

When to Use an Anterior Deprogramming Appliance and Why

Raj Upadya, DMD

Lucia jigs, NTT's, Cranham deprogrammers, and Dawson B-Splints all fall into the broad category of temporomandibular joint disorder diagnosis appliances. There are specific reasons as to why you may want to use one type over another when diagnosing a possible TMJ problem, but at their core they all achieve the same goal, getting centric relation by eliminating muscle hyperactivity.



Dr. Rajeev Upadya practices Cosmetic, Restorative and Implant dentistry in Florham Park, NJ, and remains active in the dental community as an Associate Faculty Member and Mentor for the Dawson Academy as well as a board member of several publications. His commitment to staying current on the new advancements in dentistry and his dedication to the profession have inspired him to found several local dental study clubs focused on furthering knowledge as well as giving back to the community.

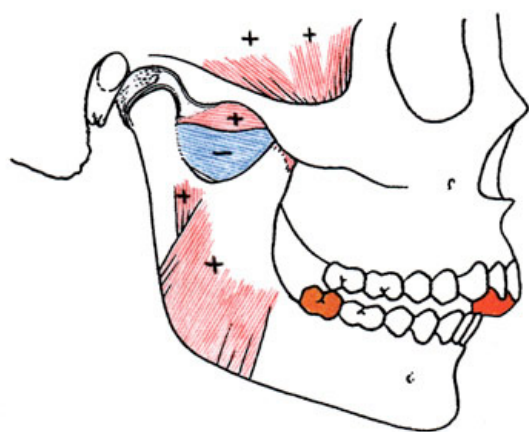


Figure 1.

De-mystifying the Appliance

Unlike full coverage orthotics with classical occlusion milled in, the anterior deprogrammer creates a small contact point for the incisors to meet, while disengaging all of the posterior teeth. In essence, it “clears the dance floor” of any noxious posterior interferences. In not allowing the posterior teeth to contact, the hyper-functioning lateral pterygoid muscles will relax, the elevator muscles activity will decrease which allows the TMJ to seat in centric relation (fig. 1), often in minutes.

When Should I Use a Deprogrammer?

When our TMJ – occlusal examination reveals an occluso-muscle disorder (or dysfunction) that needs to be addressed, a deprogramming device can safely be used. This can be indicated by no tenderness of the joint during load testing while in the presence of other signs or symptoms of instability, especially a positive finding during muscle palpation of the pterygoids, masseters or temporalis.

When Should I Avoid Them?

Anterior deprogrammers should be avoided in the presence of intracapsular pathology.

If chronic anterior disk displacement is suspected, seating the condyles with a deprogrammer can progress a reducing click to a non-reducing click, either on the lateral or the medial pole. Cautious use and careful monitoring should be utilized when using it on a patient with an intermittent lateral pole click, as well as those who recently developed a reducing lateral pole click. In the case of medial pole displacement, significant pain will result with its use, since pressure is being placed on the retrodiskal tissues. Therefore, it is crucial to remove the appliance if any discomfort is perceived at the level of the joint. Full coverage orthotics should be used to treat the joint first in such situations.

Which Deprogrammers Should I Use When?*

- 1. The Lucia Jig:** This is a great tool to have during bimanual manipulation when you want to get an accurate CR record. It will turn the rigid muscles of a 'clencher' to butter. They are relined in the mouth, and once deprogramming is complete, the bite record is taken with it in place.
- 2. The NTI:** A true help for the temporal headache patient, or for the headache patient of occluso-muscle origin. The nice part is they can be quickly made in the office. It is not uncommon for long-time sufferers of headaches and facial pain to get rapid relief. This is due in large part to a major symptom being lessened. focus can be directed to diagnosing and solving the cause – the occlusal discrepancies! Just remember, it's a temporary solution and a great appliance for your differential diagnosis.
- 3. The Cranham Deprogrammer:** Great for equilibration appointments. Having the patient wear it the night before and to the visit will deprogram the patient, and often can speed up finding those elusive initial noxious contacts. The appliance is adjusted until the deflective interferences are found and relieved. Useful for both the beginner as well as the astute equilibrating clinician.
- 4. Dawson B-Splint (dual-arch):** This splint is for long term use. I use them for night time retention and protection for those with significant parafunction. Clenchers generate even less force than they can with an equilibrated splint. It also eliminates the possibility of posterior super eruption.

Though it took me a little while to catch on to introducing deprogramming into my office, I am very happy that I did. Using the right type of appliance in the right clinical situation has definitely improved my effectiveness in literally all areas of my practice.

* *TMJ occlusal examination is positive for an occluso-muscle disorder.*