

How to Make
Smart Moves®
Work for You

- **Getting Started**
- **Case Selection**
- **Estimating # of Corrective Stages**
- **Delivery**



Smart Moves®
Invisible Aligner System

The
Guide

Smart Moves® is designed to treat minor malalignments of the anterior teeth including slight rotations, torque, tipping, and spacing.

How Smart Moves Works

Most aligner systems only move teeth up to 1/2mm per set-up, Smart Moves can achieve up to 1 mm of tooth movement per arch. (When adjacent teeth are moved in opposite directions, a total of projected movement should not exceed 1mm.)



Original Work Models — Upper and Lower

Setup

Aligner 1 — Hard/Soft

Aligner 2 — Hard

Smart Moves uses two aligners per setup for each stage of movement. The first aligner is the key to this dramatic tooth movement. It provides controlled, predictable tooth movement, is easy to seat and comfortable to wear. The second aligner completes the movement for the setup.

Aligner #1: 1.3mm Invisacryl Hard/Soft highly flexible material

Aligner #2: 1mm Invisacryl hard material



Each aligner is worn 2-3 weeks depending on the case.

If after 3 setups, more movement is needed, send another impression and the process is repeated.

Getting Started

- 1) Evaluate your patient – use the **Case Selection** information on page 2 to help determine if the tooth movement your patient desires is achievable with Smart Moves.
- 2) Estimate the number of corrective stages – using the information found on pages 3 and 4 in **The Guide**, estimate conservatively 1mm per setup. *Upon request, the Laboratory will evaluate the models, estimate the number of corrective stages required, and contact you with our recommendation.*
- 3) Send upper and lower poly vinyl siloxane impressions (PVS) or stone models and an Rx.
- 4) You will receive 2, 4, or 6 progressive aligners per arch, depending on the needs of the case.
If additional movement (beyond the 6 aligners) is required, send in a new set of impressions or stone models and we will repeat the process.

Case Selection

There are a number of cases which can be successfully treated with Smart Moves. The images represent the different kinds of labial movement that can be achieved.

When Smart Moves is Right for Your Patient

Smart Moves is designed for anterior tooth movement, it is not suitable for posterior tooth movement.

Incisor and Canine* Correction with Smart Moves

(Canine correction should be limited to 1/4mm per stage.)



1) Labial Movement
Reset 2-2



2) Labial Movement & Rotation
Reset 2-2



3) Labial Movement & Rotation
Reset 2-2



4) Labial Movement & Rotation
Reset 2-2



5) Labial Movement & Rotation
Reset 3-3

When Smart Moves May Not Be Right

There may be some cases where the movement desired can be achieved faster or more economically with an alternative treatment option. Smart Moves can then be used as a finishing appliance.

Contact Great Lakes if you have any questions or would like us to provide you with a recommendation.

This free consultation with an experienced technician can save you time and effort.*



Not enough retention, teeth are still erupting.



Too much cuspid movement required.

* Consultation is provided based on experience with Smart Moves and information provided by other clinicians. The recommendations are provided in an advisory capacity only. The dental practitioner is recognized as having ultimate responsibility for patient outcomes.

Estimating the Number of Corrective Stages

Each corrective stage achieves up to 1 mm of tooth movement. With each stage (setup), 2 corrective aligners are provided:

- 1) 1.3 mm hard/soft aligner
This hard/soft aligner is worn for 2-3 weeks to achieve correction.
- 2) 1 mm hard aligner
This hard aligner is worn for another 2-3 weeks to finalize correction.



Step 1: Evaluate the dentition to determine if the desired movement can be achieved with the amount of space available in both the upper and lower dentition or if interproximal reduction is needed to achieve the desired movement. Refer to the **Interproximal Reduction Guidelines** located in the back pocket of **The Guide**.

Step 2: Using a digital caliper, measure the distance between the incisal edge of the most lingual tooth to the incisal edge of the most labial tooth that requires the greatest amount of movement.

- 1) *Labial Movement*
Measures: 3.81mm
5 setups are recommended.
Note: The fifth setup is required because the lateral incisor is blocked by adjacent teeth.



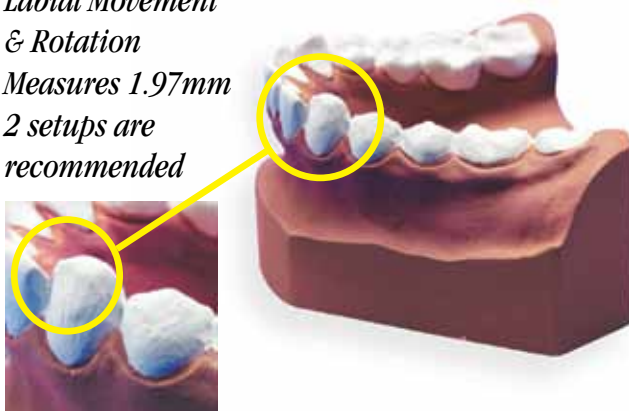
- 2) *Labial Movement & Rotation*
Measures 2.4mm -
3 setups are recommended



- 3) *Labial Movement & Rotation*
Measures 1.55mm
2 setups are recommended



- 4) *Labial Movement & Rotation*
Measures 1.97mm
2 setups are recommended



- 5) *Labial Movement & Rotation*
Measures 1.9mm
2 setups are recommended



Step 3: The greatest distance measured equals the number of stages or setups.

Use this table as a reference guide:

For movement of	Estimated # of stages
up to 1.0mm	1 stage/setup
1.1mm—2.0mm	2 stages/setups
2.1mm—3mm	3 stages/setups

NOTE: *If there is severe crowding or teeth/tooth angle (which makes seating the appliance difficult), it is recommended to estimate one additional corrective stage or setup.*

Step 4: Interproximal stripping or reduction of the enamel where appropriate, may be required to create space for crowded teeth which will allow for planned tooth movement. An overview of **interproximal stripping guidelines** based on the Laboratory's recommendation for reduction is included in the back pocket of this guide.

Step 5: Speaking with your patient. Discuss the possibility of interproximal reduction and the cost per stage/setup with your patient. Make sure the patient understands that there will be additional cost if additional movement is desired. Explain that your patient will be given wear instructions and in addition to following the instructions, patient compliance is vital to ensure that *Smart Moves* achieves the desired results.

Step 6: Once the course of treatment has been discussed with the patient, impressions can be taken and models poured.

NOTE: It is important to send both an upper and lower impression or model. Even if you are only moving teeth on the upper (or lower), the opposing model is critical to evaluate the occlusion to ensure that adequate space is available to achieve the desired movement.

Fabrication Requirements

- 1) Upper and lower poly vinyl siloxane (PVS) impressions or stone models
- 2) Rx outlining treatment objectives

Recommendations

- Check occlusion for any interferences that would inhibit desired movement
- Check models for distortion

Delivery

Most appliances seat well upon delivery. Check appliance fit against the patient's dentition. Usually, the appliance should seat well onto the teeth that were not repositioned in the lab setup. Initially, the appliance may not fully seat at the reset area, but over time, as teeth move it will settle in place.

If needed, some simple adjustments can be made to increase retention.

Increase the flexibility of the appliance by trimming the incisal edge of the hard/soft appliance at the reset area. A carbide taper bur works best.

NOTE: To avoid reducing the tooth moving capacity of the appliance, remove a minimal amount of material needed to expose the incisal edge. After 2-3 weeks, the appliance should be replaced with the hard appliance to complete this phase of alignment.



Patient Care

Aligner appliance wear should be full time, except while eating, playing certain musical instruments, or contact sports. Patient maintenance involves brushing the appliance with toothpaste daily. Do not soak the appliance in mouthwash that contains alcohol. This could damage certain plastics or cause discoloration.

Great Lakes recommends DentaSOAK®. Gentle, effective, and easy to use, DentaSOAK cleans and destroys infection-causing bacteria – in just 15 minutes. DentaSOAK is non-toxic, alcohol free, and persulfate free.



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Interproximal Reduction Guidelines

Tooth-size reduction, also termed *enamel* or *interproximal reproximation, stripping, or enamel reduction*, involves the removal of interproximal enamel that reduces mesial-distal widths.

The clinician should indicate the teeth to be repositioned on a prescription form.



In the laboratory, teeth to be moved are sectioned and reset to an ideal alignment.

The laboratory will indicate the specific interproximal reduction that was completed in the Lab.

Smart Moves® Interproximal Reduction Notice

Patient Name: _____ D# _____

Dear Doctor,

Please be advised that interproximal reduction (IPR) as indicated below was performed by our laboratory in order to facilitate dental alignment.

As each SMART MOVES stage is delivered, total IPR should be clinically re-evaluated. A conservative and incremental approach is recommended.

IPR Key			
↓	= .2mm	R	L
↓	= .4mm	4 3 2 1	1 2 3 4
↓	= .4mm	4 3 2 1	1 2 3 4

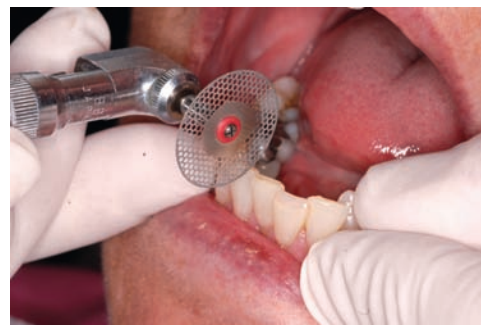
No IPR Required

Thank you for your attention,
Great Lakes Orthodontics, Ltd.

In many cases, reproximation of interproximal contacts is necessary. Interproximal reduction is a procedure to create space for crowding and increase stability by flattening curved contact surfaces. This is accomplished with abrasive strips or discs. A space analysis of the anterior alignment must be completed during the diagnostic phase of treatment and this may be complemented with a partial or gnathologic diagnostic setup. Crowding up to 2.5 mm may be resolved, without flaring the anterior teeth labially, by removal of enamel between the five contact areas.



Diamond Strip



Abrasive Disc

Many authors recognize reduction of one-half of the interproximal enamel per mesial or distal surface as a safe procedure. This represents .5 mm per contact for 2.5 mm of total space to be gained between the cuspids. In terms of safety, hand-held or motor-driven abrasive strips are preferred for reproximation, but care still must be taken to avoid trauma to the gingiva. Surfaces prepared with coarse abrasive products should always be finished with finer grades.

It is advantageous to complete reproximation during one appointment, as a thickness gauge can verify each interproximal space opened. For example, the flat end of a periodontal probe (Hu-Friedly; Chicago, IL) measures approximately .25 mm at the 1–3 mm portion and .5 mm at the 7–9 mm portion. Alternatively, a leaf gauge (Great Lakes Orthodontics, Ltd.; Tonawanda, NY) used in occlusal registration procedures has individual plastic strips that are .125 mm in thickness. The most precise amount of enamel removed is made by reducing one proximal surface at a time with a single-sided abrasive strip.

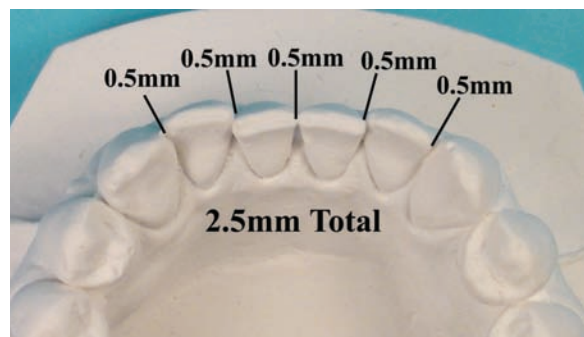
The clinician should be aware that as the degree of crowding and overlap increases, the contact is skewed to the labial or lingual enamel surfaces.

Therefore, a single or double-sided abrasive instrument is not initially indicated since enamel would not be removed at the most mesial or distal tooth surfaces. As teeth align (derotate) with aligner wear, reproximation is then appropriate.

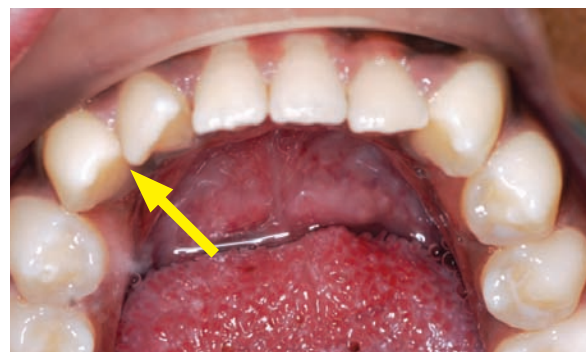
Reproximation over multiple appointments also can be an option. First, the thickness of the strip must be accurately measured with a micrometer. Interproximal enamel is removed until the strip passes with minimal binding. This represents the approximate strip thickness and space opened. For example, Compo-Strip® (Great Lakes Orthodontics, Ltd.; Tonawanda, NY) single-sided coarse diamond strips (blue) measure 0.14 mm in thickness. Reduction of five anterior contacts distributed evenly between the mesial and distal contacts thus removes 0.7 mm of enamel per appointment. The amount of enamel removed should be recorded at every appointment in the treatment chart.

Abrasive discs in a low-speed handpiece permit faster removal but present an increased risk of soft tissue injury. Also, these enamel surfaces must be further contoured and finished by hand with flexible strips. An in-office topical fluoride rinse is recommended following any enamel reduction procedure.

A distinction should be noted between the preceding procedures to resolve minor anterior crowding and another space-gaining method known as *air-rotor stripping*. The latter technique removes up to 9 mm of enamel (6.4 mm from the posterior contacts) with a high-speed handpiece in comprehensive orthodontic treatment with fixed or removable appliances.



A **maximum** of 0.5 mm interproximal reduction per contact is recommended. Therefore, a total of 2.5 mm of tooth-size reduction is possible from cuspids to cuspids.

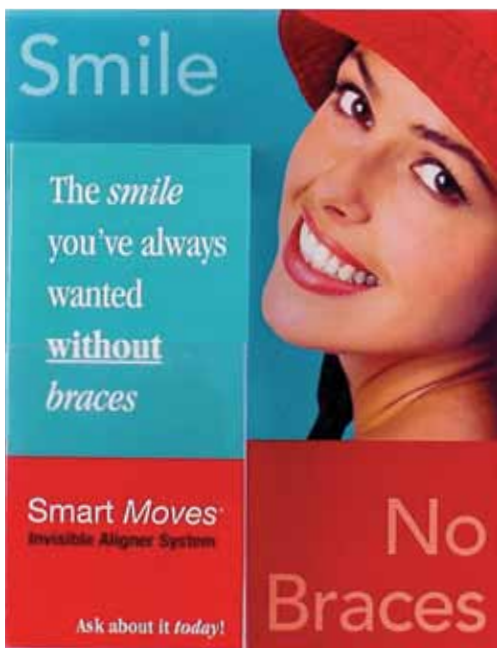


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on Compo-Strips® or
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