American Association of Orthodontists

ABOUT ORTHODONTICS

1. **Why should children have an orthodontic screening no later than age 7?** By age 7, enough permanent teeth have come in and enough jaw growth has occurred that the dentist or orthodontist can identify current problems, anticipate future problems and alleviate parents' concerns if all seems normal. The first permanent molars and incisors have usually come in by age 7, and crossbites, crowding and developing injury-prone dental protrusions can be evaluated. Any ongoing finger sucking or other oral habits can be assessed at this time also.

   Some signs or habits that may indicate the need for an early orthodontic examination are:

   - early or late loss of baby teeth,
   - difficulty in chewing or biting,
   - mouth breathing,
   - thumb sucking,
   - finger sucking,
   - crowding, misplaced or blocked out teeth,
   - jaws that shift or make sounds,
   - biting the cheek or roof of the mouth,
   - teeth that meet abnormally or not at all, and
   - jaws and teeth that are out of proportion to the rest of the face.

   An orthodontic screening no later than age 7 enables the orthodontist to detect and evaluate problems (if any), advise if treatment will be necessary, and determine the best time for that patient to be treated.

2. **What are the benefits of early treatment?** For those patients who have clear indications for early orthodontic intervention, early treatment presents and opportunity to:

   - guide the growth of the jaw,
   - regulate the width of the upper and lower dental arches (the arch-shaped jaw
   - bone that supports the teeth),
   - guide incoming permanent teeth into desirable positions,
   - lower risk of trauma (accidents) to protruded upper incisors (front teeth),
   - correct harmful oral habits such as thumb or finger sucking,
   - reduce or eliminate abnormal swallowing or speech problems,
   - improve personal appearance and self-esteem,
   - potentially simplify and/or shorten treatment time for later corrective orthodontics,
   - reduce likelihood of impacted permanent teeth (teeth that should have come in but have not, and
   - preserve or gain space for permanent teeth that are coming in.

3. **What is a space maintainer?** Baby molar teeth, also known as primary molar teeth, hold needed space for permanent teeth that will come in later. When a baby molar tooth is lost, an orthodontic device with a fixed wire is usually put between teeth to hold the space for the permanent tooth, which will come in later.

4. **Why do baby teeth sometimes need to be pulled?** Pulling baby teeth may be necessary to allow severely crowded permanent teeth to come in at a normal time in a reasonably normal location. If the teeth are severely crowded, it may be clear that some unerupted permanent teeth (usually the canine teeth) will either remain impacted (teeth that should have come in, but have not), or come in to a highly undesirable position. To allow severely crowded teeth to move on their own into much more desirable positions, sequential removal of baby teeth and permanent teeth (usually first premolars) can dramatically improve a severe crowding problem. This sequential extraction of teeth, called serial extraction, is typically followed by comprehensive orthodontic treatment after tooth eruption has improved as much as it can on its own.

   After all the permanent teeth have come in, the pulling of permanent teeth may be necessary to correct crowding or to make space for necessary tooth movement to correct a bite problem. Proper extraction of teeth during orthodontic treatment should leave the patient with both excellent function and a pleasing look.

5. **How can a child's growth affect orthodontic treatment?** Orthodontic treatment and a child's growth can complement each other. A common orthodontic problem to treat is protrusion of the upper front teeth ahead of the lower front teeth. Quite often this problem is due to the lower jaw being shorter than the upper jaw. While the upper and lower jaws are still growing, orthodontic appliances can be used to help the growth of the lower jaw catch up to the growth of the upper jaw. Abnormal swallowing may be eliminated. A severe jaw length discrepancy, which can be treated quite well in a growing child, might very well require corrective surgery if left untreated until a period of slow or no jaw growth. Children who may have problems with the width or length of their jaws should be evaluated for treatment no later than age 10 for girls and age 12 for boys. The AAO recommends that all children have an orthodontic screening no later than age 7 as growth-related problems may be identified at this time.

6. **What kinds of orthodontic appliances are typically used to correct jaw-growth problems?** Correcting jaw-growth problems is done by the process of dentofacial orthopedics. Some of the more common orthopedic appliances used by orthodontists today that help the length of the upper and lower jaws become more compatible include:

   Headgear: This appliance applies pressure to the upper teeth and upper jaw to guide the rate and direction of upper jaw growth and upper tooth eruption. The headgear may be removed by the patient and is usually worn 10 to 12 hours per day.

   Herbst: The Herbst appliance is usually fixed to the upper and lower molar teeth and may not be removed by the patient. By holding the lower jaw forward and influencing jaw growth and tooth positions, the Herbst appliance can help correct severe protrusion of the upper teeth.

   Bionator: This removable appliance holds the lower jaw forward and guides eruption of the teeth into a more desirable bite while helping the upper and lower jaws to grow in

proportion with each other. Patient compliance in wearing this appliance is essential for successful improvement.

Palatal Expansion Appliance: A child's upper jaw may also be too narrow for the upper teeth to fit properly with the lower teeth (a crossbite). When this occurs, a palatal expansion appliance can be fixed to the upper back teeth. This appliance can markedly expand the width of the upper jaw.

The decision about when and which of these or other appliances to use for orthopedic correction is based on each individual patient's problem. Patient cooperation and the experience of the treating orthodontist are critical elements in success of dentofacial orthopedic treatment.

7. **I've just heard about the Herbst appliance. How could it help my son who has an underdeveloped lower jaw?** For patients who have an underdeveloped lower jaw, it is important to begin orthodontic treatment several years before the lower jaw ceases to grow. One method of correcting an underdeveloped jaw uses an orthodontic appliance that repositions the lower jaw. These appliances influence the jaw muscles to work in a way that may improve forward development of the lower jaw. There are many appliances used by orthodontists today to treat underdeveloped lower jaws – such as the Frankel, headgears, Activator, Twin Block, bionator and Herbst appliances. Some are fixed (cemented to the teeth) and some are removable. You and your orthodontist can discuss which appliance is best for your child.

8. **Can my child play sports while wearing braces?** Yes. Wearing a protective mouth guard is advised while playing any contact sports. Your orthodontist can recommend a specific mouth guard.

9. **Will my braces interfere with playing musical instruments?** Playing wind or brass instruments, such as the trumpet, will clearly require some adaptation to braces. With practice and a period of adjustment, braces typically do not interfere with the playing of musical instruments.

10. **Why does orthodontic treatment time sometimes last longer than anticipated?** Estimates of treatment time can only be that – estimates. Patients grow at different rates and will respond in their own ways to orthodontic treatment. The orthodontist has specific treatment goals in mind, and will usually continue treatment until these goals are achieved. Patient cooperation, however, is the single best predictor of staying on time with treatment. Patients who cooperate by wearing rubber bands, headgear or other needed appliances as directed, while taking care not to damage appliances, will most often lead to on-time and excellent treatment results.

11. **Why are retainers needed after orthodontic treatment?** After braces are removed, the teeth can shift out of position if they are not stabilized. Retainers provide that stabilization. They are designed to hold teeth in their corrected, ideal positions until the bones and gums adapt to the treatment changes. Wearing retainers exactly as instructed is the best insurance that the treatment improvements last for a lifetime.

12. **Will my child's tooth alignment change later?** Studies have shown that as people age, their teeth may shift. This variable pattern of gradual shifting, called maturational change, probably slows down after the early 20s, but still continues to a degree throughout life for

most people. Even children whose teeth developed into ideal alignment and bite without treatment may develop orthodontic problems as adults. The most common maturational change is crowding of the lower incisor (front) teeth. Wearing retainers as instructed after orthodontic treatment will stabilize the correction. Beyond the period of full-time retainer wear, nighttime retainer wear can prevent maturational shifting of the teeth.

13. **What about the wisdom teeth (third molars) – should they be removed?** In about three out of four cases where teeth have not been removed during orthodontic treatment, there are good reasons to have the wisdom teeth removed, usually when a person reaches his or her mid-to-late-teen years. Careful studies have shown, however, that wisdom teeth do not cause or contribute to the progressive crowding of lower incisor teeth that can develop in the late teen years and beyond. Your orthodontist, in consultation with your family dentist, can determine what is right for you.
