

Caring by Dr May Ling Eide for Crooked Teeth

We set you straight on the dental hygiene issues



THE PRESENCE OF crooked teeth may impact patients in several areas, most importantly, with regards to the long-term health of the teeth and supporting periodontal tissues, and the aesthetics of the smile. Let's examine the issue of crooked teeth and find out more about:

1. Why crooked teeth occur
2. The consequences of having crooked teeth
3. How to address the problem

What contributes to the presence of crooked teeth?

Genetic Factors

Genetic factors may affect either the teeth themselves, or the shape and size of the jaws of the patient.

- Morphology of teeth, that is, their size and shape, may be determined by genetic factors.
- Genetic factors play a role in the development of the upper and lower jaws. When there is a mismatch between the size of the teeth and the size of the jaws, crooked teeth due to crowding can occur.
- Skeletal problems can also contribute to the cause of an abnormal condition (aetiology) of malocclusion (misalignment when biting between the top row of the teeth and the bottom). For example, a smaller lower jaw may contribute to the presence of crooked lower teeth as the lower jaw is 'trapped' by the upper jaw and cannot express itself forwards. In

patients with large protrusive lower jaws, the lower teeth may lean back due to pressure from the lower lip, causing crooked lower front teeth.

Genetic factors are important in conditions such as hypodontia, which is where teeth are developmentally missing. Genetic factors may also contribute to positions that are unusual (anomalies) of certain teeth, causing them to originate in the jaws in poor positions.

Timely Loss of Teeth

Losing primary teeth too early, or even too late, can cause subsequent problems with the eruption of the adult teeth.

Young patients may suffer from loss of the primary teeth too early from either extractions due to dental decay, or from traumatic loss of a primary tooth. The early introduction of space in the jaws may cause the remaining teeth to drift into the available space. The permanent teeth that subsequently erupt into the mouth may then have insufficient space to erupt in their proper position, and may be rotated or misaligned. If the loss of space is severe, there is also a chance that the affected permanent tooth may not have enough space at all, thereby becoming 'impacted'.

Conversely, in cases whereby the primary tooth is not lost in a timely fashion, it may become over-retained. This situation can cause the adult successor tooth to erupt in an undesirable position.

Habits – Digit Sucking

The intensity and duration of a digit or thumb-sucking habit may place large amounts of force on one or several teeth, causing them to become misaligned. The malocclusion that results may include that of top teeth that stick out, or a gap between the upper and lower teeth, also known as an anterior open bite.

Trauma

Suffering a traumatic knock on one or several teeth may cause teeth to shift from their original positions and become misaligned. In cases where a tooth has been avulsed, that is, completely knocked out from the mouth, the teeth adjacent to the space may become misaligned.

What are the consequences of having crooked teeth?

Aesthetic Impact

Crooked or misaligned teeth have obvious negative impacts on one's

smile. In severe cases, some patients may even appear to have missing or malformed teeth due to severe misalignment. Having misaligned or crooked teeth may affect a person's self-esteem, causing them to be more self-conscious about their smile and facial appearance.

Functional Problems

Having misaligned teeth can pose functional problems for patients. For example, in cases where the patient has a reverse bite of one or several teeth, the patient may tend to shift their bite forwards or to the side upon contact with the tooth/teeth. This can cause long-term problems not only to the affected tooth, but potentially also to the temporomandibular joints (TMJ) – that is, the joint of the jaw – of the patient.

Difficulty in Maintaining Oral Hygiene

Scientific research usually seems to suggest that patients can have excellent oral hygiene despite having crooked teeth. However, clinical experience shows that being unable to clean effectively between overlapping teeth can result in a greater risk of developing decay between the teeth. It may also prove difficult to subsequently restore these teeth as well as to maintain them, especially if the oral hygiene measures remain poor.

Not being able to clean efficiently or floss well between crooked teeth can lead to problems more severe than just gingivitis. The bacteria in the plaque around misaligned teeth can cause problems to the supporting bone and periodontal tissues, which can lead to eventual bone loss, mobility of teeth (loose teeth), and even tooth loss.

What can be done to address the problem of crooked teeth?

Preventative Measures

Regular dental check-ups with timely

radiographic investigations are the most important preventative measures that parents can take for their children. Regular dental check-ups allow the dentist to educate families and children with the appropriate dietary and oral hygiene advice. As mentioned before, although dental hygiene measures may be more difficult to carry out in patients with very crooked teeth, good toothbrushing and flossing techniques are still possible.

Preventing dental decay and early loss of primary teeth ensure that the primary teeth act as natural space maintainers for the adult teeth. There are certain developmental milestones that dentists can look out for in children with regard to their teeth. Radiographic and clinical investigations would be necessary if these developmental milestones are not met.

Appliances such as space maintainers may be considered in cases where primary or permanent teeth have been lost early. This can prevent unwanted drifting of adjacent teeth into an available space if a tooth has been lost prematurely.

Interceptive Measures

Interceptive orthodontic measures help to eliminate a particular condition that may subsequently lead to a malocclusion. Interceptive orthodontic measures may prevent or reduce the need for definitive orthodontic treatment in the future.

Types of interceptive measures include:

- habit-breaker appliances
- appliances to correct a crossbite

The appliance chosen for use may be removable or fixed onto the teeth.

Definitive Orthodontic Treatment

Definitive orthodontic treatment is generally begun when the patient is in the late mixed dentition, or permanent dentition. This phase of orthodontics will address the major concerns of the patient and dentist.

The most common types of appliances used in orthodontic treatment are:

- functional appliances
- fixed orthodontic braces
- clear aligner appliances such as Invisalign^{eh}



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