

Orthodontic anomalies

Orthodontics

Orthodontics is the field of dentistry that specializes in the diagnosis, prevention and treatment of dental and facial irregularities (anomalies – dental and skeleton).

There is no age restriction when to first have an orthodontic screening and treatment. Everyone can visit orthodontics without any previous recommendation. The sole reason for a visit might be the desire to make your appearance and health better. Children should have their first orthodontic screening after an occurrence of a problem noted by a dentist, doctor or parents. The beginning of the treatment is very individual and is closely connected with dentition.

Everyone is allowed to visit an orthodontist without previous medical recommendation. The doctor informs you about the type of anomaly you have and recommends orthodontic treatment and its timing, whether to start immediately or later. The dentist also determines the best course of treatment and states examinations that are required before the orthodontic treatment begins. The orthodontist also proposes a suitable kind of braces and the length of treatment.

It is utterly advisable to plan precisely orthodontic screening before treatment. Such a screening contains entrance examination, making of tooth prints, X-ray pictures and photographs. During such a visit, you will be acquainted with the precise procedure of the treatment. While having approved this plan, the patient gives an approval for the treatment suggested by the dentist. In the course of the treatment, some complications might arise, however the dentist can modify the plan afterwards.

Children should first visit orthodontics after their first jaw-teeth and incisors have already come out. During that period, different defects may be diagnosed (crowding, deep overbite, cross bite, open bite cause by a bad habit etc.). In this period, the orthodontist can conduct dentition, growth of jaw or change the width of a tooth arch. Early treatment enables getting rid of bad habits, making a place for permanent teeth, and possibly inserting impacted teeth.

Fixed braces are not intended only for adolescents. Teeth can be moved at any age under the condition that your teeth, gums and bones are healthy. Wrong dental position may influence an excessive occurrence of dental scale and bone recession. Some parents find inspiration in their own children undergoing orthodontic treatment and afterwards they decide for the treatment by a fixed brace. Application of fixed brace may improve your smile and therefore your self-confidence at any age. Orthodontic treatment is usually a part of cooperation with other fields (paradontology, implantology etc). The team of doctors tries to reach the best results thanks to such a close cooperation.

Types of anomalies

Anomalies of tooth number

Hyperodontia – supernumerary teeth (mesiodens – between upper incisors. Very often)

Hypodontia – reduced number of teeth (anodontia – the germ of tooth is missing)

Oligodontia – more teeth are missing

Dentes confusi – fusion and simultaneous development of two teeth

Anomalies of tooth size and form

Macrodonia – big teeth

Microdonia – small teeth

Spacing – abundant space between teeth

Diastema – abundant space between upper incisors

Anomalies of tooth position

Protrusion – long axis tilted forward (to the front)

Retrusion – long axis tilted to the back

Infraocclusion – the tooth does not reach the occlusal plane

Supraocclusion – the tooth overreaches the occlusal plane

Inclination – the tooth declinates mesially or distally

Rotation – the tooth is rotated along its long axis (mesially - mesiorotation, the vestibular surface is rotated mesially, distally –distorotation, the vestibular surface is rotated distally)

Dystopia – the tooth is erupted out of the dental arch

Heterotopia – the tooth is erupted on different place in dental arch

Transposition – two neighbouring teeth interchange their position

Retention – the tooth is developed but is not erupted –completely or partially.

Anomalies of tooth development and eruption

Delayed eruption of teeth

Natal teeth – teeth in oral cavity in time of deliverance

Anomalies of development of hard dental tissues

Hypoplasia – pits and grooves on atypical places

Hypominelization – spots white or dark

Bite anomalies , Anomalies in intermaxillary relationships

Sagittal plane

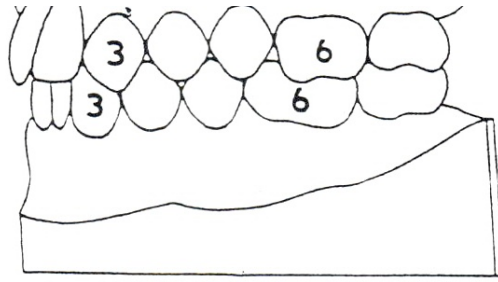
Key of occlusion is the relationship between upper and lower first molar. We recognise three classes of this relationship according to Angle.

- I. class: Normoocclusion. The mesiobuccal cusp of the first upper molar fit into the transversal groove on occlusal surface of the first lower molar. In this class we can recognise anomalies of teeth and group of teeth. E.g. infraocclusion, inclination etc.
- II. Class: Distocclusion. The position of lower jaw is distally in comparison to the normoocclusion. There are two departments in third class:
1.st department: protrusion of upper incisors

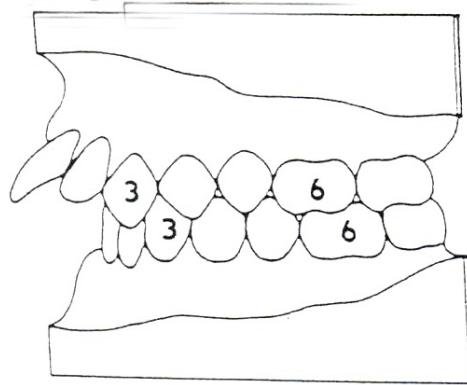
2. nd department: retrusion of upper incisors.

III. Class: Mesioocclusion.

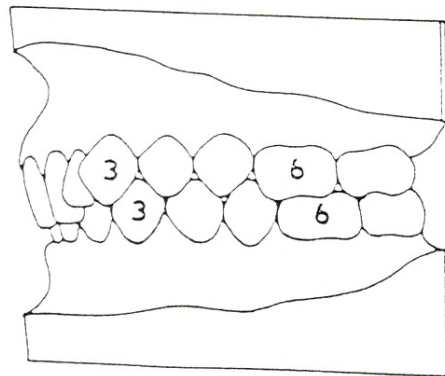
The position of lower jaw is mesially in comparison to the normoocclusion.



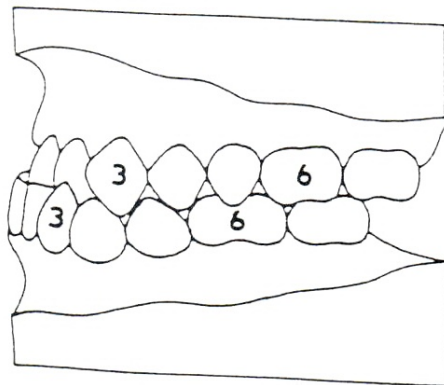
Angle I. –
normoocclusion



Angle II. –
distoocclusion
1st dpt



Angle II. –
distoocclusion
2nd dpt



Angle III. –
mesioocclusion

Vertical plane

Open bite

Deep overbite

Transversal plane

Crossbite

Anomalies of groups of teeth

Crowding

Protrusion (overjet)



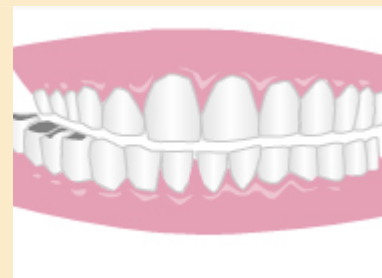
Disaccordance of central line
(movement of upper dental arch
to the right)



Open bite



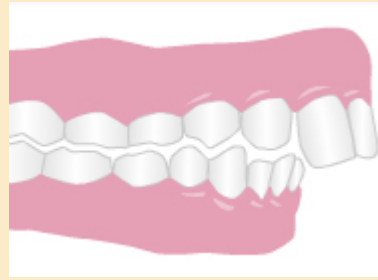
Deep overbite



Crossbite



Crowding (lack of space in dental arch)



Overjet (protruding upper teeth)



Spacing (space abundance in dental arch)



Underbite (lower jaw protrusion)