

Myofunctional Orthodontics

Information

for parents

and

Children over 12 years

Orthodontic Early Treatment

Centre

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Myofunctional Orthodontics

Dental and Facial Correction for the Growing Child

Dentists and orthodontists are becoming increasingly aware that if a child's teeth are not straight, facial growth and development are also not correct.

The teeth are a connected structure of the face, the head and the body.

The position of the teeth, good or bad, is determined by the muscles of the lip and tongue.

Traditional Orthodontic treatment uses the extraction of permanent teeth. It has been proven by research to be of little benefit, with crowding frequently returning after retainers are removed.

- ❖ **Myofunctional Orthodontics** identifies the cause of irregular teeth.
- ❖ **Myofunctional Orthodontics** treats the causes of irregular teeth in the growing child.
- ❖ **Myofunctional Orthodontics** has benefits for the teeth, facial appearance, the posture and improved general health.
- ❖ **Myofunctional Orthodontics** does not require the use of full "braces"

This is Myofunctional Orthodontics



Myofunctional Orthodontics

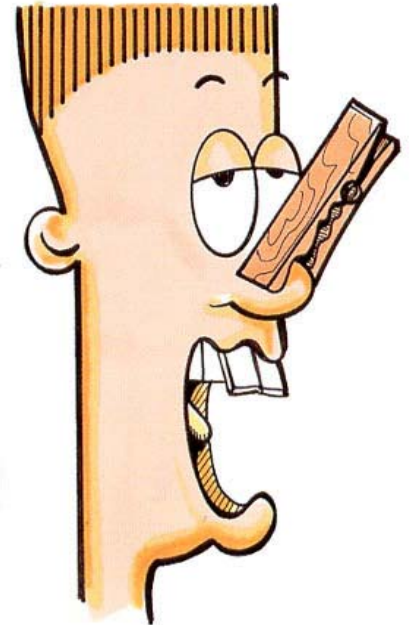
The development of the size and shape of the jaws is almost entirely influenced by how the child breathes, swallows and positions the tongue and the lower jaw.

Incorrect habits such as mouth breathing, thumb sucking, incorrect swallowing and poor posture are the major contributing factors of orthodontic problems.

These habits should be corrected as soon as they are evident.

If these habits are not corrected, the growth of the face and alignment of the teeth will not be correct. In addition, any orthodontic treatment with or without braces will NOT be successful.

By correcting myofunctional habits, not only will the teeth become correctly aligned and stay correctly aligned, but also, facial development will be improved and there is less need for complex orthodontics later.

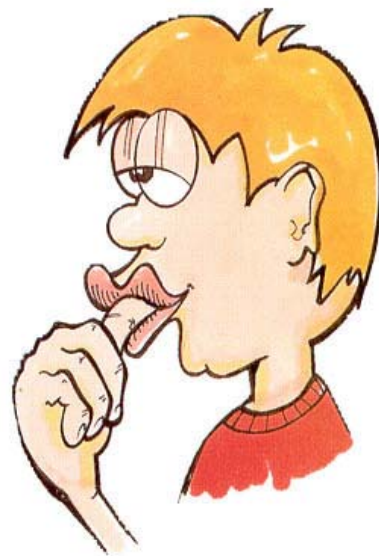


There are four things that need to be examined and perhaps corrected:

- ❖ Myofunctional bad habits
- ❖ Tooth alignment
- ❖ Jaw growth
- ❖ Breathing pattern

Generally if the myofunctional habits and the jaw growth are corrected there is plenty of room for all the teeth.

Therefore this technique does not require extractions.



Correcting Myofunctional Bad Habits

The forces of the muscles of the lip and the tongue on the teeth have more power than the strongest braces to move teeth!

Correction of these habits will result in life long stability of the orthodontic treatment and associated facial improvement.

Chronic mouth breathing will compromise any orthodontic result no matter how many teeth are extracted.

Establishing Nasal breathing is an important part of Myofunctional orthodontics.

All children who grow up breathing through the mouth will develop crooked teeth.



The Trainer Programme

A specially designed appliance is used for a minimum of one hour, plus overnight, to correct the myofunctional bad habits.

The more effort that is put into the Trainer programme the greater the benefit is received from it.

Other Benefits Of Myofunctional Orthodontics

The correction of the habits that cause poor facial growth and dental crowding tend to reduce the incidence of jaw (TMJ) problems in later life.

Other health benefits that have been reported are a direct result of changing from mouth to nose breathing.

Mouth breathing has a profound effect on overall health and development in growing children. It is important to seek medical advice for persistent allergies as this is a major cause of habitual mouth breathing.

Breathing through the nose should be established at the earliest age.

Myofunctional Treatment for children over 12 with only adult teeth

Boosting Jaw Growth

We may need to make room for the tongue to fit in the roof of the mouth before we straighten the teeth

Either with a plate: The Biobloc appliance

At any age, the upper jaw may be so underdeveloped that we need to use a plate to expand the upper jaw before we can start myofunctional training. The plate has a screw in the midline that is turned every day as instructed, for a few weeks.

This is used where the child has a cross bite. That is, the upper teeth are biting inside the lower teeth.

The plate is worn day and night. It is only removed to turn the gear and to clean the teeth and plate.



Or with Invisible Braces: The Bent Wire System (BWS)

This appliances can be removed only by the dentist. It is held in the mouth with a band around the back teeth. They are used with the Trainer System. They widen, lengthen and correct the shape of the upper or lower jaw.

The BWS is not easily visible, comfortable to wear and is adjusted every three or four weeks slowly bringing the jaw shape back to normal.

The BWS is worn and regularly adjusted by the dentist for the period of 12-18 months. At the same time the Trainer helps to correct the myofunctional habits.

Once we have made room for the tongue to fit in the roof of the mouth; we need to train the tongue to rest and function there using a Trainer.



Once the child is keeping the mouth closed, breathing through the nose and swallowing correctly, this treatment is phased out and the Trainer worn alone until completion.

Straight Teeth

If the child has completed myofunctional treatment when younger, the adult teeth usually erupt into a good position just like nature intended, with no need for extractions or further treatment.

If the child has completed myofunctional treatment when younger and there is mild crowding, a myofunctional appliance T4A can be used alone to correct the tooth position. This would need to be worn for a minimum of one year.

If the child has completed myofunctional treatment when younger, some children may need fixed braces on the upper and lower teeth for a short time for final alignment of the front teeth.

For children who have not had myofunctional treatment when younger braces are usually required to straighten the teeth.

These are often worn for 14-20 months plus six months in retainers.

Fixed orthodontic braces are very good at aligning teeth but not effective at jaw correction or changing muscle patterns but we can train and change muscles at this age.

While wearing braces the teeth need to be cleaned every time after eating.



Myofunctional treatment is required while wearing braces to correct the myofunctional cause of the crooked teeth .

The Trainer for Braces, T4B, is used with the fixed braces for one hour in the day plus all night every night while asleep.

When the child has fixed braces they need to be seen every four weeks for change of elastics and sometime change of arch wires.



Retainers and Relapse

The three choices at the end of orthodontic treatment

No matter what technique is used to move teeth, whenever orthodontic treatment is completed there are three choices and three choices only:

- ❖ With good wear of the Trainer the muscles will have been changed to match the new tooth position. This is the desired outcome of myofunctional orthodontics. The new tooth position will be stable.
- ❖ If the Trainer was not worn well or the muscle pattern not corrected for any reason, a retainer will need to be worn, for ever, in order to keep the teeth straight.
- ❖ If the muscle patterns are not corrected and retainer wear is stopped the teeth will move back towards their start position. **This process is called relapse!**

Why do teeth Relapse?

- ❖ When we start orthodontic treatment the teeth are irregular but they are in perfect harmony with the muscles of the lip and tongue.
- ❖ If we move the teeth and do not change the function, for any reason, then the muscles will put the teeth and jaws back where they started.
- ❖ Teeth do not have memories, as is a common myth, and will only relapse when the bad myofunctional habits that caused the problem have not been corrected.

It is easier and quicker to correct muscles when the child is still growing.

When we use braces to straighten the teeth in teenagers, even though the Trainer is worn well, we may not fully correct the muscle patterns. Retainers are then used to hold the teeth. At the same time the teenager will need to continue to wear a Trainer to continue to improve the muscle patterns until they match the new tooth position.

In any case, all patients who have had braces will wear retainers for six months before we review the result and look at long term retention needs. During this time we will need to see the patient every six weeks.

Long term retention is the responsibility of the patient.

In traditional orthodontics, with no muscle training, over 90% of all cases relapse unless permanent retainers are worn.



Potential Risks of Orthodontic Treatment

Patient Co-operation

This is one of the most important factors in determining whether treatment is completed on time. The patient must follow instructions carefully and must co-operate in the wearing of orthodontic appliances, elastics, keeping appointments, eating the proper foods so as not to dislodge the brackets and bands. Failure to adhere to instructions can lengthen the treatment time and can adversely affect the quality of the treatment results.

Gum Tissue Inflammation, Decay, Decalcification.

These conditions can result from lack of brushing and flossing and poor oral hygiene. They need not occur if good oral hygiene procedures are closely followed. The permanent white lines (bracket scars) that are sometimes visible around the area of the brackets signal the early stage of a cavity. Sugary food and between meal snacks should be eliminated as they can adversely affect dental health. Orthodontic appliances do not cause cavities or swollen gums, but because of their presence, food particles and dental plaque are retained and the potential for problems is increased. If a bracket or band becomes loose, the patient must return to the practice as soon as possible, otherwise the possibility of a cavity developing exists. Sometimes a periodontal defect may develop from improper oral hygiene and diet control which may need corrective treatment. It is important that routine dental examination and treatment continue through the orthodontic treatment period.

Loss of Tooth Vitality

Some patients may experience loss of tooth vitality (the nerve within the tooth dies) and they may require root canal treatment. This condition can occur with or without orthodontic treatment. It is usually related to a previous injury to the tooth or may even be the result of a large filling in a tooth. The tooth usually discolours and requires root canal treatment in order to preserve the tooth in the jaw.

Root Resorption

Progressive shortening of the roots of certain teeth may occur in some individuals with or without orthodontic treatment. Root shortening (root resorption) can be caused by trauma, excessive forces, impaction of teeth, and endocrine disorders (certain patients seem more predisposed to root resorption than others and 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, the root resorption could cause the tooth to be lost sooner.

Jaw Joint Problems

Some of the symptoms of jaw joint dysfunction (temporo mandibular joint or TMJ) include clicking, locking, pain, limited jaw mobility, headaches or ear sounds or infections. 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 TMJ symptoms during the movement of the teeth in orthodontic treatment, but hopefully they will subside after the treatment is completed. However, jaw joint problems are not all "bite" related, as tension appears to play a role in the frequency and severity of jaw joint pains. The problems are more common in females and in many cases, muscle spasms are the cause of the pain. The emotional state of the person predisposed to the problem is a factor and the symptoms, including clicking and pain, may fluctuate with the

emotional state of the individual. In conclusion, patients need to be aware of the fact that jaw joint problems can occur prior to, during, or after orthodontic treatment, and if relevant symptoms exist, then we must be informed of this.

Enamel Reduction

Reshaping the teeth before, during or after treatment may be recommended to provide room for alignment, improved appearance, and stability. This reduction of the tooth enamel seldom presents a problem with enamel integrity or susceptibility to decay.

Tooth Size Discrepancy

If, after orthodontic treatment, minor spacing occurs between the teeth because of small or abnormal tooth size, bonding may be suggested to fill in the spaces, improve the aesthetics and stability of the completed orthodontic case.

Discontinuance of Treatment

Treatment will be discontinued for lack of patient co-operation, including poor oral hygiene, broken appointments, lack of wear time of appliances or elastics, and in cases where to continue the treatment would unfavourably influence the dental health of the patient. Prior to the discontinuance of treatment the patient (and parent where applicable) will be thoroughly informed of the reason for this action.

Prolonged Treatment Time

Total treatment time can sometimes be increased beyond the original estimate. Excessive or deficient facial growth, poor patient co-operation, broken appliances, missed appointments are all factors that could extend treatment time and affect the quality of the result.

Jaw Growth Problems

Sometimes, in growing patients, the jaws do not develop as expected. This problem is a myofunctional and biological process and is sometimes out of direct control in treatment. All available techniques will be used to control these problems.

Dental Checkups

Patients should return to their regular dentist for checkups and cleaning every 4-6 months during orthodontic treatment.

Understanding This Document

I have attempted to explain some of the many problems that could arise as a result of orthodontic treatment - although the chance of any of these occurring is relatively remote. Treatment of human biological conditions will never reach a state of perfection despite technological advances. I will fully co-operate with you during treatment and keep you informed of progress and problems. In return I expect you to question me on any problems or concerns you might have.

Dr John Flutter
Dental Surgeon