn in the mouth during sleep. They fit over the teeth on the lower and upper jaw, allowing repositioning of these structures, to aid night time breathing. They come in a variety of designs as described below.

### How do they work?

The device brings forward (advances) the lower jaw (mandible). This helps to keep the airway open, reducing the likelihood of snoring and apnoeas. The position and size of the lower jaw as well as the number and arrangement of teeth is different in everyone, therefore the IOD must be moulded and fitted for each person. They should be worn all night during sleep.

### How do I get one?

Your sleep specialist will advise you if they think an IOD is suitable for you to try. IODs are not usually provided on the NHS and have to be purchased either over the counter from pharmacies or online. There are several options:

1. The cheapest one is sometimes called a 'boil and bite' device. Examples are the SleepPro Easy Fit, Tomed SomnoGuard, SnoreBan, etc. These cost around £40.00. Other similar devices are available. Although these are readily available, they are not as effective as the more sophisticated (and more expensive devices). Nevertheless they could be used initially as a 'trial' device to see if it has any effect on your snoring or sleep apnoea, and whether you would consider using such a device for longer term.

2. Based on some recent research (TOMADO trial), the most cost-effective IOD is a 'semi-bespoke' type of IOD. An example of this is the Sleep Pro Custom, which costs around £100.00. This device is custom-made based on the impression of your teeth. You are given a kit to make an impression of your teeth which you send back to the manufacturer. The device is then made and is sent to you by post in a few days ready to be used.

The above two varieties of IODs can be set up at home by you with the instructions supplied.

3. Finally, fully bespoke IODs are available and are made by a specialist dentist. This is considered to be the best option, although more expensive. Please check with your dentist or to find a local dentist who provides this service please visit the following website: [www.dentalsleepmed.org.uk](http://www.dentalsleepmed.org.uk)

A dentist will also usually do a full dental assessment which includes assessing tooth and gum disease, and decay. A dental assessment will minimise or prevent any complications in the future.

### Are IODs uncomfortable to use?

Initially, wearing the IOD all night may be uncomfortable. Building up use gradually is the best way to start. Generally most people take between a few nights to a few weeks to reach comfortable sleeping. To be effective, the IOD should be worn routinely during sleep and whilst may not cure snoring or sleep apnoea, it may minimise it.'

### Are there any side effects or risks?

Common side effects are tooth pain, jaw pain, a dry mouth and excessive salivation. These however usually get better with time. You may also a notice change in your bite pattern over time. A more serious side effect is the feeling of teeth becoming loose or movable. If this occurs, IOD therapy should be stopped and you should seek advice from your dentist. Having a dental assessment prior to IOD use reduces the likelihood of complications occurring.

### Are IODs suitable for everyone?

No, there are certain conditions which make IODs unsuitable for use. These are severe asthma and epilepsy, and they are not recommended for use if you suffer from Temporomandibular Joint Disorder (TMJD). Dental problems may also prohibit an IOD fitting properly and there is a minimum number of teeth required to anchor the device. If in doubt about this, it is advisable to see a dentist. Finally, some are more suitable for use with dentures than others, this is something to consider before buying and devices may be difficult to make for people with complete upper and lower dentures which should be considered prior to purchase.

### What should I consider when buying?

UHB cannot recommend and does not endorse any specific IOD device; however we have prepared a list of devices readily available in shops or online. These include Snorban, Apnea Guard, Snoremate, Sleep Pro and Therasnore. The things to consider when buying a device are:

- Cost
- Whether it is a simple 'boil and bite' device or custom made according to the impression of your teeth
- How long they last for – between one month to two years
- Ease of cleaning – water rinse, with toothpaste etc.
- Ease of setup
- Availability – mostly online and/or larger pharmacists
- Suitability for use with dentures

## Useful contacts

## Useful websites

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