Core3dcentres® utilises the latest digital technologies to deliver superior accuracy, communication and convenience for removable orthodontics - from scan, design and model production to fabrication of final prosthesis. Traditionally, splints have been made from a hard acrylic or a soft, polyvinyl material. The hard acrylic splints provide the patient with an adjustable occlusal surface but usually require substantial chair time to make the appliance fit comfortably. The soft splints, although more comfortable for the patient, do not lend themselves to adjustment and repair. Our custom, advanced surgical, TMJ and bruxism splints are constructed to your occlusal plane specifications on the upper or lower arch and cover all of today’s popular designs. We’re also always ready to take on your special or custom requirements when they arise.

**Indications:**
- To protect natural dentition or new crowns, bridges and veneers from abnormal occlusal forces caused by clenching and bruxism
- Where a splint with superior fit is required
- Where positive retention without the use of clasps is desired

**Advantages:**
- Long edentulous spans where denture teeth are required in the splint
- As with any appliance, appliance may break down under extreme bruxism pressure
For the laboratory

What to send:
To receive a Splint from Core3dcentres the laboratory will be required to send either a digitally designed file from an open or affiliated scanner software with reference to the shade required and any special requirements. Core3dcentres can advise you on the best scanners available in the market today.

OR

A upper and lower model with bite registration with clear instructions of what has to be manufactured and the appropriate shade.

Beautiful, Accurate Splints – Fabricated from your digital files:
Core3dcentres has committed to staying on the leading edge in proven, state-of-the-art printer technology and materials specially designed for the orthodontic market. With our on-site, large capacity 3d printers, Core3dcentres leads the way in manufacturing precise, strong custom splints with unprecedented turnaround times.

For the clinician

Treatment Procedures:
1. Conduct a comprehensive dental examination including a complete medical and dental history; thorough dental exam; periodontal evaluation; occlusal analysis; orthodontic survey and TMJ screening. A screening evaluation can be simply accomplished by a nurse or assistant in less than two minutes by utilising the following process:

   - FEEL jaw movement. Use bimanual technique. From behind the patient, place your hands so the little finger rests against the ascending ramus. The other three fingers should be against the lower border of the mandible. Ask the patient to open wide, and then close slowly. Do this passively and then with firm pressure applied coronally. Any pop, click, bump, grind or erratic movement will alert you to TMJ problems.

   - ASK the patient. Specifically ask about the following symptoms: Headache, Grinding noise in TMJ, Neckache, History of jaw locking, “Sounds” in the ear, Pain in the TMJ area, History of jaw pop/click, Unable to open mouth, Arthritis, and Pain in the TMJ/ear area. A positive answer suggests a possible craniomandibular disorder and requires follow-up.

   - LOOK at the patient. Visually evaluate for Facial asymmetry, Teeth missing, Deviation on opening, Teeth worn, Open bite, Teeth clash in movement, Short lower jaw and Mandibular dyskinesia. The presence of one or more of these conditions requires follow-up.

   - LISTEN to the TMJ. With a stethoscope, listen to the TMJ, first on one side, then the other. Use an open bell without a diaphragm to avoid confusion from skin and whisker sounds. Healthy joints are silent throughout the entire range of function. Any sounds such as clicks, pops or grating indicate the need for follow-up.

2. Complete all caries removal and necessary restorative work before the impressions for the splint are taken. The decay process can be accelerated if the splint is worn over carious lesions.

3. Conduct a complete TMJ work up for all TMJ patients. Radiographic techniques such as a transcranial or a tomogram should be used for the purpose of confirming your clinical diagnosis.

4. Take a digital impression as per manufacturer’s instructions. Digital impressions reduce the need for late adjustments or retakes. On-screen visualisation allows practitioners to make modifications as they scan and obtain an optimal impression with the right occlusion information the first time. Digital impressions also add control and reduce the need for corrections during treatment.

5. Take an extremely accurate construction bite using your intra-oral scanner to represent the exact vertical and AP position that is desired in the finished appliance. This is the single most important step leading to successful treatment after making the correct diagnosis. If the construction bite is open even slightly or displaced in any way the models will not occlude correctly in their 3D form.

6. Provide a detailed prescription as to how occlusal surfaces of splint should be finished (i.e. flat plane, occlusal indexing, canine and anterior rise, etc.).

7. Upon delivery of the appliance, make any occlusal adjustments required.

How to adjust if required:

- The self-adjusting nature of the soft material base all but eliminates the need for long and tedious adjustment sessions (experience is that it easily saves 15 to 20 minutes of grinding during the initial seating of the appliance).

- Adjustments for opposing arch contact with the splint should be minimal provided that an accurate construction bite is sent to the laboratory with the Digital Impression or working models.

- Patients should be checked after the first week of wearing the splint. Any remaining occlusal or lateral interferences can be quickly removed at this time.