



Mandibular Advancement Splint for Snoring & Obstructive Sleep Apnoea

This document provides information about a Mandibular Advancement Splint (MAS), which may have been recommended or discussed with you as a treatment for snoring and obstructive sleep apnoea (OSA).

What is a mandibular advancement splint (MAS)?

A mandibular advancement splint (MAS) is a device made to be worn over your teeth as you sleep.

How does it work?

The MAS aims to hold the lower jaw (mandible) in position or slightly forward, to make more space at the back of the tongue during sleep. This can reduce airway narrowing, improve breathing, reduce snoring and OSA severity and leads to more refreshing sleep. MAS can take time to work as people need to get used to wearing it and the MAS can be gradually adjusted to push the lower jaw forward for maximum effect.

Who should use one?

If you are diagnosed with OSA with symptoms that affect usual daytime activities, you should have been made aware of the treatment options for this. The first treatment typically recommended is called CPAP (continuous positive airway pressure). This is a snug-fitting mask typically worn over the nose and mouth during sleep attached to a machine that provides a continuous flow of pressurised air, splinting the upper airway open. This improves snoring, OSA and sleep quality. Sometimes, people find this difficult to tolerate or decline to try it. CPAP is recommended first as there is more evidence that this is effective.

NICE, who publish healthcare guidelines in the UK, gave recommendations in 2021 for treating OSA. They suggest people with **mild OSA** with symptoms that affect their usual daytime activities, who are unable to tolerate CPAP or decline to try CPAP, consider a customised or semi-customised MAS as an alternative to CPAP. They should be aged 18 and over and have optimal dental and periodontal (gum) health. NICE also suggests people with **moderate or severe OSAHS** who are unable to tolerate CPAP or decline to try CPAP, consider a customised or semi-customised mandibular advancement splint as an alternative to CPAP if they are aged 18 and over and have optimal dental and periodontal (gum) health.



A MAS may not be appropriate for some people, particularly if you have ongoing dental problems such as gum disease, tooth decay or you are missing many teeth (though you may still be able to wear a custom-made device). Dental work may be needed before a MAS can be fitted. People who are prone to suffer fits (tonic-clonic seizures) at night should only use a customised (better fitting) MAS.

What else do I need to know about MAS?

The NICE guidelines in 2021 reviewed different research studies of MAS. MAS improved quality of life by improving the symptoms of OSA. If your BMI is >35, it is less likely that they will work and weight loss is recommended.

There are no significant health risks from wearing the splint, however there are side effects, many of which improve over time. You should be aware that continued use can result in a small change in your bite over time. While the benefits to your quality of life will hopefully make this a worthwhile treatment, the side effects include:

- Excessive salivation
- Discomfort of the jaw, teeth and face muscles
- Dry mouth
- Unpleasant taste sensation
- Unwanted dental effects -bite can change (these can be permanent)

People using a MAS should be reviewed typically after 3 months of treatment by the dental provider, to ensure the MAS is working. Follow up is then made according to your needs. The splint may need adjustment or titration to work well. It is also important that you have regular follow-up with your dentist to ensure your dental and gum health remain good.

You will be provided with information on how to care for your splint, and when it will need replacing. Device care will usually involve cleaning it with a brush and rinsing it between uses.

Further information

The British Society of Dental Sleep Medicine <https://bsdsm.org.uk/> includes Sleep Medicine Dentist finder and Information on OSA and dental interventions

The British Orthodontic Society - www.bos.org.uk – Information on OSA and dental interventions

Industry providers for example: Somnomed <https://somnomed.co.uk>, SleepPro – www.sleeppro.com



How to get a mandibular advancement splint (MAS)?

It is hoped that with the NICE recommendations of 2021 these will become available via the NHS. This is not yet the case in many areas, but we are working on this with NHS funders. If you need to purchase a device, these are the options. Broadly the splints fall into three categories:

- **Fully-customised / Bespoke MAS**

These are fitted by a suitably trained dentist or orthodontist and are considered by NICE to be more effective than the alternatives, as they can be adjusted to bring the mandible forward more over time. They may also lead to fewer side effects, although the evidence for this is less conclusive. They tend to cost more (£200-400) but are more durable and longer lasting, making them cost effective long term options. They may also be suitable for people with multiple missing teeth who may otherwise not be able to use a mandibular advancement splint.



- **Semi-customised / semi-bespoke MAS**

With the semi-customised option you are sent a kit to make a dental impression, which is then returned to the manufacturer who makes a customised mouth piece. It is more expensive (£90-£160). Studies show it gives increased comfort and effect compared to the boil-and-bite device.



- **Ready made ("Boil and bite") devices**

These can be directly purchased for immediate wear: online and in certain retailers. They are the cheapest option (£20-50), although they are less effective and less well tolerated than the customised options. They are made of a thermoplastic material which allows them to be moulded to the shape of your teeth after heating. NICE did not recommend these.



<http://www.dentalpgh.com/i/sleep/6.jpg>