

How Much Forward Facial Growth Possible?

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In 1938 when X-rays were first used to assess skeletal changes during orthodontic treatment an orthodontist called Brodie used the X-rays taken by Downs to assess the skeletal changes during treatment. He found that moving the teeth had little effect on the basal skeleton and concluded "The most startling find was the apparent inability to alter anything beyond the alveolar process" [1].

This has directed orthodontic treatment ever since and current treatment is largely mechanical and surgical with the objective of aligning the teeth perfectly. Back in the 1970's I studied the X-rays shown in various orthodontic journals, and found there was a slight but constant tendency for the jaws to be taken back and down, in a proportion of cases this movement was quite large.

This stimulated me to research vertical facial growth and I found that it was widespread and did not appear to be inherited. I spent the next few years exploring possible factors that might influence the growth of the jaws, and in 1981 published a paper about the 'Tropic Premise' there I drew attention to the work of Horowitz and his colleagues on Identical twins in 1960. He had found that there were "Highly significant variations in the anterior cranial base, mandibular body length, total face height, and lower face height". These are the very aspects associated with vertical growth [2].

This may be ancient research but it strongly suggests that vertical growth is nothing to do with the genes. In fact, it is far more likely to be environmental. So, I looked for possible factors and soon realized that it was probably modern life style as animals did not seem to be affected and as Knockow and Winkler (1932) demonstrated the severity of malocclusion is closely related to human standards of living. They found that at that time wealthy life styles resulted in 33.3% of malocclusion, middle class life styles resulted in 28.5% of malocclusion while poor life styles had 19%.

Having decided that vertical growth was environmental I then looked for those factors most likely to cause vertical growth. I discussed this in my paper the "Mastantlos Hypothesis" which I think is one of the most significant orthodontic papers but sadly has only been published in Japanese. Here I decided it was due to three life style factors: 1. Living in houses, 2. Eating soft food, 3. Cup spoon and bottle feeding before 28 months.

I then designed a series of appliances that could overcome these problems. I called these the Biobloc series and have since found that they are able to create 30 or more millimetres of forward facial growth. This does however depend on the skill of the clinician, the age of the patient and the cooperation of the patient, given these I am sure this potential exists in every human child.

Over an inch of forward growth will cure almost all Sleep Apnoea, as well as Temporomandibular Joint problems and will provide space for 32 teeth with an attractive face. ENT surgeons will find this opens the nasal airway and prevents 'Glue Ear'. While most appro-

priate for the young, teenagers and above can gain great benefits including an improvement in Sleep Apnoea and Jaw joint problems at almost any age.

Bibliography

1. Brodie AG., *et al.* "Cephalometric appraisal of orthodontic results - a preliminary report". *The Angle Orthodontist* 8.4 (1938): 261-351.
2. Horowitz EP., *et al.* "Cephalometric study of craniofacial variations in adult twins". *Angle Orthodontist* 30.1 (1960): 1-5.

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