



QUICKSPLINT™

RECENTLY FEATURED IN
cosmetic dentistry

dti Dental
Tribune
International

Improving success with your cosmetic cases using the QuickSplint

Author: Dr John F. Weston, USA

Fig. 1 Immediately post-delivery of ten restorations.

Fig. 2 The TMJ QuickSplint device before use.

Fig. 3 The TMJ QuickSplint with impression and trimming.

Fig. 4 Intra-oral realignment, patient wearing the TMJ QuickSplint.



Fig. 2



Fig. 3



Fig. 4

Any clinician who practises aesthetic or reconstructive dentistry knows the challenges of predictably executing multi-unit anterior dental cases. From acquiring proper and repeatable bite records to protecting provisional and final restorations, anterior bite plane devices (deprogrammers) are a useful tool when integrated into your protocol.

Research has shown that when posterior teeth are prevented from contact, the overall mastication forces are reduced by up to 70 per cent. This protective feedback mechanism is both beneficial to teeth and can relieve uncomfortable muscle pain resulting from overuse and spasms caused by excessive contraction.

For this reason, some providers regard anterior bite plane devices as the perfect first-line treatment for acute temporomandibular joint (TMJ) pain and dysfunction.

Most of the time, patients present for anterior reconstruction due to worn anterior incisal edges and/or abraded posterior dentition. This condition is most commonly associated with night-time bruxing habits (sleep bruxism). Over time, sleep bruxism can cause aesthetically displeasing results, with loss of anterior guidance, occlusal disharmony and overall destabilisation of the bite. Sleep bruxism, like many other oral conditions, is often painless but without intervention leads to more tooth wear and can result in TMJ pain and pathology.



Fig. 1

Moreover, studies have shown that more than half the patients who grind their teeth due to para-functional habits are not aware of the behaviour, which can interfere with treatment needs and case acceptance. With time, sleep bruxism can result in firm and enlarged muscles of mastication. Enlarged muscles can increase the challenges of case aesthetics and often make it difficult to obtain a passive centric relation occlusal bite record.

In my practice, anterior deprogrammers have been used successfully for many years. These devices can help relax overused or hyperactive muscles. They allow the joints to seat passively in their anatomically ideal location through a protective pathway once the patient's occlusion is disengaged. Used as a diagnostic tool, as a first line of treatment or as a step in treatment, anterior deprogramming devices are a valuable treatment tool.



Fig. 5

Fig. 5 The take-home package for same-day night-time wear.

The TMJ QuickSplint is a semi-custom anterior bite plane (deprogrammer) that was developed for immediate placement with minimal demand on the provider regarding time, cost or treatment expertise. Although other methods currently exist, I have found the TMJ QuickSplint to be especially useful in the following two areas in aesthetic dental care.

_Achieving accurate open-bite centric relation records

A simple technique that can be used to achieve accurate bite records involves using the TMJ QuickSplint as a night-time appliance for one week prior to record making. The design of the TMJ Quick Splint shell and recommended fabrication technique provide a simple, consistent, reliable and fast method to deliver this device chairside. The TMJ QuickSplint used as a deprogrammer will relax the patient's muscles of mastication and help provide a repeatable, accurate centric relation record. The TMJ QuickSplint is designed for maxillary or mandibular arch use, based on maximum contact, occlusal stability, operator preference or patient comfort.

The procedure is simple. After using the device for seven to ten days, the patient returns for records to be made. With the TMJ QuickSplint in place, the patient is asked to bite on the anterior plate (of the TMJ QuickSplint), slide forward and backward a few times and then while the jaw is in the most retruded position to firmly bite down on the TMJ QuickSplint and to hold and squeeze the jaw to stabilise the position.

Bite record material is then injected between the posterior teeth and allowed to set. The TMJ QuickSplint is then removed and the patient is asked to bite into the freshly made posterior sections that provide stability while new material is injected onto the anterior region, providing an accurate full-arch open-bite centric relation record.

_Protecting provisionals and final restorations

Another common and significant problem is keeping provisionals in place while waiting for laboratory-fabricated restorations to be completed. It is not practical to fabricate any permanent bite protection for patients in provisionals and most systems on the market involve rigid acrylic liners that could potentially damage and

or loosen the restorations. Provisionals need to be luted to the preparations in such a way that the patient can visualise the end-result and have some functional benefit. Essentially, they need to be cemented well enough to function but easily removed without damaging the preparations.

Since the cause of the patient's original tooth wear is still present and active, this is not always easy and often leads to broken provisionals and upset patients and clinicians. Failure or unexpected events in aesthetic dental care can have negative consequences on patient perception, which is essential to building a strong cosmetic dental practice.

The TMJ QuickSplint is best fabricated using Blu-Mousse (Parkell) or your choice of similar fast-set bite registration material. This allows for rapid, accurate and careful placement over the top of the provisionals. The patient uses the TMJ QuickSplint at night to prevent damage to the provisionals during removal or placement, with the added benefit of reducing overall force and stresses on the interim restorations. After final delivery, we relign the TMJ QuickSplint to fit the final restorations. This can be worn until a definitive device is fabricated and delivered. In my practice, the patient is advised to keep the TMJ QuickSplint as an emergency device in the event of a symptomatic muscle flare-up or if the current appliance is misplaced or damaged.

TMJ QuickSplint™ is a registered trademark of Migratherapy LLC.

_about the author		cosmetic dentistry
	Dr John Weston is an accredited fellow of the American Academy of Cosmetic Dentistry and an examiner for the American Board of Cosmetic Dentistry. He lectures nationally and internationally, publishes articles, conducts clinical research, and evaluates new and emerging dental technology and products for major dental companies. He is director and owner of Scripps Center for Dental Care, a multi-specialty practice located at Scripps Memorial Hospital in La Jolla, California. Information on other articles he has published can be found at www.scrippsdentalcare.com .	