

Clinical program

PUL Concept: 4D harmonization – by Dr Élie CALLABE

A global approach: physiological, functional, orthopedic and psychological.

PUL's family consists of PUL 1, PUL 2, PUL 3, PUL Twin, PUL W retainer, PUL Snorlight and PUL Helix.

Orthodontic malocclusions are medical syndromes. Like any medical treatment, orthodontist has to treat the causes of the disease. In children's malocclusion, the cause of the syndrome is usually a functional disorder. The aim of orthodontic treatment is to treat the causes and symptoms by using a multi-actions appliance for **global 4D harmonization: functional, sagittal, transverse and vertical.**

The PUL (Propulseur Universel Light), the concept of free occlusion: A new generation removable mandibular advancer, comfortable, light, aesthetic for **maximum efficiency and compliance.** According to the authors, the cooperation with the classic activators would be 30%. Our statistics from 2010 till 2014: on 565 patients the rate of cooperation is **92%** for all the ages.

Goal ► Transform the difficult case into a simple Class I without extractions with favorable and harmonious growth.

The different types of treatment



PUL 1, PUL 2 & PUL Twin

- **Class II hyperdivergent** multi functional disorders: Restore functions (chewing, breathing, swallowing) and promote anterior rotation of the mandible. Transforming an unfavourable facial growth in favourable and harmonious growth. «Change the function to change the shape» (Linder Arronson).
- **Class II hypodivergent:** Concept of propulsion and posterior disclusion inducing a temporary neutralization of muscular and occlusal forces which induces rapid correction of Class II with natural eruption of the molars.
- **Difficult Class II** transformed into easy treatment of Class I without extractions:
 - Class II and ectopic canines: distalization of upper molars using mandibular anchorage concept: the PUL'Teens.
 - Class II subdivision.
 - Class II division 2, Brodie or «Scissors bite».



PUL 3

- **Class III:** Can we apply the same concept for interception of Class III? Benefit of the PUL 3 «a maxillary advancer», an upper mesialization in case of agenesis of 12-22.

«Use the problem to make a solution»



PUL W retainer

- **The anti-relapse stabilization:** according to the authors, between 20% and 30% of cases relapse: can we avoid it? Benefits of anti-relapse 4D retainer: the PUL W.



PUL Snorlight, anti-sleep apnea

- **Snoring and sleep apnea:** indication of mandibular advancer: why prescribe PUL?



PUL Helix

- **Fixed appliance** for Class II, combination: RPE (rapid palatal expansion) + fixed advancer.

Benefits of PUL concept: Harmonization of orthodontic practice and relationship between patient and care team: increasing satisfaction, compliance and patients' loyalty, more comfort, serenity, profitability and enhancing the professional image of orthodontic team.