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TIPS AND TECHNIQUES

TALON SPLINT

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This course is written for dentists, hygienists and dental assistants.
This course is designated for one CE Contact Hour.

OVERVIEW

Occlusal splints are among the most versatile tools used in dentistry. Traditionally (and depending upon patient diagnosis and preference) splints are available in a hard acrylic or soft polyvinyl design. The Talon Splint constitutes a step forward in splint evolution, providing the doctor and patient with the best of *both* worlds.

Responsibility for evaluating and treating bruxism and TMJ dysfunction; effecting orthodontic stabalization and optimum occlusal condition: and preventing unnecessary post-periodontal surgery discomfort and complications should rest with the dentists and hygienists who care for a patient. The Talon Splint presents a more comfortable, retention-superior, easily adjustable alternative to traditional occlusal splints – all the advantages with none of the disadvantages – and is ready to assume an integral role in ensuring and maintaining beautiful smiles.

EDUCATIONAL OBJECTIVES

The overall objective of this course is to provide the participant with an evidence-based guide to the advantages, applications and proper procedural protocols for the Talon Splint in the dental office.

UPON COMPLETING THIS COURSE, PARTICIPANTS WILL BE ABLE TO:

- Recognize and evaluate the factors and conditions indicating a need for splint therapy in the treatment of occlusal dysfunction.
- Appreciate the importance and necessity of a detailed patient examination and accurate history.
- Understand the occlusal health practice potential; specific treatment and diagnostic applications; proprioceptive advantages of the Talon Splint.
- Discuss Talon Splint treatment options and procedures for bruxism, TMJ dysfunction, post-periodontal surgery care and orthodontic stabilization with patients.



About the Author:

ROB VEIS, DDS.

Dr. Veis began practicing in 1984 as a solo general dentist and has been a part of both solo and group practices since then. A graduate of USC Dental School, he taught for 12 years at the University of Southern California as a Clinical Professor in Restorative Dentistry; is an internationally renowned lecturer (at locations including UNLV, Columbia University, Loma Linda University and NYU) on the topics of Dental Sleep Medicine, Orthodontics for the General Practice and Appliance Therapy; and has served on the faculty of the Las Vegas Institute of Advanced Dental Studies. He is the co-author of The Principles of Appliance Therapy for Adults and Children – considered one of the definitive texts on the subject – and has lectured extensively for the Academy of General Dentistry-sponsored mastership program. In 2014, he will embark on a world-spanning lecture tour encompassing Canada, Australia, Taiwan and the US.

AUTHOR DISCLOSURE:

Dr. Veis discloses that he is the CEO of SML™ Space Maintainers Laboratories.

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Publication Date: Original Release Date: 2005. Reviewed 2013, EXPIRATION DATE: November, 2015.
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Splints come in a variety of designs. Traditionally, they 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.

The Talon® Splint offers the best features of a hard splint and a soft splint while eliminating these disadvantages.

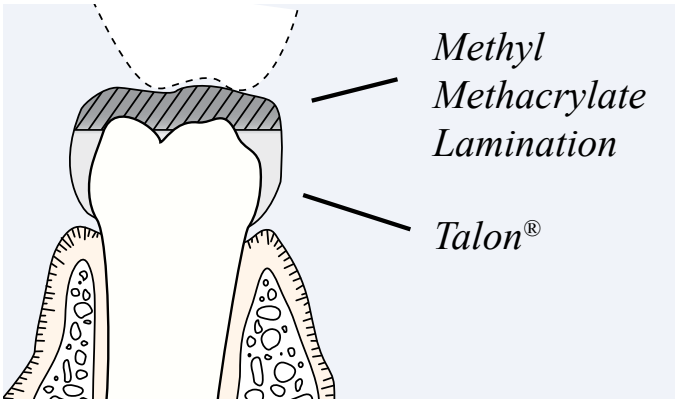


Abnormal Occlusal Wear

Splints are being used in the general practice to achieve a variety of objectives:

- Bruxism Splints are used to prevent excessive tooth wear, tooth mobility, and loss of tissue attachment.[1]
- After periodontal surgery, splints are used to distribute forces, decrease trauma, and aid in the healing process.[1]
- In orthodontics, they are used as a form of final stabilization.[1]
- Splints are used to treat patients with TMJ dysfunction, i.e. patients who suffer from local (neck, shoulder or sinus) pain, clicking in the joints, pronounced malocclusion, impaired excursion in opening of the mouth or deviant motions of the jaw.

DESCRIPTION:



The term "Talon"® refers to the material used for the retentive portion of the splint. Talon® is a soft, thermoplastic, resilient polymer. Unlike other thermoplastics currently available, it maintains its original flexibility* for years. This material is very retentive and eliminates the need for any other form of mechanical retention.

Once the Talon® material is processed, hard acrylic is then chemically bonded to the Talon® material to form the occlusal surface of the splint.

Precise occlusal adjustments can easily be accomplished due to the hard occlusal surface. This allows you to maintain a proper proprioceptive response with the opposing dentition.[2]

Important – the "Talon®" technique can be utilized for all splint designs, i.e., Gelb, MORA, May, Sears, Jankelson, Tanner, etc.

*Shore Hardness Tests performed by Braun Intertec Northwest, Inc.

INDICATIONS:

The Talon® splint will benefit every patient in your practice needing a splint for bruxism, periodontal splinting, orthodontic stabilization, or TMJ dysfunction.

The Talon® Splint should be used when you need:

1. A splint with a superior fit – the soft nature of the retentive portion of the appliance completely eliminates pressure points and thus the patient adapts immediately. No longer will you have to spend time trying to find "tight spots" on the appliance and your delivery appointments will be much shorter.
2. Positive retention without the use of metal clasps.
3. The ultimate in comfort – a Talon® Splint has the best features of a soft splint yet it allows for excursive movements free of the friction inherent in other splint designs.[3]
4. An appliance that can be made in a manner that will not interfere with your patient's ability to speak normally. Because retention is superior, this appliance can be designed without speech inhibiting lingual extensions. This is greatly appreciated by your adult patients.

TREATMENT PROCEDUERS:

1. Every patient who needs a splint should have a comprehensive dental examination.[4] This should include:
   A. A complete medical and dental history.
   B. A thorough dental exam
   C. An occlusal analysis
   D. An orthodontic survey
   E. A TMJ screening
2. All caries and necessary restorative work should be completed before impressions for a splint are taken.
3. TMJ patients should have a complete TMJ work up. Radiographic techniques such as a transcranial or a tomogram should be used for the purpose of confirming your clinical diagnosis.
4. Upon delivery of the appliance, do any needed occlusal adjustments.

5. Discuss with the patient how to insert, remove, and care for the appliance.



The Talon® Splint

LAB REQUIREMENTS:

1. Accurate casts poured in stone. Air bubbles or holes on tooth surfaces are unacceptable as they can negatively affect the fit of the appliance.
2. Provide a carefully taken construction bite that represents the exact vertical and AP position that you desire in the finished appliance. This is the single most important step to successful treatment after making the correct diagnosis.[5]
3. Detailed instructions as to how you would like the occlusal indexing, cuspid and/or anterior rise, etc.

SUPPLY LIST:

- □ Alginate
- □ Mixing bowl and spatula
- □ Water
- □ Dental Stone
- □ Impression trays
- □ Bite registration material
- □ Acrylic burs
- □ Articulation paper
- □ Per-Fect Bites
- □ Construction Bites

ADJUSTMENT TIPS:

The self adjusting nature of the thermoplastic Talon® material all but eliminates the need for a long and tedious adjustment session. My experience is that it easily saves 15 to 20 minutes of grinding during the initial seating of the appliance.

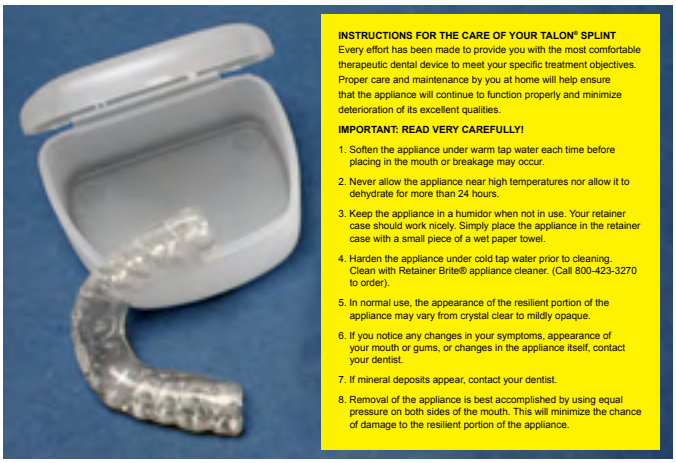
Expect adjustments for opposing arch contact with the splint to be minimal - provided an accurate construction bite is sent to the lab with the working models.

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

CARE FOR THE APPLIANCE:

It is essential that the patient is instructed in the proper care of the Talon® splint. This includes the following guidelines:

1. It is VERY IMPORTANT to have the patient soften the appliance under warm tap water prior to its placement.
2. Never allow the appliance near high temperatures or allow it to dehydrate for more than 24 hours.



3. The appliance should be hardened under cold tap water prior to cleaning. Brushing with a soft brush or soaking in dental appliance cleaner, is all that is needed.
4. Removal of the appliance is best accomplished by using equal pressure on both sides of the mouth. This will minimize the chance of damage to the resilient portion of the appliance. If appliance is difficult to remove, rinse mouth with warm water and try again.

CONTRA INDICATIONS & CONCERNS

All new or recurrent caries should be treated prior to the fabrication of the Talon® splint. The decay process could be accelerated if the splint is worn over carious lesions. As with all appliances, patients should be checked on a regular basis to be sure your treatment objectives are being met.

When treating TMJ dysfunction, it is essential to take proper records, which should include a pre-treatment image of the TMJ (a transcranial or tomogram).

REFERENCES:

1 Marks, Corn: Atlas of Adult Orthodontics, Philadelphia, Lea & Febiger, 1989. Chapter 5, pp. 147159.
2 Talon® Laboratory Technique Manual: Thermoplastic Resilient Polymer for Interocclusal Dental Appliances.
3 Okeson, J.P.: Fundamentals of Occlusion and Temporomandibular Disorders, St. Louis, C.V. Mosby Co., 1985. Pgs 355-356.
4 Gelb, H.: Clinical Management of Head, Neck and TMJ Pain and Dysfunction, Philadelphia, W.B. Saunders, 1985. Pgs 73-116.
5 Space Maintainers Laboratory: Manual of Orthodontic and Pedodontic Appliances, 1990. Technical Bulletin – The Taking of a Proper Construction Bite.

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