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Hybrid Orthotropic Therapy

This is a description of hybrid orthotropic therapy, usually for 6 to 30 year olds (sometimes older). The exact details and timeline for each individual may vary, however the underlying process is similar for everyone.

This system has been developed to be less complicated or involved, than the classic system, to assist people with more moderate problems, who have better function and posture, to change and improve. However it requires more personal motivation and dedication than the classic therapy.

The hybrid approaches both a structural change and postural/functional change at the same time. This is only appropriate for people whose current structures already allow a reasonable posture and function. As the therapy is not as singularly focused on the structural change there tends to be less change in facial structure, in particularly the midface (the area under the eyes, either side of the nose). However, this varies greatly depending on the individual's response and effort, and anyone who raises their tongue effectively to the roof of their mouth will see improvements in this area, even with no therapy.

Hybrid Orthotropics is broken into two distinct phases:

Phase 1 Preparation Phase and training

This phase involves transverse (sideways) as well as sagittal (front to back) expansion, were appropriate, of the upper and lower jaws at a significantly slower rate than the classic therapy. It uses a single appliance (training appliance) to match the change in the upper and lower dental arches at the same time, as well as aiming to gain changes in posture and behavior, via a system of bio-feedback. Specifically, it increases tongue volume while changing the postural position of the mandible and raising the resting muscle tone.

Phase 2 Active Retention Phase

Usually half the treatment effect is seen in this "long tail", through the long term effect of biofeedback to individuals with adequate tongue space to effect change. It is important to continue to wear the appliances as directed, we usually recommend the continued wear of the training appliance for many years after treatment. Basically, an appliance is needed until change in function and posture has occurred.

Treatment

The treatment lasts for approximately 24 months. The transverse expansion rate is 0.1mm per week. This does not aim to gain sutural growth between the facial bones. However effective changes in posture and function will over time achieve the same effect.

It is our rule of thumb that an individual requires about 38mm or more between their upper first molars with a nice “U”- shaped dental arch to provide adequate tongue space to achieve and maintain good oral posture and function, which then leads to the changes that we wish to see.

Additional space; Most people wishing to have therapy have crowded teeth and require additional space for the teeth to align naturally. However, some people do not and as such the expansion creates space between the teeth.

- In the upper arch we aim to rearrange the teeth so that the space is initially behind tooth number 3 and then after the appliance conversion we can move this behind tooth number 4 (or 5 if the 4 has previously been removed). If you wish this to be moved further back, the brace can be adjusted in the laboratory at a later date to achieve this, a small fee is charged for this.
- In the lower arch space is often more randomly distributed.

Bio-feedback; The appliance provides a system of bio-feedback. Extensions called anterior locks are situated close to the mucosa (skin of the mouth) adjacent to the lower premolars which touch the skin when the jaw drops down. This reminds the wearer to raise their mandible thus programming a new mandibular rest position and causing an increase in the resting mandibular muscle tone.

The need to change

The approaches that we pursue do not aim to fix you but help you to change yourself. Please review the document titled “1001 Elements and Exercises”, the ultimate goal of our treatment is to initiate a virtuous cycle of change. Change is not easy and please review the document titled “The Challenge of Change” which covers this aspect and the need for you to change.

It is important to understand the CFD train and how improvements at many points in this train can gain improvements in all the parts of the train.

Appliance wear

Initially it is important to become accustomed to the appliance. The locks (the fangs) are designed to touch the soft tissue (skin) to remind the wearer to raise their mandible and thus change their habits. However, they have the potential (if the jaw is dropped) to hurt and damage the soft tissue, which will then swell so that the soft locks touch the soft tissues even in a well-adjusted “home” position. This can make it difficult to wear the appliance at all. Therefore, care must be taken to accommodate to this appliance with conscious (awake) wear before attempting unconscious (sleeping) wear.

Everyone is different, however we recommend that this appliance is not worn when asleep for the first month, when it should be worn during the day instead. Build the daytime wear up to approximately 8hrs a day during this period before attempting alternate nights at about 2 weeks

and then every night for the next 2 week period thereafter. Once night wear is mastered it is possible to cut down the day wear but remember that it is an advantage to maintain a minimum of 4-6hrs daytime wear whilst becoming accustomed to nights.

The hybrid appliance eventually needs to be worn for about 10 or 12hrs during the treatment phase. Which is usually at night plus some conscious, daytime, hours.

If the appliance is ever uncomfortable in the morning it should not be worn the next night but then for 4-6hrs of daytime wear to compensate for this. If large sores develop all night wear should stop, use hydrogen peroxide mouthwash 4 to 5 times a day to help. Again, compensate with 4-6hrs of daytime wear and contact a member of the team.

Never just stop wearing the appliance!!

Appliance conversion

The appliance has a screw in the roof of the mouth to generate the expansion, which clearly occupies tongue space. Once the desired expansion is achieved, usually around 5mm, which takes about 50 weeks without problems (we do not start turning immediately when the brace is fitted), it is important to remove the screw and convert the brace design to give additional tongue space. This has to be done in the laboratory by our technician on a day that she is here and will require a few hours of waiting.

Pre-expansion

As a rule of thumb, we have found that people with narrow dental arches and older people (it becomes harder after 16 and much harder over 30) find the volume of the hybrid appliance difficult to accommodate to. In general people lack tongue space so can struggle with an appliance which occupies tongue space and until you can accommodate to this appliance it is not possible to start any expansion. As such we sometimes have to undertake some pre-treatment expansion prior to the hybrid therapy.

For this we use an upper ALF and a lower Biobloc expansion appliance. Clearly there is a greater risk of expanding out of the balance zone using these appliances which mean people need to work harder and must then work well with the hybrid. The cost of any pre-expansion is not covered with the hybrid approach, we usually add an additional £650 for this.

Active retention

Please review this section in the Orthotropics Clinical Information sheet.

Additional appliances

There are a range of small discrete additional appliances which may be given to assist postural and functional change, usually worn in the lower jaw during the day. We reserve the right to change additional funds for such appliances and treatment involved.

Cost

This treatment costs are £6100 or £5500 (if we are free to use your images but never name) for 24 months of therapy, after which we change to our sessional rate which is currently £120 per session (approximately 15-20min) plus the cost of any additional appliances.