

## **PALATE WIDENING APPLIANCE**

The palate widening appliance is a custom made appliance to expand the upper arch or roof of the mouth. The reasons to widen the arch are as follows:

1. By widening the upper arch, the upper teeth will better align with the lower teeth giving the patient a better bite.
2. Widening the palate can make more room for crowded teeth and create space for the teeth to be straightened with braces.

When the appliance has been bonded or cemented to the teeth the appliance will be activated. This is done twice daily by turning it with a special key, once in the morning and once in the evening, unless otherwise instructed.

The expanding action of the appliance will separate the elastic membrane and bone in the center of the palate. Once the palate has been expanded new bone tissue will fill that space. The upper arch can usually be expanded sufficiently in 15 to 20 days, however the appliance will remain in the mouth for a minimum of six months. This allows new bone to be generated in the expanded arch and for the stretched soft tissue of the roof of the mouth to relax. Once the turning of the appliance is started, a space will develop between the two front teeth. This is normal and to be expected. Once instructed to stop turning the appliance, this space will gradually close over a period of a few days or weeks.

You will experience pressure and discomfort after the first turn. The discomfort will increase after each turning of the appliance for approximately the first four to five turns, then will continue to be quite uncomfortable for the first four to five days. After approximately five days the discomfort will start to decrease. The discomfort is caused by the initial loosening and drawing apart of the bone in the roof of your mouth. Once this has occurred then you will experience very little discomfort when the appliance is turned. Tingling sensation at the bridge of the nose is not uncommon at the beginning of appliance wear. If there is a history of headaches, the appliance may aggravate this situation. Medication used at home for aches and pains may be taken. Also the pressure at the initial turning of the appliance may cause a tingling or an itch under the appliance.

**If at any time during appliance wear, you develop a sore spot under the appliance, stop turning the appliance and contact the office to arrange an appointment.**

### **To Activate the Appliance**

1. Be sure to loop the wire attached to the key around your finger. This is an important precaution against swallowing the key.

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2. Carefully insert the key into the hole in the middle bar of the appliance.
3. Gently and steadily push the key from the front toward the back of the mouth. Do not back up. The key must be pushed as far back as possible to bring the next hole into place. Remove the key toward the back of the throat.
4. Regardless of the number of times you are instructed to turn the appliance each day, the number of turns should be completed by bedtime.

### **Food Precautions**

There are some food limitations while wearing this appliance. There are also important restrictions on the types of foods that can be safely eaten. These precautions are to prevent insoluble foods from being trapped under the appliance and causing an infection.

- \* do not eat nuts, popcorn and any seedy foods such as sesame and poppy seeds, cucumbers, tomatoes strawberries and raspberries.
- \* do not eat sticky or gooey foods, these foods may loosen the appliance or get caught around the screw apparatus.

### **Oral Hygiene**

You will be instructed on how to clean your appliance and will be given some useful tools in order to complete this task. You should clean under your appliance at least twice a day to remove trapped food and bacteria.

### **After the Widening is Completed**

Be patient, the space between the front teeth will naturally close on its own after the appliance is no longer turned.

Headgear or night brace may be recommended. This will be worn along with your appliance after the widening is completed. The headgear is intended to make more space or hold the upper jaw from growing forward as the bite improves.

Once the appliance is removed it is replaced by a removable appliance. This is to hold the space open that has been created and resist the elastic rebound of the soft tissue of the palate. If you have braces placed, the appliance will be worn along with the braces. The removable appliance must be worn 24 hours a day until instructed by Dr. McSweeney to stop wearing.

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## HERBST APPLIANCE

Your son/daughter has been fitted with a herbst appliance. The purpose of the herbst appliance is to move the lower jaw forward into better alignment with the upper jaw. The appliance has three parts, an upper and lower appliance and hardware. The appliances are cemented to the biting surface of the top and bottom teeth. The hardware is then placed to move the lower jaw forward. This appliance requires approximately six to eight months of wear to be effective. Appointments will range from five to eight weeks apart.

It will require a few days to become accustomed to the appliance. Some mild discomfort may be experienced for the first few days. The area where the hardware is attached to the appliance may cause some irritation in the mouth. Orthodontic wax may be required to cover the screws on the lower appliance. Use the wax during the day but remove at night so your cheeks have a chance to toughen-up. Salt-water rinses and/or peroxyd may also be used to help in the healing process. There will be an increase of saliva production, since the mouth thinks the appliance is food; this will decrease in time. Speaking may be difficult the first few days. To practice speaking properly, read a book out loud at home.

Oral hygiene is very important to prevent food from becoming trapped under the edges of the appliance. The foods to avoid are the seedy and gooey foods such as nuts, strawberries, raspberries, toffee, jujubes etc. Your son/daughter has been supplied with a syringe and toothbrush. The syringe is used to flush the trapped particles out from around the appliance. Good tooth brushing is important also, remembering to brush the gums when brushing the teeth. Appointments with your regular family dentist should continue even while under the care of Dr. McSweeney.

Breakage can occur with this appliance. If the appliance loosens from the teeth, please call the office to arrange an appointment to repair the appliance.

Once this phase one of treatment is completed, assessment will be made for the continuation of this phase with another type of appliance or to enter a second phase of treatment consisting of braces.

Desktop 3/Instr. for Herbst Appl.

### **FUNCTIONAL APPLIANCE**

Your son/daughter has been fitted with a functional appliance (twin block or bionator). The purpose of this functional appliance is to move the lower jaw into better alignment with the upper jaw and to draw the upper front teeth back. The functional appliance requires approximately eight to twelve months of wear to be effective.

The functional appliance is worn twenty-four hours a day, seven days a week. The appliance should only be taken out for: eating, sports, brushing the appliance and teeth. Some discomfort may be experienced for the first few days. There will be an increase of saliva production, since the mouth thinks the appliance is food, however this will decrease over time. Speaking may be difficult the first few days. To help with speech, it is best to read a book out loud at home. Appointments will range from five to eight weeks apart.

Oral hygiene is very important. The appliance needs to be brushed with a toothbrush and toothpaste every day. In the morning after waking up is a good time to do this. As recommended for good daily oral hygiene, the teeth are brushed after every meal. Appointments with your regular family dentist should continue even while under the care of Dr. McSweeney.

A night brace may be recommended to wear along with the functional appliance during the evening and sleeping. An additional instruction sheet will be given at that time.

Breakage can occur with this appliance. One of the wires may pull away from the appliance or the acrylic may crack or chip. Please call the office and the staff will arrange with you the necessary appointments to repair or adjust the appliance. If the original mold is not useable for a repair, an impression needs to be taken.

Once this phase of treatment is completed, additional orthodontic work may be required. The next phase of treatment will be discussed prior to proceeding.

## **INSTRUCTIONS FOLLOWING REMOVAL OF BONDED APPLIANCES**

There are two appliances that Dr. McSweeney cements to the biting surface of the teeth. The expansion appliance (RPE) is placed on only the upper teeth, and the Herbst appliance is placed on both your upper and lower teeth.

### **EXPANSION APPLIANCE**

The widening appliance, which has been covering the roof of your mouth for a period of six months has not allowed the tissues to breathe and may leave the tissues irritated. In the few days with regular warm salt water rinsing, your palate will quickly heal up the somewhat swollen gums. You may experience minimal bleeding and sore tissue.

### **HERBST APPLIANCE**

The herbst appliance may cause irritation along the gum line and palate, therefore when the appliance is removed, your gum line will be irritated and you may experience some bleeding when you brush your teeth, which is normal. With the use of warm salt water rinses the irritated gum line and palate will heal.

### **ORAL HYGIENE CARE ONCE YOUR BONDED APPLIANCE IS REMOVED**

To help with the healing, rinse often for the first week with warm salt water. Stir a teaspoon of salt into a glass of warm water and swish around your mouth for approximately one minute.

Be careful with hot foods and drinks for the next few days (temperature hot and spicy hot). Sometimes acidic foods and drinks will be irritating to the healing tissues. Hard and crunchy foods might poke into the gums so they should be avoided for a few days (hard foods – crusty breads and rolls, crisp French fries, sharp chips like Dorito's and popcorn).

You may now brush your teeth normally, being gentle along the gum line until your gum tissue is no longer irritated.

Once again, please be assured the irritated tissues in your mouth will heal up very quickly.