

ORTHODONTIC TREATMENT

Information about risks, side effects, limitations and discomfort

Orthodontic treatment

The goal of orthodontic treatment is for you to obtain a beautiful smile with well-functioning teeth. Successful orthodontic treatment is a partnership between the orthodontist and the patient. The orthodontist and staff are dedicated to achieving the best possible results for each patient. Importantly, well-informed and cooperative patients are getting more positive orthodontic results. The themes that the orthodontist discussed with you during the treatment plan discussion are hereby written out for your reference.

Allergies

Occasionally, patients can be allergic to some of the materials (nickel, metals, elastics, etc) of their orthodontic appliances. This may require a change in treatment plan or discontinuation of treatment prior to completion.

Radiographs

Radiographs (x-rays) of the jaws, skull and teeth are taken before and during orthodontic treatment. In principle they are harmful to the body, however, the radiation dose used for orthodontic purposes is so small that adverse effects are highly unlikely to occur. Nevertheless, always inform your orthodontist if you have recently taken a radiograph, or if you are pregnant.

Treatment results

Orthodontic treatment usually proceeds as planned, and we intend to do everything possible to achieve the best results for every patient. However, we cannot guarantee that you will be completely satisfied with your results, nor can all complications or consequences be anticipated. Of importance, the success of treatment depends also on your cooperation in keeping appointments, maintaining good oral hygiene, careful handling of the appliances, and following the orthodontist's instructions.

Treatment time

The duration of treatment depends on a number of items, including the severity of the problem, the patient's facial growth and the level of patient

compliance. The actual treatment time is usually close to the estimated treatment time, but treatment may take longer. Sometimes a maxillofacial surgical correction of the position of the jaws may be necessary to obtain an optimal result. Growth changes may also occur after the orthodontic treatment, which may require re-treatment. Poor oral hygiene, breakage or loosening of equipment, and failure to keep appointments can increase treatment time.

Discomfort

After placing or adjusting orthodontic appliances you may initially experience some sensitivity during eating, feel that your teeth are becoming slightly loose and that your speech is somewhat altered. Such symptoms are absolutely normal and will resolve in a few days. However, please keep in mind that everyone experiences discomfort differently. If necessary, you can take painkillers (e.g. paracetamol) for a short period of time. Please do not use anti-inflammatory drugs, known as NSAIDs, because they are known to inhibit tooth movement. In case your gum or inner side of your cheeks are irritated from a bracket or other kind of appliance, simply contact your orthodontist as these problems can usually be resolved.

Relapse

Completed orthodontic treatment does not guarantee perfectly straight teeth for the rest of your life. Retainers will be required to keep your teeth in their new positions as a result of your orthodontic treatment. You must wear your retainers as instructed or teeth may shift. Regular retainer wear is often necessary for several years following orthodontic treatment. However, changes after that time can occur due to other causes, including habits such as tongue thrusting, mouth breathing, and growth and maturation that continue throughout life. Later in life, most people will see their teeth shift. Minor irregularities, particularly in the lower front teeth, may have to be accepted. Some changes may require additional orthodontic treatment or, in some cases, surgery. Some situations may require non-removable retainers or other dental appliances. The costs for repair of loose or broken retention equipment are included in the treatment rate for the orthodontic treatment up to two years after

placement. After that, these costs will be charged separately.

Decalcification and dental caries

Excellent oral hygiene is essential during orthodontic treatment as are regular visits to your family dentist. Inadequate or improper oral hygiene could result in cavities, discolored teeth, periodontal disease and/or decalcification. Similar problems can occur also without orthodontic treatment, but the risk is greater to an individual wearing braces or other appliances. If oral hygiene remains inadequate after repeated instruction, the orthodontist will be forced to stop the treatment and remove the braces to limit further damage to the teeth.

Periodontal disease

Gingivitis or periodontitis (gum inflammation with or without loose teeth) can develop or worsen during orthodontic treatment due to many factors, but most often due to the lack of adequate oral hygiene. You must have your general dentist, or if indicated, a periodontist monitor your periodontal health during orthodontic treatment every three to six months. If periodontal problems cannot be controlled, orthodontic treatment cannot start or may have to be discontinued prior to completion.

Root resorption

The roots of some patients' teeth can become shorter (resorption) during orthodontic treatment. It is not known exactly what causes root resorption, nor is it possible to predict which patients will experience it. However, many patients have retained teeth throughout life with severely shortened roots. If severe root resorption is detected during treatment, your orthodontist may recommend a pause in treatment or the removal of the orthodontic appliances brace prior to the completion of orthodontic treatment.

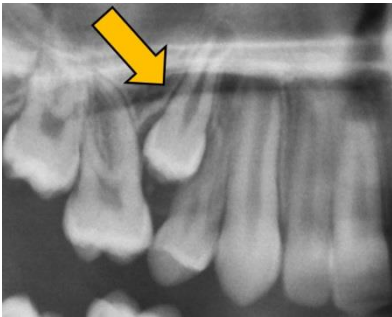
Dental nerve damage

A tooth that has suffered from trauma or has been heavily restored by a filling, may have undergone nerve damage. In some cases, discoloration or pain of the tooth in question may develop. If such symptoms occur during orthodontic treatment, then root canal therapy is indicated and should be performed by your dentist or endodontist. If the prognosis of the tooth is poor, extraction may be necessary.



Impacted, ankylosed, unerupted teeth

Teeth may become impacted (trapped below the bone or gums, ankylosed (fused to the bone) or just fail to erupt (see example in picture below). Often, these conditions occur for no apparent reason and generally cannot be anticipated. Treatment of these conditions depends on the particular circumstances and the overall importance of the involved tooth, and may require extraction, surgical exposure, surgical transplantation or prosthetic replacement.



protection and disinfection protocols to prevent transmission of communicable diseases. Please inform the orthodontist if you are carrying any contagious disease.

Temporomandibular joint dysfunction

Problems may occur in the jaw joints, i.e., temporomandibular joints (TMJ), causing pain, headaches or ear problems. Many factors can affect the health of the jaw joints, and jaw joint problems may occur with or without orthodontic treatment. Any jaw joint symptoms, including pain, jaw popping or difficulty opening or closing, should be promptly reported to the orthodontist. Treatment by other medical or dental specialists may be necessary.

Injury from orthodontic appliances

Activities or foods which could damage, loosen or dislodge orthodontic appliances need to be avoided. Loosened or damaged orthodontic appliances can be inhaled or swallowed or could cause damage to the patient. You should inform your orthodontist of any unusual symptoms or of any loose or broken appliances as soon as they are noticed.

Do not wear the headgear during sports activities. Use your heat adjustable mouthguard.

Transmission of diseases

Our orthodontic office follows the regulations (guidelines for infection prevention in dental practices -KNMT, Infection Prevention Working Group) and recommended universal personal



Optional:

Medication

Certain types of medication, such as bisphosphonates and pain killers, can negatively influence bone remodeling. Bone remodeling is the biological process that is necessary for tooth movement. Bisphosphonates are used for bone disorders, osteoporosis and in cases of bone cancer metastases. In addition, the intake of such medication can cause inflammation of the jawbone and make orthodontic tooth movement slower, leading to a prolonged treatment time. You should always inform your orthodontist regarding the medication you are taking as well as any changes that may have occurred either in your health or medication.

Use of tobacco products

Smoking or chewing tobacco has been shown to increase the risk of gum disease and interferes with healing after oral surgery. Tobacco users are also more prone to oral cancer, gum recession, and delayed tooth movement during orthodontic treatment. If you use tobacco, you must carefully consider the possibilities of a compromised orthodontic result.

Extractions

Some cases will require the removal of deciduous (baby) teeth or permanent teeth. There are additional risks associated with the removal of teeth which you should discuss with your family dentist or oral surgeon prior to the procedure.

Orthognathic surgery

Some patients have significant skeletal disharmonies which require orthodontic treatment in conjunction with orthognathic (dentofacial) surgery. There are additional risks

associated with this surgery which you should discuss with your oral and/or maxillofacial surgeon prior to beginning orthodontic treatment. Please be aware that orthodontic treatment prior to orthognathic surgery often only aligns the teeth within the individual dental arches. Therefore, patients discontinuing orthodontic treatment without completing planned surgical procedures may have a malocclusion that is worse than when they began treatment!

Adjunctive treatment

Teeth vary in size and shape. Therefore, additional dental treatment is sometimes needed in order to enhance the end result of orthodontics. Adjunctive treatment can include tooth-colored fillings (composite restorations), crown/bridge work and gum treatment or may be stripping/making your teeth slightly smaller. Your orthodontist or dentist can inform you about these treatments, which are exclusive of the orthodontic treatment costs.

Bone anchors and mini-screws

Bone anchors and mini-screws can be used as part of your treatment plan (see pictures on the right). Your orthodontist will inform you if these are required during your treatment plan discussion. Bone anchors and mini-screws are directly fixed to the bone. Their placement does include a risk of damaging the tooth root, nerves or perforation of the maxillary sinus and the mini-screws themselves can fracture during insertion and removal. Usually these consequences are not serious, but it can mean that additional medical or dental treatment is needed. Your

orthodontist or oral surgeon will extensively discuss the risks with you.

Inflammation of the gum around the screw or gum growth over the screw can occur in case of poor oral hygiene. In such instances the screw must be removed. If a screw becomes loose, a new one will be placed at a slightly different position. An unstable screw may also be a reason to change your orthodontic treatment plan as it can be accidentally swallowed.

Mini-screws are removed when they are no longer needed for treatment, however, sometimes bone anchors are left in place. Your orthodontist or oral surgeon will discuss this with you.



INFORMED CONSENT FORM

Name of patient: %PTVOLNAAM%

Date of birth: %PTGEB%

Proposed treatment plan:

%PTBEHANDEL%

Alternate treatment plan (if indicated):

I confirm that I have read the above information (or had this information read to me) and understand the issues it describes. I acknowledge these risks and accept that the outcome of the orthodontic treatment may be different from what I expected.

The practitioner has extensively discussed the orthodontic treatment plan with me and has provided sufficient information that has helped me make this choice. I have had the opportunity to ask questions and any questions that I have asked have been answered to my satisfaction.

I understand that the cost of orthodontic treatment is not inclusive of treatments provided by other health care professionals, such as dentists and dental or medical specialists, and that these will be separately charged by them.

I consent to the orthodontic treatment of the aforementioned patient, which also involves orthodontic documentation such as taking photos, radiographs and impressions during and after orthodontic treatment. I fully understand the risks associated with the treatment. I give my permission for the orthodontic documentation to be in disposal of other practitioners.

I also give permission for the use of orthodontic documentation traceable to the patient, such as light photos and 3D photos of the face, for the Postgraduate Orthodontic Training Program or the Undergraduate Dental Education Program.

I also give my permission for the orthodontic documentation to be used for quality assessment (NVvO) in the quality control system ESAS. Furthermore, I consent to the use of the above data in a (pseudo) anonymized (sub) orthodontic database, from which non-traceable patient data is subsequently extracted, as far as possible, for research and publication in scientific professional literature. If photographs of data are used in a publication, separate permission will be requested.

Name of patient:

Place and date:

Signature of patient (if over 12 years)

Name of parent/ legal guardian::

Place and date:

Signature of parent / legal guardian:

Print name of practitioner: %MRESPONDENT%

Place and date:

Signature of practitioner:



initials patient and/or parent/legal guardian:

If you do not fully agree with the permission to use the patient-traceable orthodontic documentation, please specify below for which purposes you do not consent to use:

- Orthodontic Specialty Training, and the Dental Education program Radboudumc: Yes / No
- To inform other practitioners in the context of treatment : Yes / No
- Research, publication in scientific professional literature: Yes / No
- Quality assessment (NVvO) in the quality control system (ESAS): Yes / No

