Dr. Chris Baker Seminars

Changing the world ~
one smile at a time

**iOrtho? ---- Why Interception?**

- in any order:
  - Self-view/esthetics: beautiful children
  - Easier for the patient and parent: compliance
  - Less extractions and surgeries
  - More stability
  - Growth that follows your treatment as guide
  - Less compensation and adaptation
  - Occlusion: healthy occlusion for lifetimes

**What do we know?**

- **Self-view/esthetics**: beautiful children
- **Easier for patient and parent**: compliance
- **Less extractions and surgeries**
- **More stability**
- **Growth**: follows treatment as guide
- **Less compensation and adaptation**
- **Occlusion**: healthy occlusion for lifetimes
What do we know?
We know that:
• conventionally, orthodontics has been done in permanent dentition.
• many attempts have been made to change growth during the pubertal growth spurt with varying and usually less-than-satisfactory success.
• treatment during or before growth can and does improve growth direction.

What do we know?
20-25% of adult patients have signs and symptoms of occlusal dysfunction, and many to most have had orthodontic treatment in permanent dentition.

What do we know?
We know that:
• It is possible to diagnose and prognose orthopedic(skeletal) problems as early as birth.
• That which is diagnosed should be treated as soon as feasible.
• The earlier the treatment of dysfunction, the earlier normal function and morphology can be developed, which increases the potential for normal growth.

What do we know?
The earlier the orthopedic treatment, the more reduced is the need for extractions and orthognathic surgery.

What do we know?
The earlier the orthopedic treatment, the increased stability and esthetics of the final result.

What do we know?
The younger the child, the greater the opportunity for cooperation with appliance wear.
**Functional Matrix Theory – Melvin Moss**

The functional matrix theory

- Form follows function.
- First introduced by Melvin Moss 50 years ago.
- Attempts have been made to test the validity
  - Mixed results according to the science.
- Science: 70% invalid, according to Dr. Ioannidis

---

**Functional Matrix Theory – Melvin Moss**

- Study:
  - Looked at role of neuronal function in craniofacial development. (testing Moss’ theory)
  - Results: midface retrusion accompanied neuronal dysfunction in mouse model
  - Restoration of neuronal function in the mice → normalization of midface development


---

**Functional Matrix Theory – Melvin Moss**

- Results:
  - Histological analysis of the cranial base:
    - Abnormal development of the synchondroses underlies the attendant midface retrusion
  - In neuronal dysfunction = absence of hypertrophic chondrocytes in the synchondroses
  - Hypertrophic chondrocytes are functional during endochondral bone formation to the recruitment of osteoblasts, vascular cells, and osteoclasts and thus cause growth plate development.
  - Restoration of neuronal function → normalization of cranial base development.


---

**Functional Matrix Theory – Melvin Moss**

- Conclusion:
  - Taken together, our studies suggest that neuronal function is critical for normal midface development,
  - Underscoring the importance of the functional matrix theory as originally proposed by Melvin Moss.

Functional Matrix Theory – Melvin Moss

- Conclusion:
  - Taken together, our studies suggest that neuronal function is critical for normal midface development,
  - underscoring the importance of the functional matrix theory as originally proposed by Melvin Moss.

What is the cause of malocclusion?

- Many theories over the last 100 years,
- Most have stated that it is inherited.
- More recently, greater emphasis on the environment,
- especially the activity and the posture of the oral soft tissues.
- Unfortunately, it is not possible to measure long-term posture with any precision,
- and this has reduced its perceived importance.

What is the cause of malocclusion?

- This article undertakes a philosophical examination of the conflicting strands of evidence that link oral posture with malocclusion,
- hoping to create a theory based solely on the restricted evidence that is broadly accepted by all sides in this age-old debate


What is the cause of malocclusion?

- So, what is the cause of malocclusion?
- Is it function
  - (posture)?
  - (airway)?
- How does the functional matrix contribute?

In diastema, there is a failure of fibers to migrate apically

Which results in a residual band of tissue between the MX centrals.

The residual persisting frenal fibers also attach to the periostereum and to the internal connective tissue in the V-shaped MX suture.

- A low-pull
- or deep-pull frenum results

A low-pull or deep-pull frenum results

And a diastema is born.

- Functional matrix  \(\rightarrow\) malocclusion.
You have the opportunity to change the functional matrix

- before it has so negatively impacted the growth
- and provide a positive direction for the growth

You have the opportunity to change the functional matrix

- It is easy and can be life-transforming
  - IF
    - you get complete data (records)
    - and a complete work-up of information
    - and treatment plan based on these findings,
      especially:
      - Face type (growth direction)
      - Adverse functional matrix findings
      - Early-enough growth direction

Why iOrtho? ------

- Give your child patients a beautiful self-view
- Give their parents the most beautiful children
- Make it easier for the patient and parent: compliance
- Need less extractions and surgeries
- Provide more stability
- Have growth follow your treatment as guide
- Help your patients need less compensation and less adaptation
  - and –
- Create healthy occlusions for lifetimes!

Think about how comfort and your concern allows your patients and their parents to feel.

Our objective must never waver.
Transform your life through transforming lives.

Transform your life through mastery and excellence.