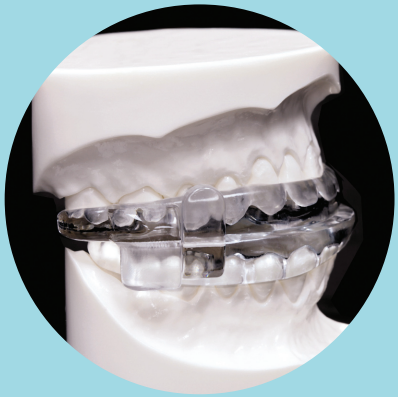
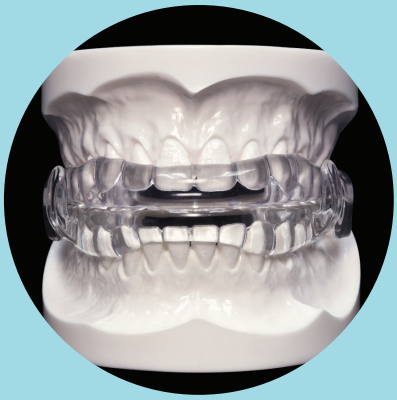


New Mandibular Advancement Device for Treating OSA

MicrO_2



William G. Dickerson, DDS, FAACD, LVIM

By now every dentist should be aware of the need to be able to diagnose and treat Obstructive Sleep Apnea (OSA). Treating OSA is not that simple. For it to be done properly and insuring the best results, without making the patient worse, or preventing post issues like temporal mandibular disorder or dysfunction, it has to be done physiologically. There is only one place in dentistry that teaches this approach and of course it's at LVI.

But now there is a new appliance that is completely designed around the physiologic approach, requiring less forward titration to open the airway while also preventing the unintended closing of the airway which can be seen in many mandibular advancement devices. The MicrO_2 is a patented device made by Micro Dental Laboratories in Dublin, CA after 18 months of research, prototypes (of which I was the guinea pig on many of them), studies and beta testing. I have now been wearing one for the last 15 months and even though I don't suffer from OSA, I find I sleep better so I don't leave home without it. And instead of having moving parts that can break or create areas of weakness, the titration is done with alternate appliances (you get 2 maxillary and 2 mandibular appliances).

The top ten advantages of the MicrO_2 appliance are:

1. **Airway preserving fins**
2. **Lingualess – more room for tongue so less forward position necessary**
3. **Lightweight**
4. **No moving parts**
5. **Smaller than normal sleep appliances (less obtrusive)**
6. **Comfortable so better compliance**
7. **Stronger**
8. **Milled, not powder / liquid made, so always a good fit**
9. **Back up appliances in each order**
10. **If a remake is necessary, since milled, no new impression is necessary and no need to send anything but a request to them to have a new one made.**

I believe you will find this device superior to any sleep appliance you've ever used. Here are some considerations for you when using the appliance.

1. This is not a functioning appliance so does not need to be, nor should be, as tight as a daytime orthotic. They don't eat with it so it's not important that it be a tight fit. In order to get the thickness necessary for the strength (3mm between the thinnest separation of the arches unless the LVI Golden Vertical is more than that) the appliances don't drop down or come loose. It would be my advice NOT to ask for ball clasps. I have been wearing the various beta forms of the appliance for over 15 months and find it incredibly comfortable and retention not a problem.
2. If the bite is taken at the physiologic position as taught in LVI's Physiologic Approach to Dental Sleep Medicine, then very little titration will be needed if at all. We are finding that very few find they have to use the titrated appliances. You still will want to get them and it would be best to have one extra for the maxillary arch at 1.5mm titration and one extra for the mandibular arch at 2.5mm. That way you can titrate 1.5mm, 2.5mm or using both, 4mm. It also provides you an extra backup for both arches in case one breaks so they can use it while you are having Micro make a new one to replace the broken one.
3. If someone is obese and or has a small arch, then more titration may be needed. In that case, make the extra maxillary arch 2mm and the extra lower arch 3.5mm. That way you can titrate the case from the original bite 2mm, 3.5mm or 5.5mm.
4. I would keep the backup appliances at your office so you can control the titration and have the backup for them in case they lose the case with all of them in it.
5. If you have not taken the "Physiologic Approach to Dental Sleep Medicine," and use a standard George Gauge, then there is no reason to do a 70% advancement. Since there is no lingual flange to the appliance, much less forward advancement is necessary. Understand that this bite is a pathologic bite that may result in TMD symptoms such as a sore jaw, inability to get teeth together in the morning, headaches or worse. If you want to learn how to prevent that and achieve better results with your appliance, I would suggest you take the Physiologic Approach to Dental Sleep Medicine at LVI.
6. If not using the "physiologic approach," too far of a forward advancement may make it difficult for the patient to open because of the vertical fin. If this occurs, it is an indication that you have advanced the mandible too far. There is no reason to advance it that far.
7. The vertical fin is a very important feature that prevents closing of the airway as the patient opens. It would be advisable NOT to ask for a tapered fin as seen in other appliances.
8. If using the "physiologic approach," after a month of wear, attempt to titrate back towards the physiologic bite position. Do this in a step by step process. This should be achievable as the tissue of the throat heals. This should not be done if using an arbitrary pathologic bite like the George Gauge.

Upcoming OSA Course Dates

OSA I
March 21-23, 2015

OSA II
March 25-27, 2015

If you are not treating Sleep Apnea in your practice... you should be, but only if you treat them "physiologically." And if you are treating sleep apnea, you should try out this new appliance on your patients for all of the reasons listed above. I think they will love you for it.