

# Advanced Cosmetic & Implant Dentistry

Kevin M. Landers, D.D.S. FAACD

## Informed Consent For Orthodontic Treatments

In the vast majority of orthodontic cases, significant improvements can be achieved. Orthodontic treatment remains an elective procedure. It, like any other treatment of the body, has some inherent risk and limitations. These factors should be considered in making the decision to undergo treatment. You are therefore urged to read the following information, ask us any questions, and then consent to our treating you. This is now a standard procedure in our office.

### Patient Cooperation

Patient cooperation is one of the most essential factors in determining whether treatment successful and is completed on time.

### To Help Achieve The Most Predictable And Successful Results Patients Must:

- Keep regularly scheduled appointments.
- Practice good oral hygiene, including brushing, flossing, etc.
- Wear orthodontic appliances & clear teeth aligners all the time unless you are eating or brushing and flossing your teeth
- Wear rubber bands (elastics) if necessary.
- Eat proper foods so as not to dislodge the braces (brackets, bands).
- Schedule in a timely fashion if braces, brackets come loose or break or if you loose clear teeth aligners or appliances
- Wear retainers after braces are removed.

### Review Functional And Parafunction Habits Lists From Our Office.

- Agree to make a strong effort to manage subconscious day time habits
- If the patient is grinding at night, agree to wear a grinding appliance at night.

Failure to follow instructions can lengthen the treatment time and can adversely affect the quality of the treatment results. In extreme circumstances, it could be necessary to discontinue orthodontic treatment.

### Tooth Movement During Treatment

During the course of orthodontic treatment most patients will notice that one or a few of their teeth seem to move in a non-ideal direction. In most cases this is normal and is a result of forces that are required for larger scale type movements. If you are concerned, take a few angles of the tooth or teeth in question and email the pictures to our office.

### Cavities, Swollen Gums, White Spots

Orthodontic appliances do not cause cavities or swollen gums, but because of their presence, food particles and dental plaque are more likely retained and create a higher potential for problems. Cavities, swollen gums and white spots (decalcification) can result from lack of brushing and flossing and poor oral hygiene, and need not occur if good oral hygiene procedures are closely followed. The permanent white lines (decalcification) that are sometimes visible around the area of the brackets signal the early stage of a cavity. Sugary foods and between meal snacks should be eliminated.

### Bracket Or Band Becomes Loose

For a Bracket Or Band Becomes Loose, or lost or broken Teeth Aligner Trays or orthodontic appliances, the patient must return to the office as soon as possible, otherwise the possibility for a cavity exists. Missed appointments or untimely scheduling could result in tooth damage due to undetected loose bands. The avoidance of chewing hard and sticky foods will keep bands and brackets from loosening.

## **During Orthodontic Treatment Patients Need Dental Cleanings At Least 2-3 Times Per Year**

In addition to regular monthly visits for orthodontic work, we suggest that orthodontic patients see our hygienist least 2-3 times per year for periodic examination and cleaning.

## **Periodontal problems – Gum inflammation, bleeding and periodontal disease**

Proper and regular flossing and brushing can usually prevent swollen, inflamed and bleeding gums. Periodontal disease can be caused by accumulation of plaque and debris around the teeth and gums but there are several unknown causes that can lead to progressive loss of supporting bone and recession of the gums. Should the condition become uncontrollable, orthodontic treatment may have to be discontinued short of completion, this would be rare, usually in adults with a pre-existing periodontal problem.

## **Loss Of Tooth Vitality**

Loss Of Tooth Vitality is usually related to a previous injury to the tooth or jaw and may even be a result of a large cavity or large filling in a tooth. An injured tooth can die over a period of time with or without orthodontic treatment. This tooth may flare up during orthodontic movement and would require root canal treatment. Discoloration of a non-vital tooth may be noticed after treatment has started or following appliance removal. Devitalization is seldom due to orthodontics. Loss of tooth vitality (nerve within the tooth dies) and tooth bone infections may not be detectable on Dental X-rays. If you have a history of tooth trauma or a tooth that appears slightly darker than contralateral tooth of the same shape, please let Dr Landers know. Tooth movement may exasperate a preexisting tooth problem and its unlikely but possible that teeth may discolor or darken after treatment.

If teeth darken you may need a Porcelain Veneer or Dental Crown to esthetically correct the problem. Current research suggests that properly treated asymptomatic root canal treated teeth will not have problems as a result of orthodontic treatments. But remember the dental x-rays do not always reveal dental infections at the tips of root canal treated teeth and for this reason patients with root canal treated teeth may have problems as a result of orthodontic movements.

## **Bite Problems During Orthodontic Treatments**

It's very common that your bite will feel different during and initially after orthodontic treatment. None the less, you should always let Dr Landers know if you are experiencing strong or uncomfortable contact with a just one or two teeth.

## **Root Resorption**

Progressive shortening of the roots of certain teeth may occur in some individuals and can occur with or without orthodontic treatment. Injury, impaction endocrine or idiopathic disorders can also be responsible. Under healthy conditions the shortened roots usually are no problem. This is a negative side effect that occurs rarely with fixed appliances or braces. Root shortening (root resorption) can be caused by trauma, injury, excessive forces, impaction of teeth, prolonged treatment and hormonal imbalances. Certain patients seem more predisposed to root resorption than others. No one seems to know exactly why, nor can one predict for certain when it will occur.

Slight root resorption usually presents no problems for patients who have normal root length and healthy gums and bone. If the patient has advanced gum disease with resultant loss of supporting bone, then root resorption could cause the tooth to be lost sooner.

In attempting to move impacted teeth especially cuspids, various problems are sometimes encountered which may lead to loss of the tooth, root resorption, or periodontal problems. The length of time required to move such a

---

tooth can vary considerably, occasionally twelve year molars may be trapped under crowns of six year molars consequently the removal of third molars may prove necessary.

## **Unfavorable Growth**

In the case of younger patients, the treatment plan will be determined on the anticipated amount and direction of facial growth. On occasion, the facial growth does not occur as predicted, and it may be necessary to recommend a change in treatment objectives and procedures. Abnormal growth is a biological process and is beyond the dentist's control. Most common is the lower jaw continues to grow forward after teeth are aligned and the lower teeth collide into the back of the upper teeth and create spaces between the top teeth. My philosophy is to treat problems early and non-surgically. Only in extreme cases will jaw surgery be necessary to correct the abnormal cranial facial growth patterns.

Growth patterns can be adversely affected by finger, thumb or tongue habits, persistent mouth breathing (abnormal breathing pattern) and may cause facial growth to occur in a more vertical direction.

## **Jaw Joint Problems (TMJ Or TMD)**

Some patients experience jaw joint (temporomandibular joint) problems prior to, during, and after orthodontic treatment. Usually multiple factors cause this condition. Some of the signs and symptoms of jaw joint (TMJ) dysfunction include headaches, neck aches, ear aches, dizziness, fainting, pain around the eyes, clicking jaw, popping noises, inability to open mouth wide, and in severe cases, pain and locking of the jaw.

Many people experience these symptoms independent of orthodontic treatment and some are even referred for orthodontic therapy to correct these conditions. Occasionally, a patient may experience some of the jaw joint symptoms during the movement of the teeth in orthodontic treatment, but most will subside after treatment is completed.

However, jaw joint problems are not all "bite" related, as tension and day and night time parafunctional oral habits appear to play a role in the frequency and severity of jaw joint pains. Current research suggests that day and nighttime parafunction is responsible for greater than 80% of TMJ problems. If you have had a history of jaw or facial trauma and experience TMJ problems during or after orthodontic treatment you will be referred to a specialists. The problems are more common in women and seem to get worse with age. In many cases, muscle spasms are the cause of the pain. The emotional state of the person predisposed to this problem is a factor and the symptoms may fluctuate with the emotional state of the individual.

During the records appointment, we attempt to determine the seriousness of the TMJ (jaw joint) problem and then try to minimize the signs and symptoms throughout the treatment. In some cases functional orthopedic appliances such as an expansion appliance, lower jaw advancement appliance (twin block, rick-a-nator), anterior sagittal appliance, etc. Are helpful in preventing or treating these problems.

## **Enamel Reduction & Tooth Reshaping**

Reshaping the teeth before, during, or after treatment may be recommended to provide room for alignment, improved appearance and occlusal bite stability.

Bite Adjustments before during and after treatments are often essential to balance bite forces and create a stable bite to decrease side effects after treatment.

Modern orthodontic treatment methods recognize the importance of reshaping crowded tooth so that the width of aligned teeth matches the existing individual's unique anatomical upper and lower bony arch form. As apposed to old treatment methods of forcing crowded teeth into alignment and ignoring unique bony arch formations. Forcing crowded teeth into alignment will lengthen the tooth supporting bone and may abnormally bend the bone. Or even thin the bone, as the roots are force out of the bony arch. Reshaping tooth structure will result in a more stable

tooth/ bone position and reduce the risk of creating bone defects under your gums. Additionally, if teeth are aligned to match the bony arch, there is a significantly less chance of post treatment crowding movement of the teeth.

This reshaping of the outer layers of enamel seldom presents a problem with enamel integrity. Enamel reshaping alone rarely if ever causes any post treatment sensitivity. Tooth root reshaping or shaping of the inner tooth layer under the tooth enamel, on the other hand, commonly will produce transient post treatment sensitivity. In other words, the sensitivity commonly goes away as the tooth re-mineralizes over time. In rare cases, permanent sensitivity may result. If your teeth are already very sensitive to hot and cold, you will more likely experience more post treatment sensitivity after root reshaping. If your teeth are sensitive hot/cold or sugary foods before treatment, you should always inform Dr Landers. There may be other reasons your teeth are sensitive like hidden cavities, food impaction, gum recession root exposure etc.

At our office, Dr Landers has over 25 years of experience reshaping tooth enamel and the roots of teeth. In many cases, this root reshaping is done in order to create space for proper anatomical growth of the gum tissues. Dentist in general reshape roots during restorative procedures for fillings with cavities, crowns, bridges, veneers, etc. While there is a common post treatment soreness of the gum tissues, and increased sensitivity of the roots, our patients have not experienced any long term or permanent sensitivity from tooth reshaping that was not correctable with professional desensitizers. Nonetheless, every case is different, and every patient is different. Permanent tooth sensitivity is a possible side effect of reshaping through the enamel, or tooth structure under enamel, or roots surfaces of teeth. And this risk of post treatment permanent sensitivity is a risk of all dental reshaping of tooth structure which includes any and all dental restorative procedures done by every dentist every single day.

In cases where tooth to tooth roots are too close to allow for natural formation of dental gum papilla or orthodontic treatments to correct "Canine substitution." Large Canines teeth in the anatomical position of the anatomically smaller lateral incisor teeth. The roots will need to be reshaped in order to allow for proper anatomical gum tissue formation and in order to look smaller like a lateral incisor tooth.

There are two conditions which may create space near the gums after orthodontic treatment is complete:

1. Bone loss (from gum disease or clinically hidden pretreatment Bony defects) and associated gum recession may contribute to the creation of small spaces between teeth near the gums called black triangles.
2. Tooth movement to untangle teeth that are crowded or overlapping. Over the years crowded teeth smash the gums in between the roots. Once teeth are moved apart to create space for proper alignment, if the gum does not grow this can create a black triangle or space between the teeth roots near the gums.

Treatment Solutions for Black Triangles are any combination of the following treatments

1. Tooth Slenderizing and reshaping with the goal to pull teeth closer together and close space (This only possible if there is enough room).
2. Dental Bonding to Close Space
3. Dental Veneers to Close Space

## **Tooth Size Discrepancy**

If you are looking for a more ideal esthetic result porcelain veneers or dental bonding may be suggested after orthodontic treatments. One example is that some patients, after orthodontic treatment, still have minor spacing between the teeth. This is common if your teeth are smaller than the length and width of your anatomical arch of bone. Solutions for tooth size discrepancies are dental bonding (white filling material) or porcelain veneers. In addition to better esthetics results, porcelain veneers can improve the stability of the case.

## **Front teeth edges may be uneven after adult orthodontic movement**

Tooth enamel wears from function. More specifically, anterior tooth edge enamel wears from the normal functions like chewing, biting, and parafunction habits (day time habits like fingernail biting, cheek biting and/or nighttime habits like grinding).

If you're an adult and have crooked teeth before treatment, the wear that has occurred over decades of function has worn the teeth edges in the functional plain between the top and bottom teeth. Once the teeth and roots are leveled (during proper orthodontic movements), the pretreatment worn edges will be at a different angles to the smile line and commonly look uneven.

**FYI:** If you are an adult you likely have some sort of anterior pretreatment wear (i.e. Tooth edge wear which has occurred before tooth movement). Orthodontic treatment and tooth movement will not re-grow the worn tooth enamel. Once your anterior teeth and roots are ideally leveled and aligned, you may have uneven tooth edges. If latter occurs, and your goal is to have more ideal smile line after orthodontic treatment is complete, you may choose any combination of the following treatments:

- Cosmetic contouring
- Dental bonding
- Porcelain veneers

\*Anterior functional and non-function wear patterns are not esthetically appealing and do not match idealistic esthetic tooth lengths created in esthetic smile line design.

## Treatment Time

The treatment time can vary with the difficulty of the problem, cooperation of the patient, and individual response to the orthodontic treatment. Lack of facial growth, poor cooperation with elastics or appliance wear, poor oral hygiene, broken appliances or missed appointments are all important factors which could lengthen treatment time and affect the quality of the results.

The normal treatment time with braces is about 24 to 30 months. However, this can vary considerably in some cases. This time period does not include "phase I" treatment or the "orthopedic phase" (where the orthopedic appliances are utilized while some of the primary or "baby teeth" are still present).

I understand that individual treatment times cannot always be accurately predicted. I understand that all treatment times (including time needed to move teeth with braces or clear tray aligners, presented by Dr. Kevin Landers or any member of his staff are only an estimate based on an average healing times, and that my healing time may take longer.

During the final stages of orthodontic treatments teeth become aligned and patients often prematurely request that the braces get removed. Please understand, there are two phases of orthodontic treatment: active movement phase and the phase of holding the teeth in position while the tooth supporting bone regrows around the tooth roots. While it may seem that your teeth are aligned and that you are finished, if the appliances are removed too quietly the bone does not have time to remodel and the teeth will likely move out of ideal alignment.

I understand that if I experience any unanticipated complications or unintended results, that I will need to inform Dr Landers of such complication and follow recommended appointments in a timely fashion in order to correct and/or stop any further potential damage caused by such complication. I further understand, that any untreated dental infection or dental treatment complication not managed in a timely fashion could result in breakdown to otherwise healthy teeth, gums, jaw joint, and bone. In rare cases untreated complications can result in general health issues, and will result in additional time and expenses. **I understand that Dr. Kevin Landers is not liable for further breakdown caused as a result of my inability to schedule and/or keep recommended appointment intervals.**

Patients who discontinue treatment for personal reasons or **interrupt normal recommended treatment intervals**, increased risk for poor treatment outcomes. Subsequent to the later, if there are complications and need for additional treatment, and/or failure of previously completed treatment, an additional fee may be assessed.

I understand that **individual treatment times cannot always be accurately predicted**, i.e. if my body heals at a slower rate, my treatment maybe delayed. I understand that all treatment times (including time needed to move teeth with braces or clear tray aligners, and time needed for dental implant stability & bone integration) presented by Dr. Kevin Landers or any member of his staff are only an estimate based on an average healing times, and that my healing time or orthodontic treatment time may take longer.

## **Discontinuance Of Treatment**

Treatment will be discontinued for lack of patient cooperation, including poor oral hygiene, broken appointments, lack of wear time of appliances or elastics, and in cases where to continue the treatment would unfavorably influence the dental health of the patient. Prior to the discontinuance of treatment, the patient or parent will be thoroughly informed of the reasons and hopefully will agree.

## **To Assure Safe Successful Treatments**

Patients must agree to treatment recommendations and changes in treatment recommendations. Treatments recommendations may change during the course of therapy and additional appliances, braces, elastics or bite blocks to maintain an open bite positions may be required.

## **Relapse –Tooth Shifting After Treatment**

Relapse has been described as a movement or shifting of the teeth back to their original position after the braces have been removed. It is probable that all patients may experience at least some movement of the teeth once the braces have been removed. In the late teens or early twenties, some patients may notice slight crowding of the lower front teeth. This is particularly evident if their teeth were extremely crowded prior to treatment.

This minor relapse can occur even with good cooperation throughout the active and retention phases of treatment.

The problem of late crowding of the lower teeth occurs in many people with or without orthodontic treatment. Some reasons for crowding include the eruption of the wisdom teeth, the growth pattern of the jaws, or the muscle balance of the lips and tongue.

Muscle balance plays an important role in the stability of the case. There must be a balance of the muscles of the lips, and cheeks outside and the tongue inside. Unique individual parafunctional habits have an adverse effect on the muscle balance.

Muscle instability can occur with patients with allergies involving swollen adenoids or tonsils. Since the swollen tonsils and adenoids block the airway who must therefore breathe through their mouths. If you are a patient who has a persistent forward tongue thrust swallowing habit, there will be a greater chance of relapse.

Outside of the normal functional habits of eating and swallowing such as habitual clenching, nighttime teeth grinding, nail biting, thumb sucking, tongue thrusting, and mouth breathing etc. Can cause teeth to become crowded. Ask for our list of these habits at any time! The first step to stopping a subconscious daytime habit is to identify the habit!

To minimize relapse, it is important to eliminate habits as well as wear the retaining devices as directed. Failure to wear retainers may result in undesirable tooth movement for which we cannot assume responsibility. It is important for patients to keep their appointments during the retention stage and to wear their retainers at all times, except while engaged in contact sports or cleaning the appliance,

## **Our Treatment Goal — The Best Treatment Possible**

Our treatment objective is to always obtain the best treatment results possible. However, orthodontics is not a perfect science and, in dealing with problems of growth and development, genetics, stress, and patient cooperation, achieving an optimal result is not always humanly possible. No guarantees can be given as to the orthodontic finished result, as the retention and results depend too much upon patient cooperation and other factors beyond the dentist's control.

## **Propose Treatment Plan**

Dr. Kevin Landers has thoroughly explained to me the proposed treatment plan, the alternatives of treatment and the consequences if no treatment is done. I agree that I have been involved in the formation of the proposed treatment plan and that I am in agreement with the plan. I acknowledge that Dr. Kevin Landers is a general dentist who has taken numerous post-graduate courses in orthodontics.

### **Permission To Use Photographs & X-rays**

I consent to the taking of photographs and x-rays before, during and after orthodontic treatment, as they are a necessary part of the diagnostic procedure and record keeping. I further give permission for the use of these photographs, x-rays and records to be used for the purpose of research, education of other patients, or publication in professional journals.

### **Unusual Occurrences**

Swallowing an appliance, chipping a tooth, dislodging a restoration: an ankylosed tooth, an abscess or cyst may occur but are rare.

### **Understanding Information And Informed Consent Document**

It's impossible to mention all the possible problems that could arise with orthodontic treatment or any other medical or dental treatment. We will make every effort to cooperate with you during your treatment and keep you fully informed as to the progress of orthodontic treatment.

I certify that this information and informed consent document, outlining the general treatment considerations as well as the potential problems of orthodontic treatment, was presented to me and that I have read and understand its contents. I also understand that there could be other potential risks or problems that could arise that are not listed in this document. I further understand that, like other healing arts, the practice of orthodontics is not an exact science, and therefore cannot be guaranteed.

I hereby acknowledge that I have been informed to my satisfaction of all the treatment considerations, including benefits of treatment, risks of treatment, risks of non-treatment, and the proposed orthodontic treatment plan and that I now consent to treatment.

---

Patient Signature

---

Date