

# ORTHODONTICS

## DUAL-FLEX™ / CLEAR-FLEX™ SPLINTS

# 1

### Safe, comfortable “smile insurance”!

For all practical purposes, **everyone** grinds or clenches their teeth at one time or another. Think about what 600 pounds of grinding force per square inch (10 times the force registered during normal chewing) from a bruxing patient could do to their natural teeth or your cosmetic dentistry. **That’s enough force to crack a walnut – and to easily damage the smile you have taken such care in creating!!!**

Prescribe Clear-Flex and Dual-Flex splints to protect natural dentition or new crowns, bridges and veneers from any abnormal occlusal forces that might damage or even destroy them. Both splints feature a unique soft, clear base (thermo-elastic material with memory) that becomes flexible when placed under warm tap water for easy insertion. As they cool, the splints conform to the shape of the teeth for incredible fit and retention (allows use of natural buccal undercuts and lingual interproximal spaces for reliable retention). Claspings is almost eliminated.



### Clear-Flex

Indicated for patients with mild bruxing/ clenching, the Clear-Flex is entirely constructed of soft material and is often used for “clenchers” where the occlusal surface must give under stress.

*Soft material conforms to your teeth for comfortable, reliable fit.*



### Dual-Flex

Indicated for patients with moderate to severe bruxing/ clenching, the Dual-Flex combines the fit and comfort of a soft splint with the wear resistance, accuracy and adjustability of a hard acrylic occlusal surface.

*Hard outer layer is durable and sparkling clear.*



*Soft base rests comfortably against teeth and gums.*

### Features and Benefits

- Both splints based on clear, thermo-elastic material with memory.
- Clear-Flex entirely constructed of soft material.
- Dual-Flex combines fit and comfort of a soft splint with the wear resistance, accuracy and adjustability of a hard acrylic occlusal surface.
- Base becomes flexible when placed under hot tap water for easy insertion.
- As it cools, splint returns to original shape, conforming to shape of patient’s teeth (allows for use of natural buccal undercuts and lingual interproximal spaces for reliable retention).
- Claspings for retention almost eliminated.
- Both splints can be utilized for all splint designs (e.g., Gelb, MORA, May, Sears, Jankelson, Tanner, etc.)

## 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.

## Contraindications:

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

## Treatment Procedures:

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

- Pain in the TMJ/ear area

A positive answer suggests a possible craniomandibular disorder and requires follow-up.

### C. **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
- Mandibular dyskinesia

The presence of one or more of these conditions requires follow-up.

### D. **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.

### E. Radiographic techniques such as transcranial or tomogram should be used for the purpose of confirming your clinical diagnosis.

2. Complete all caries removal and necessary restorative work before impressions for splint 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. Upon delivery of the appliance, do any required occlusal adjustments.
5. Discuss with the patient how to insert, remove and care for the appliance.

## Impressions:

1. Take alginate impression as per manufacturers' instructions.
2. Pour cast in stone. Air bubbles or holes in tooth surfaces are unacceptable as they can negatively effect the fit of the appliance.

3. Take a construction bite that represents 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.
4. Provide a detailed prescription as to how occlusal surfaces of splint should be finished (i.e. flat plane, occlusal indexing, canine and/or anterior rise, etc.).

## Adjustment Tips:

- 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 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.

## Appliance Care:

Patient instruction regarding the proper care of their new splint is essential in ensuring long life for the appliance.

1. Instruct the patient on how to insert and remove their Clear-Flex or Dual-Flex.
2. It is very important to have the patient soften the appliance under warm tap water prior to its placement.
3. Never allow the appliance near high temperatures or allow it to dehydrate for more than 24 hours.
4. Keep appliance moist when not in use. A retainer case works nicely. The patient should simply place the appliance in the case with a small piece of wet paper towel.
5. Harden the appliance under cold tap water prior to cleaning. Brushing with a soft brush and toothpaste, or soaking in a denture cleaner, is all that is needed.
6. 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.

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