



## Mandibular Advancement Devices (MAD)

Obstructive sleep apnoea occurs when there is partial or complete closure of the airways during sleep. 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

A customised or semi-customised mandibular advancement device (MAD), also sometimes called a mandibular advancement splint, can be considered for patients with mild sleep apnoea and symptoms that affect their daytime activities or moderate or severe sleep apnoea, if they;

- are unable to tolerate or decline CPAP therapy
- are aged 18 and over **and**
- have optimal dental and periodontal health

### What is an MAD?

MADs 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 nighttime 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, so an MAD 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 MAD is suitable for you to try. MADs are not provided by the University Hospitals Birmingham on the NHS and must be purchased, although not all devices are of high quality (particularly over the counter or online), so taking time to do your own research and seeking advice from a dentist is recommended. There are several options:

1. The cheapest one is sometimes called a 'boil and bite' device. Examples include the SleepPro Easy Fit, SnoreEze, SnoreBan, and SomnoGuard etc. These cost around £40.00. Although

these are readily available, they are not as effective as the more sophisticated (and more expensive devices) and may not be suitable for long-term use. Nevertheless, they could be used initially as a 'trial' device to see if it has any effect on your snoring or sleep apnoea before committing to a better device.

2. Based on previous research (TOMADO trial), the most cost-effective MAD is a 'semi-customised' type. An example of this is the Sleep Pro Custom, which costs around £200.00. 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 MAD can be set up at home by you with the instructions supplied. Be aware that semi-customised MADs may be inappropriate for people with;

- active periodontal disease or untreated dental decay
- few or no teeth
- generalised tonic-clonic seizures

3. Finally, fully bespoke MADs are available and are made by a specialist dentist. These are the best option, although they are more expensive. Please check with your own dentist or search online to find a local dentist who provides this service.

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

## **Are MADs uncomfortable to use?**

Initially, wearing the MAD 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 MAD should be worn routinely during sleep and, whilst it may not fully 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, but these usually get better with time. You may also notice a change in your bite pattern over time and more serious side effect is the feeling of teeth becoming loose or movable. If this occurs, MAD therapy should be stopped immediately and you should seek advice from your dentist. Side-effects are more common with over-the-counter devices and having a dental assessment prior to MAD use reduces the likelihood of complications occurring.

## **Are MADs suitable for everyone?**

No – there are certain conditions that make MADs unsuitable. These include severe asthma, epilepsy, and Temporomandibular Joint Disorder (TMJD). Dental problems may also prohibit an MAD fitting properly and there is a minimum number of teeth required to anchor the device. If in doubt, it is advisable to see a dentist. Finally, some are more suitable for use with dentures than others, which is something to consider before buying. Devices may be difficult to make for people with complete upper and lower dentures.

## What should I consider when buying?

UHB cannot recommend and does not endorse any specific MAD device, although we have provided a few above as a starting point for your research. 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

QEHB Lung Function and Sleep Department  
09:00–17:00 Monday–Friday  
Tel: **0121 371 3870**

## Useful websites

You may find the websites below helpful when researching MADs;

**[www.sleep-apnoea-trust.org](http://www.sleep-apnoea-trust.org)**

**[www.advancedbrainmonitoring.com/products/apnea-guard](http://www.advancedbrainmonitoring.com/products/apnea-guard)**

**[www.sleeppro.com](http://www.sleeppro.com)**

**[www.snorban.co.uk](http://www.snorban.co.uk)**

**[www.snoreeze.com](http://www.snoreeze.com)**

**[www.bsdsm.org.uk](http://www.bsdsm.org.uk)**

ARTP Standards of Care Mandibular Repositioning Devices:



**[www.artp.org.uk/\\_userfiles/pages/files/sleep/standards%20of%20care/artp\\_standards\\_of\\_care\\_mandibular\\_repositioning\\_devices\\_version\\_71\\_28042025.pdf](http://www.artp.org.uk/_userfiles/pages/files/sleep/standards%20of%20care/artp_standards_of_care_mandibular_repositioning_devices_version_71_28042025.pdf)**

Please use the space below to write down any questions you may have and bring this with you to your next appointment.

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## Lung Function and Sleep

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