

# Smiles with Style

{ How we'll get there }



**HILLIARD  
ORTHODONTICS**  
*Orthodontic Specialists*

# ORTHODONTICS

## Orthodontic Treatment for All Ages

It's never too late or too early to think about orthodontics. Whether your child is just starting school or graduating from college, or if you are considering orthodontic treatment for yourself, the information contained in this book will help give a gift that lasts a lifetime: a beautiful smile.



**Keith Hilliard, D.M.D., P.A.**  
Orthodontic Specialist

330 East Highland Drive  
Lakeland, FL 33813  
(863) 644-0430

6430 Pearce Road  
Lakeland, FL 33809  
(863) 859-3581

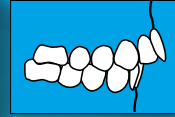
**R**est assured that when you and your family see Dr. Keith Hilliard, you'll get the most advanced, most caring orthodontic treatment possible. He has helped Lakeland area residents achieve their goals of better oral health, improved facial appearance and higher self-esteem for over 20 years.

A native Floridian, Dr. Hilliard graduated from the University of South Florida. He graduated with honors from the University of Kentucky College of Dentistry and received his Certificate in Orthodontics from the Orthodontic Specialist graduate program at the University of Alabama in Birmingham (UAB).

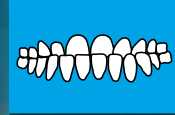
Dr. Hilliard is a nationally recognized lecturer, an inventor of orthodontic products and a leader in his local, state and regional dental and orthodontic specialty organizations. He is an active member of the American Association of Orthodontists, the Southern Association of Orthodontists and a past President of Polk County Dental Association.

**Visit us at: [www.drhilliard.com](http://www.drhilliard.com)**

## When is the Best Time to Begin Treatment?



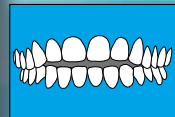
**OVERJET** Upper front teeth protrude



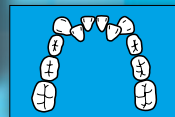
**UNDERBITE** Lower front teeth protrude



**DEEP BITE** Upper front teeth cover lower front teeth too much



**OPEN BITE** Back teeth are together with space between the front teeth



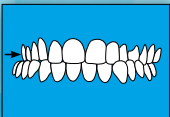
**CROWDING** Upper and/or lower teeth are crowded

Orthodontic treatment can be started on certain types of tooth problems before all permanent teeth have erupted. Early treatment, usually begun after the four permanent upper and lower front teeth have erupted (ages 7-9), is recommended when any of the problems illustrated on this page are apparent:

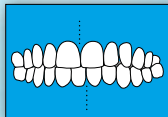
Note: Teeth renderings are for illustrative purposes only and may vary from actual tooth anatomy.

The advantages of early treatment include:

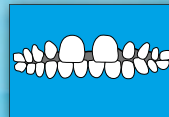
- Moving the front teeth back so they will be less susceptible to injury
- Improving the relationship of upper and lower jaws, allowing more normal future growth and development
- Using maximum advantage of growth for successful treatment
- Improving facial appearance and self-esteem
- Taking advantage of the good cooperation of patients at this age
- Possibly avoiding or reducing the need for further treatment when patients are older



**CROSSBITE**  
Upper back teeth fit inside lower teeth



**MID-LINE MISALIGNMENT**  
Mid-lines of upper and lower arches do not line up



**EXCESS SPACING**  
There is excess space between teeth



## Treatment Timing and Phases

Orthodontic treatment can be completed in one full-length treatment or broken into two separate treatment phases with a maintenance phase between the two. Please keep in mind that treatment times depend on several factors.

**Dr. Hilliard will review the treatment options with you and point out the advantages and disadvantages of pursuing a 2-phase program or a full treatment program.**



### FIRST PHASE

Treatment usually takes twelve to eighteen months (at 7 to 9 years of age) and a variety of appliances may be used to correct specific problems.

- **BRACES** - Placed on the upper and sometimes lower permanent teeth
- **HEADGEAR** - Worn to move the upper molars back
- **RAPID PALATAL EXPANDER** - Worn to widen the upper jaw
- **FACE MASK** - Worn to move the upper jaw and/or teeth forward
- **FUNCTIONAL APPLIANCE** - A removable “retainer” worn to redirect jaw growth



### MAINTENANCE PHASE

During the time between the first and second phase the patient will be seen approximately two times per year. The patient may wear a retainer during the Maintenance Phase.

### SECOND PHASE (if required)

During the first phase of treatment Dr. Hilliard has no control over 16 unerupted permanent teeth. If they grow in and problems still exist, further treatment will be required. A separate fee will be quoted at that time. Treatment usually takes twelve to twenty-four months at age 12 to 13 years.



### FULL TREATMENT

If you decide to wait, treatment will be started when all permanent teeth have erupted. Full treatment usually takes twenty to thirty months at 12 to 14 years of age. The length of treatment depends on several factors, including:

- Severity of the Problem
- Patient Cooperation
- Age of the Patient
- Consistency in Keeping Appointments



## Braces

**B**races, also known as brackets, are the most common appliance Dr. Hilliard uses to correct tooth problems. New dental technology has resulted in smaller, more comfortable and more efficient metal brackets such as those shown below. Less noticeable tooth-color or clear brackets made of ceramic or plastic are also shown.

Brackets are usually bonded to each tooth with an orthodontic adhesive. Molar brackets are sometimes bonded and sometimes attached to a band which is fitted to the specific anatomy of the tooth. The brackets are connected to each other by an arch wire and held in place by "O" rings (available in a variety of colors) or spring clips.



### ADDITIONAL APPLIANCES

In addition to braces, other appliances may be used during orthodontic treatment, including:

**RAPID PALATAL EXPANDER** - This special appliance widens the roof of the mouth, allowing room for crowded teeth to grow naturally, and/or expands the upper jaw to more closely fit the lower jaw.

**FUNCTIONAL APPLIANCE** - A "removable" retainer worn to redirect jaw growth.

**LINGUAL ARCH** - Fits on the inside of the lower teeth, from molar to molar, acting as a space maintainer.

**HERBST APPLIANCE** - A fixed functional appliance available in a variety of designs to achieve multifunctional treatment goals such as expansion, space opening or closure, or high angle open bite intrusion.

**HEADGEAR** - Typically worn to move the upper molars back or hold the upper jaw back, slowing its growth, while the lower jaw is free to grow forward.

**FACE MASK** - Used when the upper jaw and/or teeth need to be brought forward.



## Adolescent and Adult Treatment

Today, more than 30% of orthodontic patients are over 18 years old. Crooked teeth, improper bite, overcrowding and "buck teeth" are now being corrected in many people, regardless of age. The major difference between child and adult orthodontic treatment is that adult bones are no longer growing. This means that it may take a little longer for adult teeth to move into their correct position. In general, adult treatment takes between eighteen and thirty months.

Adolescents and adults have more choices than ever in creating a beautiful smile. From traditional braces to "invisible" braces, the number of effective and cosmetically pleasing treatment options is growing all the time.



# Adolescent and Adult Treatment

## Traditional Braces

Recent improvements in traditional braces have resulted in smaller, more efficient and less conspicuous brackets. Metal brackets are the most familiar, however clear and tooth-color ceramic and plastic brackets are now available. Their clear or natural color gives these brackets a less noticeable look.



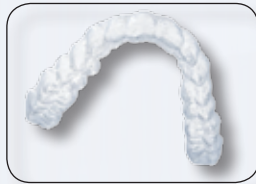
Metal Braces



"Clear" Braces

## Invisalign®

Invisalign is a popular treatment option that involves wearing a series of clear removable aligners that gradually move your teeth without wires or brackets.



Above photos courtesy of Align Technology, Inc.



Whole fruits and vegetables should be cooked or cut into small pieces



Do not suck on lemons, limes or ice.



Avoid drinks that contain sugar

## Foods to Avoid During Treatment

Eating proper foods, minimizing sugar intake and getting enough sleep are essential during orthodontic treatment. Your braces are precise appliances that can be damaged by eating hard foods. Some soft and sticky foods can cause tooth decay and loosen or dislodge your braces.



Use common sense when choosing food to put in your mouth and avoid chewing on hard objects such as pens and pencils.

### HARD FOODS TO AVOID INCLUDE:

- Hard Candy
- Corn Chips
- Popcorn
- Jerky
- Ice
- Nuts
- Pizza Crust
- Corn on the Cob
- Jolly Ranchers

### SOFT FOODS TO AVOID INCLUDE:

- Bubble Gum
- Gum (as directed by Dr. Hilliard)
- Starbursts
- Sugar Daddies
- Tootsie Rolls
- Gummy Bears
- Caramels
- Taffy
- Other chewy candies



## Proper Braces Care and Brushing Techniques

**B**rushing and flossing your teeth can be challenging when wearing braces but it is extremely important that you do both consistently.

Toothbrush bristles should be soft. Brush after every meal. If you cannot brush right away, rinse well with water.

### BRUSHING



Use a dry brush with a small amount of toothpaste. Place bristles where gums and teeth meet.



Brush the lower teeth up and the upper teeth down. Brush your tongue and the roof of your mouth too.



Use circular, vibrating motions around the gum lines, 10 seconds on each tooth.



Brush slowly, each arch separately, every tooth.



Special brushes can be used for hard-to-clean places.

### FLOSSING



Carefully pull unwaxed floss between wire and braces. A floss threader may be helpful.



Floss carefully around the braces.



Floss carefully around the gum area.



Floss carefully around each tooth.





## Retention

As soon as your treatment is complete and your braces are removed, you will be given retainers. Proper use of your retainer is essential to establish a stable tooth relationship and keep your smile looking beautiful. Retainers should always be worn as directed by Dr. Hilliard



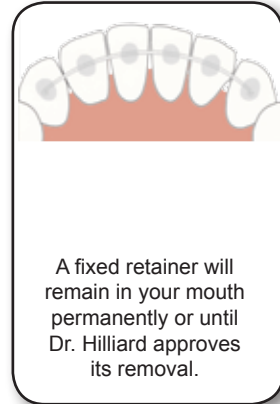
Removable  
Upper Retainer



Removable  
Upper and Lower  
Clear Retainers



Removable  
Lower Retainer



A fixed retainer will  
remain in your mouth  
permanently or until  
Dr. Hilliard approves  
its removal.

## Frequently Asked Questions

**Q:** What if the bands or brackets become loose?

**Answer:** The seal created by the cement has broken. Call Dr. Hilliard's office and schedule an appointment. If the band or bracket detaches from the wire, save it and take it with you to your next appointment.

**Q:** What if the archwire or headgear is broken, or a hook or ligature is lost?

**Answer:** These problems could cause the teeth to shift in the wrong direction and must be corrected as soon as possible. Call Dr. Hilliard's office and schedule an appointment.

**Q:** What if there is a wire sticking out and poking the mouth?

**Answer:** Try tucking it in with the eraser part of a pencil. If that doesn't work, dry it with a napkin and place wax over the tip of the wire to prevent further irritation. Wax can also be applied to a bracket or hook that is causing discomfort.

**Q:** What if the mouth feels sore?

**Answer:** To relieve soreness, rinse your mouth with warm salt water and/or take Advil or Tylenol as directed.

**Q:** What if my child plays sports?

**Answer:** Be sure to mention this to Dr. Hilliard.

**Q:** What if my child or I play a musical instrument?

**Answer:** Notify Dr. Hilliard if you play a wind instrument or a violin.

**Q:** Should I be taking any extra vitamins during treatment?

**Answer:** It is very important that you get enough Vitamin C during treatment as it helps restore and heal bone and maintain healthy gums. Check with Dr. Hilliard for help in determining which foods might provide enough Vitamin C or how much Vitamin C supplement you should take.

**Q:** What are the names of the different parts of the braces?



**Answer:**

1. BRACKET - The attachment bonded to the tooth or welded to the band
2. ARCHWIRE - A large removable wire that fits around the arch into the bracket slots
3. ELASTIC LIGATURE - Plastic ring that ties archwire into bracket or LIGATURE WIRE - Tiny wire that ties archwire into bracket
4. HOOKS - Used to attach elastics (rubber bands)
5. BAND - A ring of metal with the bracket attached that is glued onto the tooth

**Q:** What can I do to help insure the success of my orthodontic treatment?

**Answer:**

- Follow all instructions provided by Dr. Hilliard
- Keep your braces and other appliances spotlessly clean
- Wear elastics as required
- Keep appointments
- Keep your teeth clean by brushing and flossing as required
- Maintain a healthy diet

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