

Mom, What Does An Orthodontist Do?

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The mind of a child is as tender and as lovely as the petals of a full blown rose
Beware how you touch it
Meet it with the reverence of your being
Use it with gentle respect and fill it with the honey of love,
the perfume of faith and the tenderness of tolerance
Thus shall you fulfill the mission of your life

Those words of Edmund H. Wuerpel were written by one of the founders of modern-day orthodontics and appeared in the very first issue of a journal called *The Angle Orthodontist* in 1931. They hold as true today as they did for Dr. Wuerpel so many years ago. As orthodontists, we are among the select group of health care providers who really can "touch" the mind of a child. We generally begin to see your child at 6 or 7 years of age and continue to monitor the growth and development of your child's head, jaws and teeth for many years beyond that, seeing your child every 6 to 10 weeks, intervening at the appropriate times and all the while getting to know him or her as though he or she were our own.

In this article, we are going to look at just exactly what it is that an orthodontist does! That astonishing array of pliers and wires in the orthodontic office really does have a purpose -- they are not just decorative accents! We'll look at the causes (etiology) of bad bites, crooked teeth and poor jaw growth; we'll look at the scope of orthodontic treatment and finally look at the process of treatment and what you can expect when you visit your orthodontist.

Causes, or Etiology, of Malocclusions

"Malocclusion" literally means bad bite. Orthodontics, however, is not confined to only the teeth, but also to all the structures that make up the head and neck. Rather than having a specific "cause", as do some diseases, malocclusions are usually a variation in the normal growth of the bones of the face. Etiologic factors contribute to malocclusions, rather than simply cause them. Some of the more important factors are heredity, developmental defects, trauma, habits and diseases.

(1) Heredity

Very little is understood concerning the specific role genes play in the growing facial skeleton. We all recognize when we have inherited Dad's receding chin, Mom's crooked teeth or Aunt Mary's missing teeth but the precise mode of transmission is poorly understood.

(2) Developmental Defects

Developmental defects in the growth of the head and neck such as cleft lip and/or palate, Crouzon's syndrome, hemifacial microsomia, etc., will all lead to malocclusions.

(3) Trauma

Both prenatal trauma to the fetus and injuries after birth may result in dentofacial deformity. Examples of prenatal trauma would be:

- Under-development of the lower jaw can be caused by intrauterine pressure or trauma during delivery
- Asymmetry of the growth of the bones of the face can be caused by undue pressure from a knee or a leg while still in the womb.

Examples of postnatal trauma would be:

- Fractures of the jaws and teeth
- Trauma to the joint between the lower jaw and the base of the skull (temporomandibular joint) will impair growth and function of the lower jaw, leading to asymmetry of the face and/or temporomandibular dysfunction.

(4) Habits

Habits such as thumb-sucking, finger-sucking, tongue-thrusting, lip-sucking or lip-biting and habitual sucking of pencils, pacifiers, or other hard objects have very harmful effects on the development of the face, mouth and teeth. Continuing such sucking habits beyond kindergarten age will almost always lead to the need for orthodontic treatment.

(5) Diseases

Diseases such as chronically enlarged tonsils and adenoids (causing habitual mouth breathing), gum disease, tumors, dental decay, early loss of the baby teeth and the presence of extra (supernumerary) teeth will all have a direct bearing on the type of malocclusion found.

The Scope of Orthodontic Treatment

The practice of orthodontics deals directly and indirectly with the following:

- Correcting and preventing disharmonies of growth between the upper and lower jaws
- Guiding the development and ultimate position of the teeth
- Eliminating any impairment of chewing ability caused by the malocclusion
- Reducing the susceptibility to dental decay and gum disease caused by crowding of the teeth
- Eliminating harmful habits
- Improving appearance of the face and mouth area
- Correcting temporomandibular joint abnormalities

The Process of Orthodontic Treatment

The American Association of Orthodontists recommends that your child be examined by an orthodontist at 7 years of age, and as early as 3 years of age if there is an obvious "overbite or underbite." Treatment at this age is known as "Phase 1 or Early Interceptive Treatment." What

we're looking for at this visit is to ensure that the bones of the face are growing harmoniously with one another both in width and in length, that there is enough room in your child's mouth for both baby and permanent teeth and that there are no persistent habits which will destroy the natural harmony between the facial bones, muscles and teeth. You have all heard of the expression that "an ounce of prevention is worth a pound of cure." Nowhere is this more true than in the field of orthodontics. Seeing and treating your child at this age allows us to use your child's own, natural growth to correct any discrepancy. Orthodontic treatment at this stage is not concerned with moving teeth, but rather with moving bones (that's why fully trained orthodontists are known as Orthodontists and Dentofacial Orthopaedists). What we're doing at this early stage is:

- Redirecting the growth of, and repositioning, the jaws. This ensures that the further growth and development of your child's facial skeleton will allow the jaws and teeth to grow more harmoniously.
- Creating enough room in your child's mouth so that all the permanent teeth will fit in, thus avoiding the need for extraction of permanent teeth later on.
- Eliminating any persistent habits which are affecting the normal growth of the jaws and teeth.

Successful Phase 1 therapy will greatly reduce the extent of, and sometimes even eliminate the need for, more traditional orthodontic treatment with braces at a later age when all the permanent teeth have come in. It is particularly comforting for parents to know that early treatment in the growing years will usually prevent the need for orthognathic surgery (surgery on one or both of the jaws) as an adult, in cases of severe jaw disharmony.

Your child will be monitored closely throughout the growing years as he or she loses baby teeth and gets permanent teeth. At the appropriate time (usually around 10-11 years of age), your child may need braces. And what fun it is to have braces nowadays! They come in all sorts of colors -- children leave our office with rainbow mouths, color coordinated expanders or lip-bumpers and glow-in-the-dark retainers! And for those patients who prefer a more subtle way to move their teeth, we have invisible braces which go on the inside of the top and bottom teeth or Invisalign, a series of clear aligners which can guide the teeth into their correct positions.

As you can see, we really develop long-lasting relationships in the orthodontic office. Our patients become our friends -- we, as orthodontists, have the unique opportunity to truly make a difference in your child's life. I wouldn't change my profession for the world!

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