

SPLINT APPLIANCE SELECTION GUIDE

THIS GUIDE INCLUDES HELPFUL TIPS ON HOW TO CHOOSE THE RIGHT
SPLINT FOR YOUR PATIENT AND INFORMATION ON STANDARD FUNCTION
AND SPECIFICATIONS FOR GREAT LAKES APPLIANCES INCLUDING:

- ANTERIOR DEPROGRAMMER
- FLAT PLANE SPLINT
- FULL CONTACT SPLINT WITH ANTERIOR GUIDANCE

AND SEVERAL APPLIANCES AS TAUGHT BY CLINICAL LEADERS INCLUDING:

- DR. FRANK M. SPEAR
- DR. PETER E. DAWSON
- DR. DEWITT C. WILKERSON
- PANKEY INSTITUTE
- DR. JEFFREY J. BRUCIA / FACE
- DR. JOHN C. KOIS
- DR. JOHN C. CRANHAM



Great Lakes®
DENTAL TECHNOLOGIES

GREAT LAKES NYLON SPLINTS
Pages 5 - 6

4 STEPS TO CHOOSING THE RIGHT SPLINT FOR YOUR PATIENTS

1. CHOOSING AN APPLIANCE TYPE:

ISSUE/CONCERN	APPLIANCE TYPE
<ul style="list-style-type: none"> • Occlusal muscle disorder • Protection against bruxing and clenching • Finding comfortable joint position 	Anterior Deprogrammer
<ul style="list-style-type: none"> • Occlusal muscle disorder • Protection against bruxing and clenching • Certain intracapsular disorders • Long-term wear 	Flat Plane Splint (Nightguard)
<ul style="list-style-type: none"> • Occlusal muscle disorder • Protection against bruxing and clenching • Certain intracapsular disorders • Long-term wear • Provides immediate disclusion of posterior teeth (Ramp provides guidance) 	Full Contact Splint with Anterior Guidance

2. TRADITIONAL SPLINT MATERIAL OPTIONS:

CONSIDERATIONS	RECOMMENDED MATERIALS	RETENTION
<ul style="list-style-type: none"> • Retention 	<p>Splint Biocryl Great Lakes standard for splint fabrication</p>	<ul style="list-style-type: none"> • Most retentive
<ul style="list-style-type: none"> • Tooth sensitivity • Increased comfort • Crown and bridge work or veneers 	<p>Hard/Soft Splint Biocryl A hard/soft combination dual layer material, acrylic is bonded to the hard side of the material.</p>	<ul style="list-style-type: none"> • Cannot add pontics • Cannot relined
<ul style="list-style-type: none"> • Tooth sensitivity • Increased comfort • A difficult path of insertion • Patient compliance 	<p>Variflex™ A heat-softening acrylic that softens under warm tap water and self adjusts once seated, features good retention. Does not contain methyl methacrylate or plasticizers.</p>	<ul style="list-style-type: none"> • Less retentive than Splint Biocryl • More prone to wear than Splint Biocryl and Hard/Soft Splint Biocryl

LABORATORY LEAD TIMES

A due date should be provided on each prescription. This date should be one day prior to the actual appointment date. We appreciate advance notice for all RUSH cases. Lead times may vary based on fluctuations in volume. We will contact you if we are ever unable to meet your requested due date. Contact Laboratory Customer Service for all special arrangements.

3. PATIENT-SPECIFIC CONSIDERATIONS:

ISSUE/CONCERN	RECOMMENDATION
Retention - Absence of undercuts	<ul style="list-style-type: none"> • Ball Clasps • Adams Clasps • Arrow Clasps
Retention w/missing teeth	<ul style="list-style-type: none"> • C Clasps
Acrylic Coverage <ul style="list-style-type: none"> • Prevent Eruption • Sensitive Gag Reflex • Maximum Retention • Patient Comfort 	<ul style="list-style-type: none"> ➢ Full Occlusal ➢ Horseshoe or no tissue contact or mandibular splint ➢ Full Palatal ➢ No tissue contact
Edentulous or Partial	<ul style="list-style-type: none"> • Pontic
Implant Procedure	<ul style="list-style-type: none"> • Pontic or acrylic block
Difficulty seeing splint material	<ul style="list-style-type: none"> • Tint can be added
Easier speech/Day wear	<ul style="list-style-type: none"> • Mandibular splint

We have many tools available for you and your staff. Ask us about instructions for taking accurate impressions, bite registration techniques, and guidelines for making efficient chairside splint adjustments.

4. SPLINT SELECTION AND ORDERING:

Review the following pages to select the exact splint to fit your patient's needs.

Contact Great Lakes Technical Support Specialists if you need assistance or have any questions. We will also be happy to send you Rx forms and shipping supplies.

TOLL FREE: 800.828.7626
EMAIL: greatlakesdentaltech.com

LOWER OR UPPER SPLINT?

Although the majority of splints are fabricated on the upper arch, most can be fabricated on either the maxillary or mandibular arch.

For the most effective splint therapy, use the Angle classification system as a guideline when selecting an upper or lower splint:

- CLASS 1:** Maxillary or Mandibular
- CLASS 2:** Maxillary
- CLASS 3:** Mandibular



GREAT LAKES STANDARD SPLINTS & DEPROGRAMMERS

FULL-COVERAGE SPLINTS OR DEPROGRAMMERS REMOVE OCCLUSAL INTERFERENCES AND PROMOTE NORMAL MUSCLE FUNCTION

(Indicated for patients who can accept joint loading without pain.)

FULL CONTACT SPLINT WITH ANTERIOR GUIDANCE

A full-coverage splint with an anterior acrylic ramp that provides lateral and protrusive guidance against the opposing arch during function.

- > Full occlusal coverage
- > Lateral and protrusive incisal guidance
- > Anterior acrylic ramp
 - Std angle 5° greater than required to disclude posterior teeth
 - Std protrusive and lateral length extends from contact point to just beyond the labial surface of the upper anteriors (approx. 4-6mm)
- > Point contact from lower posterior buccal cusp tips

Lower: Same as upper, point contact from upper lingual cusp tips



FLAT OCCLUSAL PLANE SPLINT

(Also known as a Hard Nightguard)

A full-coverage splint with an even, flat occlusal surface providing contact for the opposing teeth.

- > Full occlusal coverage
- > No guidance
- > No ramp
- > Even, flat occlusal surface
- > Point contact for each opposing tooth

Lower: Same as upper



WE USE A VARIETY OF ARTICULATORS IN HOUSE

We have the most common models on hand so there's no need to ship your articulator. We recommend sending the bite registration and mounted cases. If unmounted, all cases will be mounted on a SAM® 2 articulator unless otherwise specified.

SAM® PANADENT
DENAR® WHIP MIX®
HANAU™ KAVO
ARTEX® STRATOS®

ANTERIOR DEPROGRAMMER - SPEAR STYLE

A standard anterior deprogrammer featuring 1mm full occlusal coverage with maximum contact points.

- > 3x3 anterior bite plate
- > No guidance
- > No ramp
- > 6-point contact of opposing anteriors
- > Open enough to eliminate interferences during function

Lower: Same as upper



A deprogrammer can be used as a nightguard, to relax muscles, to treat bruxism, to determine centric relation, and to take centric relation records.

THE RHEA® PRECISION CUSTOM-FIT OCCLUSAL APPLIANCE

MOST ACCURATE FIT.
EXCEPTIONAL RETENTION.
IMPROVED PATIENT COMFORT.



WEARGUARD SPLINT

Ideal for bruxing patients to protect against wear as well as to protect veneers and restorations.



FLAT OCCLUSAL PLANE SPLINT

Ideal for patients with occlusal muscle disorder or certain intracapsular disorders.



FULL CONTACT WITH ANTERIOR GUIDANCE SPLINT

Provides immediate disclusion of posterior teeth (ramp provides guidance). Also ideal for patients with occlusal muscle disorder or certain intracapsular disorders.

HOW THE RHEA® OCCLUSAL APPLIANCE WORKS:

The Rhea® can be easily seated with little or no adjustments. Simply heat the appliance in boiling water for 12 seconds (in the Rhea® Conditioning Unit provided) and have the patient close into it.

The low profile design of the appliance makes it comfortable for the patient to wear. This appliance has all the benefits of a traditional splint, but the ease of a boil and bite appliance.



NYLON APPLIANCES THAT DELIVER SUPERIOR COMFORT AND RETENTION

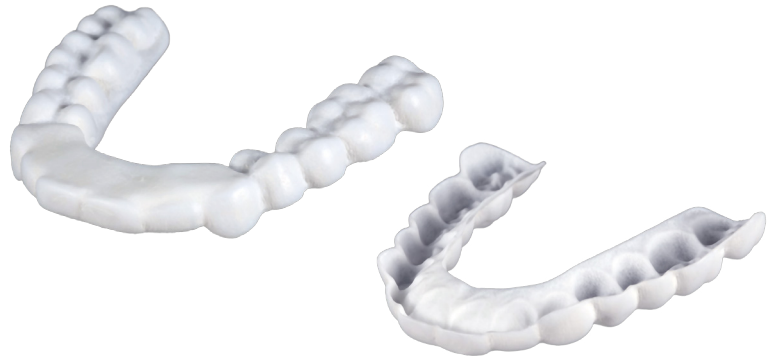
STRONG. LIGHTWEIGHT. FLEXIBLE.

We have combined our in-depth technical experience with 3D software, the latest printing technology, and biocompatible nylon material to deliver an advanced appliance. Leveraging the details and accuracy of digital 3D models and fabricated in laser sintered nylon, these low-profile appliances are lightweight, flexible, and strong.

- > **Retention is optimized** in software
- > Digital accuracy and more **flexible material** promote **patient comfort**
- > Digital design ensures the **lowest possible** profile
- > **Great Lakes technicians** work individually with you
- > **Adjust** as you would a traditional appliance

NYLON ANTERIOR BITEPLANE

The Nylon Anterior Biteplane appliance is aesthetically appealing and suitable for a broad spectrum of patient cases. It can be used therapeutically or diagnostically.



NYLON FLAT PLANE SPLINT

The Nylon Flat Plane Splint is a full coverage splint with an even, flat occlusal surface providing smooth contacts for the opposing arch. Also known as a hard nightguard.



**THESE LOW-PROFILE APPLIANCES
PRECISELY ENGAGE THE UNDERCUTS TO
PROVIDE IDEAL RETENTION AND FIT.**

NYLON APPLIANCE

FAQ'S

HOW DO I ADJUST THE NYLON APPLIANCE?

A nylon appliance is easy to adjust. The technique is similar to that of a traditional appliance. Refer to the adjustment instructions enclosed with each appliance for complete adjustment instructions. The nylon adjustment supplies used in the technique are available from Great Lakes.

CAN I ADD TO OR MODIFY THE NYLON APPLIANCE?

The nylon appliance readily accepts acrylic to further enhance comfort and fit. We recommend Fast White from Great Lakes for ideal aesthetics and color.

WHAT'S UNIQUE ABOUT THE NYLON?

The nylon material is the perfect vehicle for translating the detailed information from a 3D scan into an incredibly strong, flexible, and lightweight yet durable appliance.

WHAT ABOUT RETENTION?

Each splint is digitally designed by our technicians, who optimize retention and engagement of the undercut in software. This results in a splint with ideal and consistent retention.

HOW DO I SEND CASES?

Cases can be submitted digitally or traditionally. Intraoral scans can be uploaded to the Great Lakes Upload Portal or sent to Great Lakes through your intraoral scanner. You may also submit cases traditionally using a prescription form and PVS impressions or stone models



INFORMATIVE VIDEOS

Visit [GreatLakesDentalTech.com/Nylon](https://www.GreatLakesDentalTech.com/Nylon)

to view these educational videos:

- > Nylon Splint Durability Demonstration
- > Comparing Nylon Splints to Traditional Acrylic

CLINICAL LEADER SPLINTS & DEPROGRAMMERS

FULL CONTACT SPLINT WITH ANTERIOR GUIDANCE - SPEAR STYLE

A full-coverage splint with an anterior acrylic ramp that provides lateral and protrusive guidance against the opposing arch during function.

- > Full occlusal coverage
- > Lateral and protrusive incisal guidance
- > Anterior acrylic ramp
 - Std angle 5° greater than required to disclude posterior teeth
 - Std protrusive and lateral length extends from contact point to just beyond the labial surface of the upper anteriors (approx. 4-6mm)
- > Point contact from lower posterior buccal cusp tips

Lower: Same as upper, point contact from upper lingual cusp tips



FULL CONTACT SPLINT WITH ANTERIOR GUIDANCE - DAWSON STYLE

A full-coverage splint with the addition of a small anterior lingual shelf designed to prevent the teeth from sliding out of position.

- > Full occlusal coverage
- > Lateral and protrusive incisal guidance
- > Anterior acrylic ramp
 - Std angle 5° greater than required to disclude posterior teeth
 - Std protrusive and lateral length extends from contact point to just beyond the labial surface of the upper anteriors (approx. 4-6mm)
- > Point contact from lower posterior buccal cusp tips
- > 1mm anterior lingual shelf

Lower: Same as upper, point contact from upper lingual cusp tips



FABRICATION REQUIREMENTS FOR TRADITIONAL SPLINTS

Upper and lower stone models with a centric relation bite open a minimum of 1.5mm in the posterior. Facebow mounted models are always recommended to obtain the most accurate results.

"B" SPLINT - DAWSON ACADEMY, WILKERSON STYLE

An anterior deprogrammer featuring full occlusal coverage with a small anterior discluding element.

- > Full occlusal coverage - 1.5mm biocryl
- > Open enough to eliminate interferences during function
- > No guidance
- > No ramp
- > Point contact for opposing centrals
 - 2mm - anterior length from incisal edge
 - 5mm lingual from contact points
 - 1.5mm distal to centric relation contact



FULL CONTACT SPLINT WITH ANTERIOR GUIDANCE - PANKEY STYLE (Lower)

A full-coverage splint fabricated on the lower arch with a gentler ramp that provides protrusive movement and a flat anterior to achieve crossover excursive movement.

- > Full occlusal coverage
- > Lateral and protrusive incisal guidance
- > Anterior acrylic ramp
 - Minimum angle (gentle) required to disclude posterior teeth
 - Std protrusive and lateral length (approx. 6-8mm)
 - Canines contact at rest and in lateral excursion
 - Centrals and laterals contact in protrusive movement only
- > Point contact from upper posterior cusp tips

Upper: Standard upper CR with a small anterior lingual shelf and ramp extension for the cuspids going into protrusive movements. Point contact from lower lingual cusp tips



FULL CONTACT SPLINT WITH ANTERIOR GUIDANCE - BRUCIA/FACE STYLE

A full-coverage splint fabricated with Isofolan and ball clasps for a more comfortable anterior fit.

- > Full occlusal coverage
- > Lateral and protrusive incisal guidance
- > Anterior acrylic ramp
 - Std angle 5° greater than required to disclude posterior teeth
 - Std protrusive and lateral length extends from contact point to just beyond the labial surface of the upper anteriors (approx. 4-6mm)
- > Point contact from lower posterior buccal cusp tips
- > Isofolan material (0.10mm thick relief spacer material)
- > Ball clasping

Lower: Same as upper, point contact from upper lingual cusp tips



Opposing Arch "B" Splint Option

(For patients who require long-term wear)

- > Full occlusal coverage - 1.5mm biocryl
- > Smooth, level incisal contact from cuspid to cuspid
- > Contacts opposing discluding element to accommodate excursive movements

FLAT OCCLUSAL PLANE SPLINT - KOIS STYLE

(Also known as a Hard Nightguard)

A standard flat plane splint with a small anterior discluding element.

- > Full occlusal coverage
- > No guidance
- > No ramp
- > Even, flat occlusal surface
- > Point contact for opposing arch
- > Anterior discluding element
 - 2mm - length
 - 3mm - width

Lower: Same as upper



KOIS DEPROGRAMMER

A retainer-type anterior deprogrammer designed to disclude posterior teeth.

- > No occlusal coverage
- > No guidance
- > No ramp
- > Point contact for opposing centrals
- > Anterior discluding element
 - 2mm - length
 - 3mm - width
- > Wrap-around labial bow from most distal tooth on each side of arch
- > Recommended for equilibration

Lower: Same as upper



CRANHAM DEPROGRAMMER

An anterior deprogrammer designed to disclude posterior teeth.

- > No occlusal coverage, full palatal coverage
- > No guidance
- > No ramp
- > Point contact for opposing centrals
- > Anterior discluding element
 - 2mm - length
 - 3mm - width
- > No clasping
- > Recommended for equilibration

Lower: Same as upper



DIGITAL SPLINT FABRICATION

EXCLUSIVE TECHNOLOGY FROM GREAT LAKES

DIGITAL SYSTEM CAPABILITIES

FULL COVERAGE SINGLE ARCH APPLIANCES

FLAT PLANE SPLINT OR HARD NIGHTGUARD

- > Even contact from all teeth on opposing arch
- > Smooth transitions from point to point

FULL CONTACT SPLINT WITH ANTERIOR GUIDANCE

A flat plane splint with anterior ramp to guide disclusion.

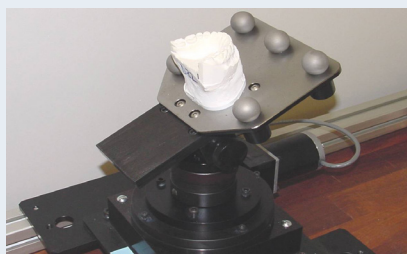
- > Ramp angle can vary - standard angle is 5° greater than required to disclude posterior teeth

CASES MOUNTED ON DENAR® OR SAM® ARTICULATORS

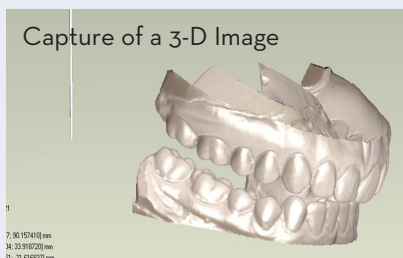
UNMOUNTED CASES WITH CR BITE REGISTRATION

DIGITAL MOUNTING OF UNMOUNTED CASES

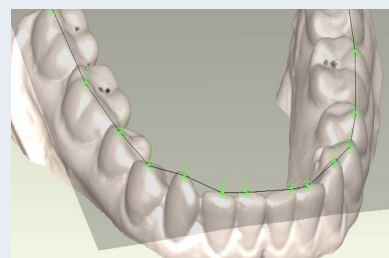
- > Rotation axis 100mm from lower centrals
- > Occlusal plane angle set 15° to horizontal



Upper and lower models are scanned



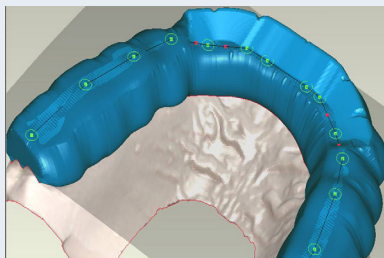
For unmounted cases, a third scan is taken with the centric relation bite record to capture the proper relationship. Cases mounted on a Denar® or SAM® articulator are geometrically reproduced precisely in software.



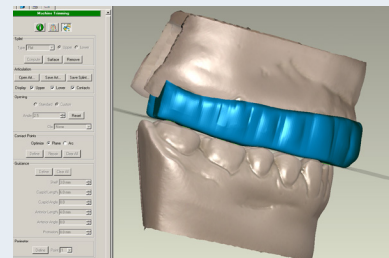
Software optimizes the position of the contact points on the opposing arch



For splints with ramps, software is used to define canine guidance or group function



3-D splint with even centric contacts and anterior guidance.



Great Lakes digital splints have exceptionally smooth transitions between contact points that cannot be reproduced manually

**YOUR EXPERTISE,
OUR TECHNOLOGY & SKILL —
A SUCCESSFUL PARTNERSHIP**

SUPERIOR QUALITY SPLINT. LESS CHAIR TIME.
INCREASED PRACTICE PROFITABILITY

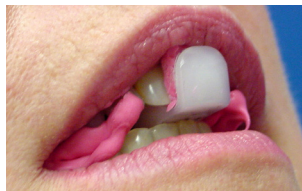
WE WILL HELP YOU STEP-BY-STEP TO:

- **SELECT AN APPROPRIATE SPLINT**
- **GET THE RESULTS YOU WANT FROM THE LAB**
- **ADJUST AND SEAT A SPLINT**

CONTACT GREAT LAKES SPLINT SPECIALISTS FOR ASSISTANCE.



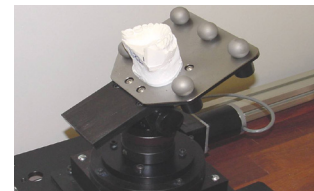
Impressions & Work Models



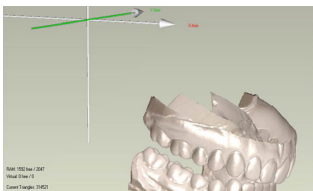
CR Bite Registration



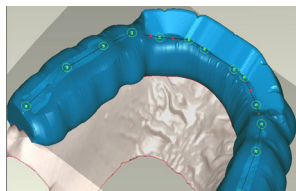
Case Arrives at
Great Lakes



Scanning



Articulating



Digital Splint



Finished Splint



Adjustment & Seating



Great Lakes[®]
DENTAL TECHNOLOGIES

GREAT PEOPLE. GREAT PRODUCTS. **GREAT LAKES.**

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800.828.7626 U.S. & Canada | 716.871.1161 Worldwide | 716.871.0550 FAX

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