



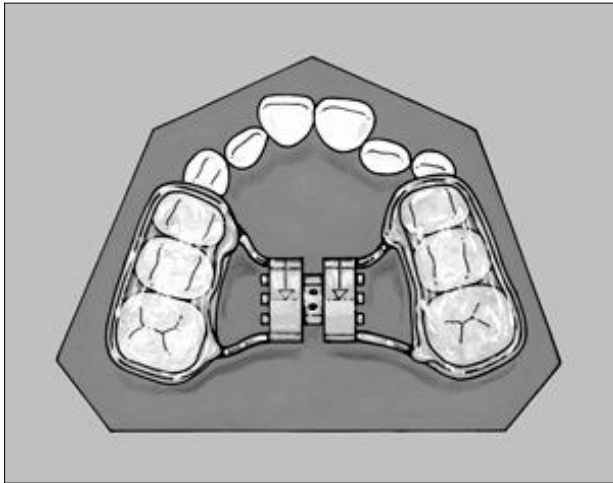
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## **RAPID PALATAL EXPANDER**

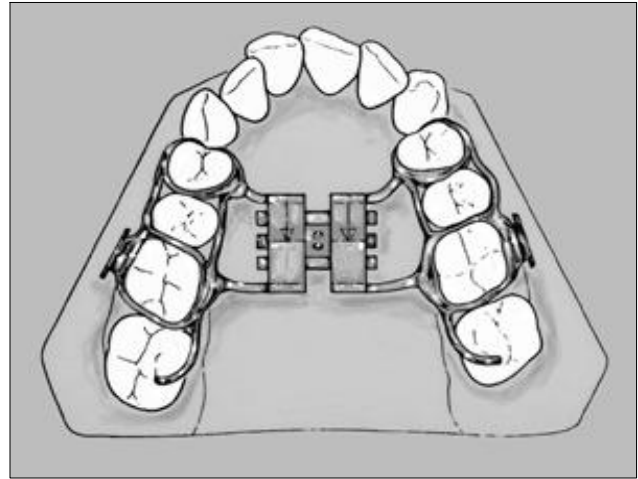
You have (or your child has) received a rapid palatal expander. This appliance orthopedically widens the upper jaw by separating the suture in the middle of the palate. This procedure also allows for the creation of more space for erupting teeth.

There are two types of expanders. The first is a **BONDED** expander. This appliance is bonded (or glued) to the posterior teeth. This bonded expander not only covers the outside and inside edges of the posterior teeth, but also covers the biting surfaces of the back teeth. **Thus, it is normal for the front teeth not to hit as they did before the appliance was placed.**

The second type of expander is a **BANDED** type. In adolescent patients or adults whose permanent teeth have erupted, the appliance is fixed to the first bicuspid and first molars by the use of orthodontic bands. Both of these appliances transmit the force of the jackscrew through the teeth to the underlying bony support.



***Bonded Acrylic Expander***



***Banded Hyrax Expander***

The first day or two is the **breaking-in period** and will be the most challenging. Initially the patient may feel frustrated. We have found that with patience, encouragement, and a positive attitude the patient will quickly adapt. The following are some helpful ideas that will ease this adjustment period.

Some **tooth tenderness is normal** and can be relieved by taking ibuprofen (Advil, Motrin) or Tylenol. Speech and eating difficulties usually are resolved within 24 to 72 hours. A helpful tip is to have the patient read out loud for a few days until speech improves.

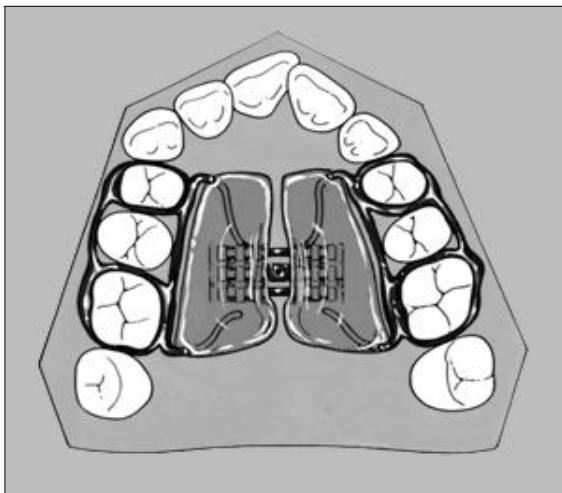
Because **the patient's teeth don't meet as they did prior to appliance placement**, eating may be a challenge for a short time. It is common for the patient to feel like they are only hitting on a few teeth, or that one side has more contact than the other. This "splinting effect" is actually beneficial to reaching the goal of treatment. You will find that with each turn of the appliance, the patient's bite will continually change. **As long as the patient is assured this is normal, regular eating habits can be adapted within a very short time.** It is helpful to eat softer foods for the first meal or two until the patient has grown accustomed to this new feeling. Initially, a cold treat of ice cream or popsicles may relieve some symptoms and help the patient become accustomed to eating with the appliance in place. This should not become a habit, however, due to the high sugar content. We suggest nutritious dishes like pasta (macaroni and cheese, spaghetti, casseroles), soup, cereal, fish, applesauce and yogurt. Within a few days, the patient should be able to eat almost anything allowed on the "Brace Watchers Diet".

During meals, **food may accumulate between the roof of the mouth and the appliance.** It is best to finish the meal or snack first, then dislodge the food by **swishing around** a mouth full of your drink. It is important to use the "swish and swallow" method. *Trying to suck the material from the appliance may cause the food particles to become lodged in the lungs. This could lead to a serious lung infection.*

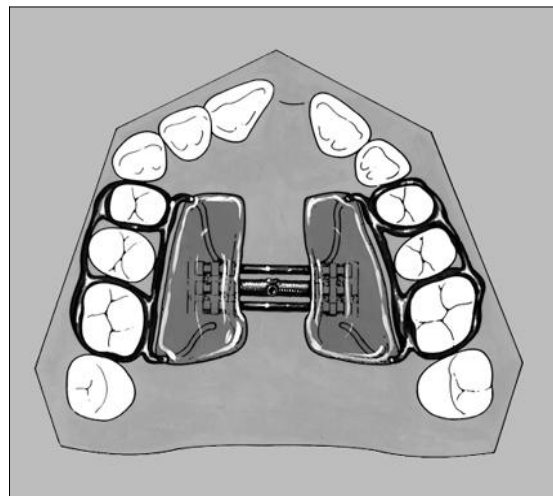
It is very important that the space between the appliance and the **roof of the mouth be cleansed** thoroughly each day. Some people have found a WATER PIK to be useful, if additional help is needed. If food particles remain under the appliance, they may become a source of irritation to the roof of the mouth that will become uncomfortable for the patient. In extreme circumstances, infections may result.

Today we have reviewed **toothbrushing instructions.** Please pay particular attention to the margin where the appliance meets the gums on the cheek side and the tongue side. Improper brushing can leave heavy plaque buildup, which will cause gingivitis. If you notice the gums are bleeding, especially during brushing, this is a sign of gingivitis. This can be eliminated within two to four days with adequate plaque removal when brushing.

**If the appliance becomes loose or if there is pain or extreme breath odor, call the office immediately.** If the patient thinks that the appliance feels loose, even though it is not visibly evident, please call the office. The patient should be seen within the next few days.



*Haas Banded Expander  
Pre-Expansion*



*Haas Banded Expander  
Post-Expansion*

The appliance is to be activated once per day, usually at bedtime. You have been given a special key for activating the appliance. The key is a piece of wire attached to a long acrylic handle. The appliance is activated in the following manner:

1. The patient should lie on a **flat surface**, such as a bed. It is helpful if there is a source of light, such as a reading light, available so that the inside of the mouth can be illuminated. Ask the patient to raise their chin up toward the ceiling, and open wide, for better access.
2. The appliance is activated by inserting the key into the **hole at the midline** of the appliance. The key is rotated downward and backward as the key moves toward the throat. The key should be pushed posteriorly until the next hole in the expansion screw becomes visible.
3. The key should be removed from the appliance by pushing downward and slightly inward on the handle. ***Do not deactivate the appliance by pulling the key anteriorly as you remove it from the appliance and make certain that you have finished the turn or you will not be able to find the next hole at the time of your next turn.***

***If you cannot find the hole at the time of the next turn, or insert your key into the next hole, it means you did not complete the last turn. You may try to reinsert the key in the hole of the last turn to complete this turn. This is somewhat difficult, so if you are unable to complete the turn, please contact our office and we will schedule the patient for a quick visit to complete this turn.***

4. During and immediately following the activation of the appliance, some **pressure** may be experienced by the patient at the bridge of the nose, in the region of the cheeks, or between the front teeth. This feeling of pressure is to be expected as the appliance is activated.
5. After about one week of activation, **a space usually opens between the two upper front teeth**. The appearance of the space is an excellent indication that treatment is progressing as expected. The space will continue to increase with subsequent activations. Occasionally, these front teeth will become slightly mobile and sensitive. This will subside within a short period of time. Discomfort can be relieved by taking ibuprofen (Advil) or Tylenol.
6. After activation of the appliance has been discontinued, ***there will be a gradual closure of the midline space spontaneously***. The upper front teeth will tend to drift and tip together. This closure of the space is to be expected, because the fibers that connect the teeth have been stretched, and the teeth will move together on their own. The closure of the space is not a sign that the treatment is relapsing.

During the time of activation of the appliance, ***it is very important that the patient is seen every four to six weeks***. If for some reason the patient misses an appointment, *expanding the appliance should be discontinued until the patient is seen*. ***In that case, please call the office promptly to reschedule.***

**At each appliance-check appointment, the doctor will tell you how many more turns are needed.** Turns are to be done once per day until you have reached that number. At that point, stop your turns until the patient is seen again. At the following appointment, the doctor will tell you if more turns are needed. The appliance has the capability of approximately 50 turns, although that much activation is rarely needed. Each turn yields approximately  $\frac{1}{4}$  of a millimeter of activation to the appliance.

If you have any questions about any aspect of treatment, please call the office. We are happy to help.