DENTAL IMPRESSIONS AND BITE REGISTRATION: THE GOOD, THE BAD AND THE UGLY

For a successful SomnoDent oral device case, a proper bite registration is essential. Knowing what to look for and steps to achieve the best records possible will directly impact your patient’s treatment outcomes. If protocols aren’t followed carefully, the manufactured appliance may not live up to you or your patient’s expectations.

1. What Does an Excellent Impression Look Like?
2. Protocols to Follow When Taking a Bite Registration
3. How a Bad Impression Could Result in a Poor Fitting Case for Your Patient
WHAT DOES AN EXCELLENT IMPRESSION LOOK LIKE?

Your initial impression is key to a successful manufacturing process and your patient’s comfort. Excellent impressions will have fine detail, go well past the gingival margin, not have any pulls or tooth distortion, and capture the distal of the terminal molar.

Using polyvinylsiloxane (PVS) is best for the impression, as it allows you to capture a highly defined occlusal surface, which is useful during fabrication. Although the lab will shave quite a bit of the bite away, the oral appliance manufacturer will only need the detailed occlusal surfaces for articulation purposes.

2 Protocols to Follow When Taking a Bite Registration
PROTOCOLS TO FOLLOW WHEN TAKING A BITE REGISTRATION

1. Examine the Teeth
Check for restorations such as crowns, implants, etc. Note everything from open contacts to periodontal status. If there are missing teeth and you plan to perform treatment in these areas, be sure to indicate such in the notes section of the SomnoDent case order form/prescription.

Structurally, look at all the teeth and for any anterior openings, including the direction of the jaw during movement or anterior disclusion. You must also make note of anatomical factors such as lip competency differences in men and women, worn down teeth, tongue size, and steep mandibular plane angles or growth patterns and curve of Spee. Align mid-lines and also note any mid-line deviations that are normal for patient.

2. Select a Fast Setting Impression Material
Blue Mousse is a common example. Do not use wax, as this could melt during shipping to and from the manufacturing facility (SomnoMed is located in Texas). Both an upper and lower impression of PVS is preferred, but alginate can be used if you pour the models immediately afterward. When you pour the model, use only a Type III or Type IV die stone.

3. Establish the Maximum Protrusive Range
Record your bite registration, starting with your patient at 60% of their maximum protrusive range or until comfortable. For most people, it’s around 2/3 of their full centric protrusion. A SOMGauge can make it easier to locate this starting point (the vertical guide ramp is 2-8mm for you to have a base record of how “open” your patient can be.)

A SOMGauge can be used for bite registration purposes on all oral appliances. This autoclavable instrument provides reliable records and includes both a fork and slider with clear protrusion indicators.

4. Prepare the SOMGauge
Set the lower slider by loosening the upper and lower screws. Place it over the patient’s lower incisors just over their skeletal midline and then move the slider to contract the lower jaw in an anterior manner before tightening the lower screw to secure it in place.

If the facial muscles or joints are tight/tender, reduce this to 50% or where the patient can tolerate it. The more protrusive the record, the more effective the mandibular advancement splint will be. Ask your patient to hold this position for 2-3 minutes, and then get their feedback on how comfortable or uncomfortable they are. If necessary, make adjustments to accommodate your patient’s needs.

3 How a Bad Impression Could Result in a Poor Fitting Case for Your Patient

If the facial muscles or joints are tight/tender, reduce this to 50% or where the patient can tolerate it. The more protrusive the record, the more effective the mandibular advancement splint will be. Ask your patient to hold this position for 2-3 minutes, and then get their feedback on how comfortable or uncomfortable they are. If necessary, make adjustments to accommodate your patient’s needs.

4. Prepare the SOMGauge
Set the lower slider by loosening the upper and lower screws. Place it over the patient’s lower incisors just over their skeletal midline and then move the slider to contract the lower jaw in an anterior manner before tightening the lower screw to secure it in place.

Use the patient’s skeletal midline as guidance, as the occlusal midlines do not always match. Take note as to where the jaw drifts or moves during movement, as this may be a factor. Be sure to check the curve of Spee and posterior coverage before using the SomGauge with PVS. When you apply the material to the bite fork for the impression, it must cover all the posterior teeth.

5. Take the Impression
Perform a static/dynamic bite impression, basing the position on what is comfortable for your patient, applicable to their anatomical characteristics, and functionally possible. Additionally, a protrusive bite record with 3mm on full occlusal surface is required.
HOW A BAD IMPRESSION COULD RESULT IN A POOR FITTING CASE FOR YOUR PATIENT

One of the most significant ways to “ruin” a case is to have a poor history or examination of the patient. Find out if he or she struggles with TMJ/OFP conditions, which may cause pain or limited range of motion. If this is the case, those concerns should be addressed prior to making an oral appliance for sleep apnea, as the sleep appliance could cause unnecessary pain, thereby making treatment ineffective.

Watch: TMJ Exam and/or Range of Motion Exam

Your exam should include palpation and auscultation of the TM joint, and palpation of the head and neck muscles. Note everything about the range of motion, including their opening, lateral, and protrusive capabilities. Be sure to screen the patient for a history of headaches (note the type: tension vs. migraine) and if necessary, have them sign a consent form noting these findings.

Thanks to SomnoDent’s proprietary materials and innovative design, 9 out of 10 patients report regular use of their oral device. A quality impression will help the sleep apnea device to be customized for a specific fit and durable for up to 3 to 5 years of use. The fully repairable device is backed by a 1 or 3-year warranties. However, it is up to you to get great bite records to make the treatment as successful as possible.