

AMCOP[®]
BIO ACTIVATOR

By Micerium



*Naturally
Orthodontics*



A modern orthodontic treatment must pursue an ideal and harmonious alignment of the teeth guided by the growth of the jaws in order to obtain not only an excellent aesthetic result but also occlusal and functional stability. The orthodontic treatment must also be in harmony with the child's postural development. We are talking about a team therapy where the orthodontist will work on the dental and skeletal system, re-establishing the relationships between bones and teeth by stabilising them with elastodontic treatments; the gnathologist will control the occlusal contacts; the speech therapist will work on the neuromuscular component linked to tongue posture with the aim of restoring the order and balance of the orofacial structures and achieving longer-lasting orthodontic results, and the osteopath will look after the patient's postural balance, which must be in harmony with the changes brought about in the mouth by orthodontic therapy.



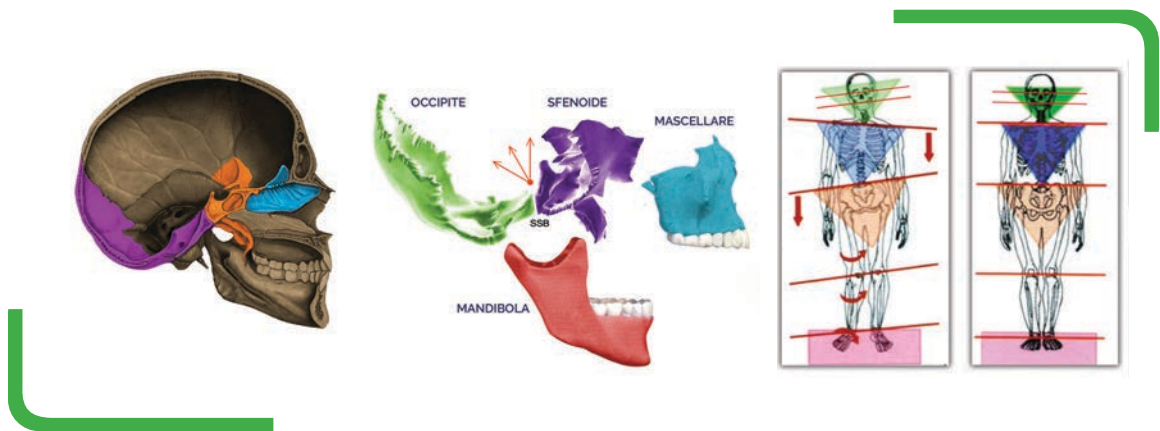
**“Treatment must be early
and it is nonsense to wait for the eruption
of the permanent teeth.”**

SOULET BESOMBES (1950)

A BALANCED MOUTH FOR A HEALTHY BODY

THE SFENO-BASILARE SYNCHONDROSIS

The posture originates in and from the skull, from the sfeno-basillare synchondrosis (ssb), skull-facial growth main position and primary centre. The ssb represents a convergence location of the other skeletal parts rotation axes; the ssb is also the position of flexed extensions, rotations, latero-flexions and twists between the occiput and the sphenoid.

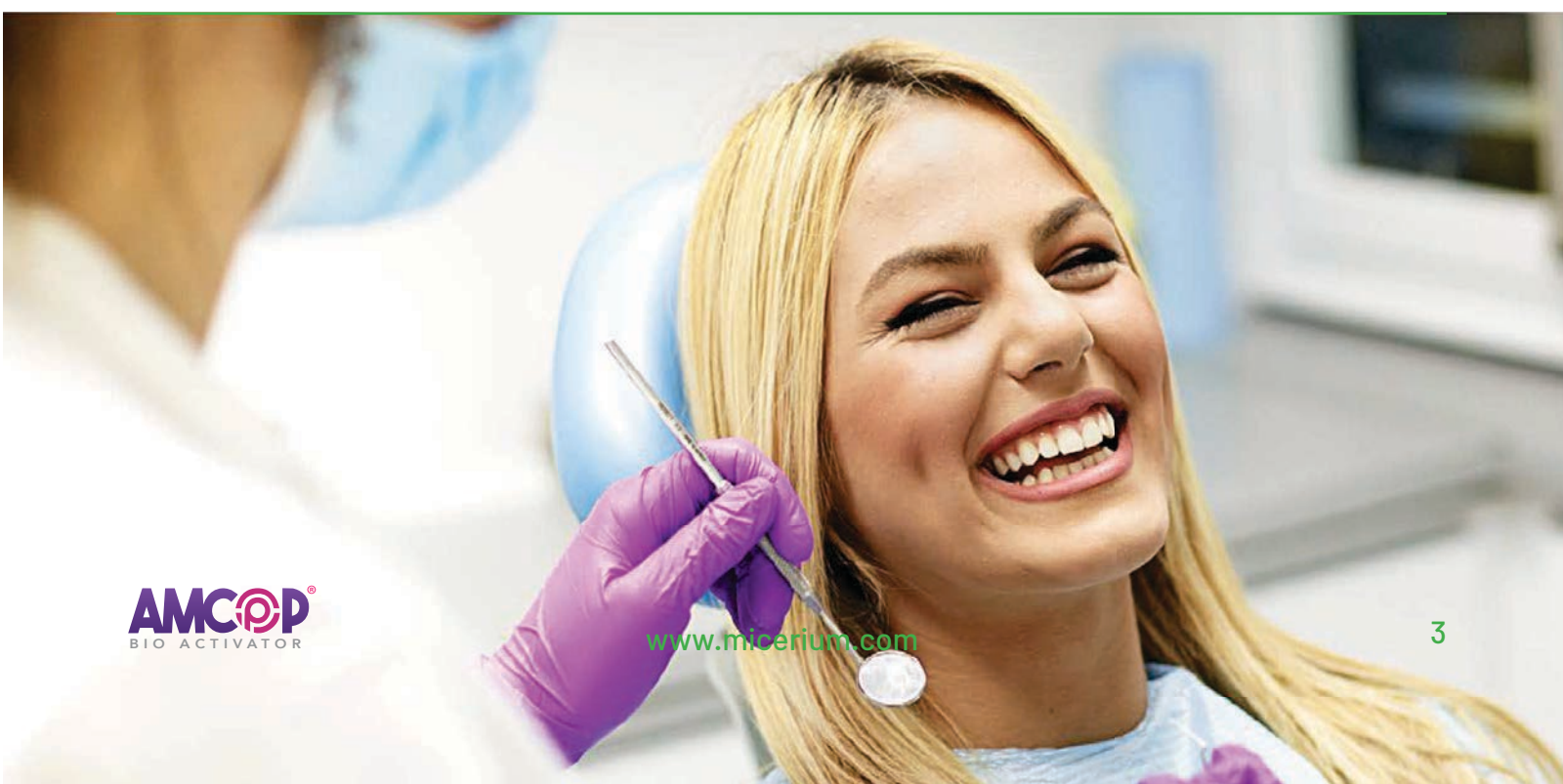


AESTHETICS & DENTISTRY



Contemporary orthodontics is based on two important fields of discussion: the aesthetic and the orthodontics with a minimally invasive approach. The minimally-invasive techniques have an important role in helping dentists to obtain an excellent aesthetic. With "Bio orthodontics" we refer to a new approach of the orthodontic therapy respecting important precepts as the minimal-invasiveness, the oral tissues respect and

the treatment simplification; so, we are talking about preventive and interceptive orthodontics, whose aim is the skeletal malocclusions treatment at their appearance, with appliances that require minimal collaboration by the young patients; but, at the same time, we are talking about an awareness to an adequate facial structure physiological growth.





PEDODONTIC ORTHODONTICS

Orthodontics starts at an early age (from two years and a half on) and it provides the best results enables to correct a skeletal defect that could worsen with growth. In fact, with “early” or “interceptive” orthodontics we refer to a treatment accomplished with prevention purposes with the aim to intercept and solve the malocclusion, or a skeletal bone disharmony, in order to avoid aggravation of the problem.

BENEFITS

- Restoration of a correct nasal breathing;
- correction of mal position of the tongue in swallowing;
- guide to an ideal occlusal relationship;
- correction of skeletal problems that can negatively affect the growth and the posture of the child.

The early orthodontic treatment is closely linked to the more general concept of growing patient prevention of, not only the dental malocclusion, but also from the postural diseases.

WHY?

Today orthodontics has completely changed and is involved, in collaboration with the pediatrician, in the study of growth and development of young patient. But the skull-facial growth must not be confused with the physical one because they are two different concepts: indeed, a patient who has finished his growth in height and is two meters tall, does not mean that he has finished growing even at the level of maxillary bones, and vice versa. What's the difference between a two year old and a twelve year old? The difference is in one little word: the growth, that must be followed, managed and used if we want to get the maximum benefit from it. The dento-skeletal malocclusions, being disharmonies of multifactorial origin, (both genetic and environmental) of evolutionary and worsening character (they start in simple form and evolve into a complex one), difficultly, if they are not intercepted at a young age, can improve in adulthood; and indeed, almost always, the opposite. Unfortunately, very often the growth doesn't help us and plays against us. Certainly early treatments represent an important form of prevention, because even if there isn't a complete solution of the problem, there will be surely an improvement of it from the initial condition, as well as a restriction of the malocclusion worsening. Summing up, the early orthodontic treatment (from two years old) is important because it harmonizes the growth of the jaws and the posture of the child, but also because it decreases or eliminates the need of a second treatment phase and, above all, it improves the young patient self-esteem.

ELASTODONTIC THERAPY

The elastodontic is the orthodontic therapy that exploits the light and biological elastic forces to correct malocclusion in young patients and in adults, eliminating functional disturbances and correcting teeth position. The elastodontic therapy plays a role of primary importance in the context of modern dentistry. The preventive and interceptive orthodontics establishes early age treatments, during the most active stages of the skeletal and dental growth, when skeletal structures are characterized from remarkable plasticity and adaptability, aimed at removing the factors considered responsible for dental malocclusions.

The therapy through elastodontic appliances represents an extraordinary treatment that presents several insications.

The AMCOP appliances have been designed respecting all the elements for a functional occlusion, and they are suitable to perform a skeletal and dental action; the Bio-Activators AMCOP act at the same time on both arches and simultaneously shortens the duration of the treatment and better, with a more stable correction. The advantages derived from the Elastodontic Therapy are surely remarkable; the most important thing is the possibility to cure patients who, until today, weren't absolutely taken into consideration for their age (2,5 years). Thanks to the AMCOP Bio-Activators three-dimensional aspect, the results are quick and organic in a three-dimensional reality as the oral cavity; in most cases, the traditional appliances have a two-dimensional function, producing an incomplete therapy with a high risk of relapse. The Elastodontic Therapy is considered an important step forward in the preventive orthodontics, since it is able to solve most orthodontic problems (90%) in a simple way, transforming most of these cases in ideal occlusions, under aesthetic and functional profile.

LOW FRICTION

OPTIMAL STRENGTH

DIRECT BONE REABSORPTION

BIOZONE

MUSCLES

SOFT TISSUE

BONE

THE ELASTODONTIC
SPACE



ELASTIC ORTHODONTIC REHABILITATION SYSTEM®

THE AMCOP BIO-ACTIVATOR CRANIUM-OCCLUDED-POSTURAL MULTIFUNCTIONAL HARMONIES T.N.S. NEUROSENSORY TRANSMITTER

There is the shape's birth for a need of our body to dispatch a function.

ELASTIC ORTHODONTIC APPLIANCE WITH FUNCTIONAL, ORTHOPEDIC, SKELETAL, ARTICULAR (TMJ), NEUROMUSCULAR, OCCLUSAL AND POSTURAL CHARACTERS.

The AMCOP treatment is really simple, natural, innovative and non-invasive and it can be considered an extraordinary bio-orthopedics oro-skull-facial. Indeed it is an elastic orthodontic appliance with an important therapeutic value, specifically orthopedic of the dental-craniofacial system.

It is a simultaneous distortions harmonizer of the mandibular and maxillary skeletal basis, and it is suitable for the occlusal surfaces leveling for a mouth good balance. The appliance is also an efficient deconstruction work tool able to solve muscle-tensive and skull-cervical-mandibular several problems; it is also indicated for the temporomandibular joint rehabilitation (TMJ). If it is correctly used, it is also able to produce physiotherapeutic, anti-inflammatory and reparative processes, that go beyond the simple occlusal treatments, and that give to the patient the possibility to eliminate unbalances of symptomatic and psychological nature.

The line also includes

3 Appliances for specific needs:

- **ELASTOOSAS:** appliance for night snoring;
- **OPEN:** appliance for the treatment of arches with skeletal malocclusion of the anterior open bite type (Open Bite);
- **INTEGRAL PLUS:** appliance for the treatment of patients with multi-brackets orthodontic therapy.

DECIDUAL TEETH



FIRST CLASS



SECOND & THIRD CLASS



SPECIFIC BIO ACTIVATOR



THE A.M.C.O.P. BIO-ACTIVATORS

The AMCOP Bio-Activators constitute the synthesis of all existing functional activators and are suitable for a personalized functional rehabilitation of the patient. They provide a systemic and correct view of the treatment, as the appliance acts as a harmonious growth of the dento-cranio-facial system stabilizing result.

The Bio-Activator rehabilitative action is reflected on all the stomatognathic system: teeth, alveoli, chewing muscles, TMJ, cheeks, lips, tongue, soft tissues, salivary glands, mandibular and maxillary bones, innervation and vascularization, so the dento-cranio-facial and cervico-postural systems. So, the appliance corrects the bad habits and the cranio-facial dysmorphism, true malocclusions causes.

THESE APPLIANCES DO NOT REPLACE THE CLASSIC ORTHODONTIC THERAPIES, BUT THEY AIM TO INTEGRATE IN THE TREATMENT FOR A MORE COMPLETE ORTHODONTICS, THAT IS NOT LIMITED TO PROCURING STRAIGHT TEETH, BUT ALSO DEALS WITH ALL THE STRUCTURES THAT FORM THE STOMATOGNATHIC SYSTEM. So, it is possible to intervene with other appliances for the correct teeth alignment on skeletal harmonized structures.

The appliance is INDICATED to improve neurovegetative oro-pharyngeal functions, sucking-swallowing, chewing, phonation and breathing to improve the nose-ventilatory function with a return to the nose-oro-larino-pharyngeal normal function. The appliance is also recommended to patients with bruxism and nocturnal snoring.



A.M.C.O.P. BIO ACTIVATOR

DESCRIPTION OF THE APPLIANCE



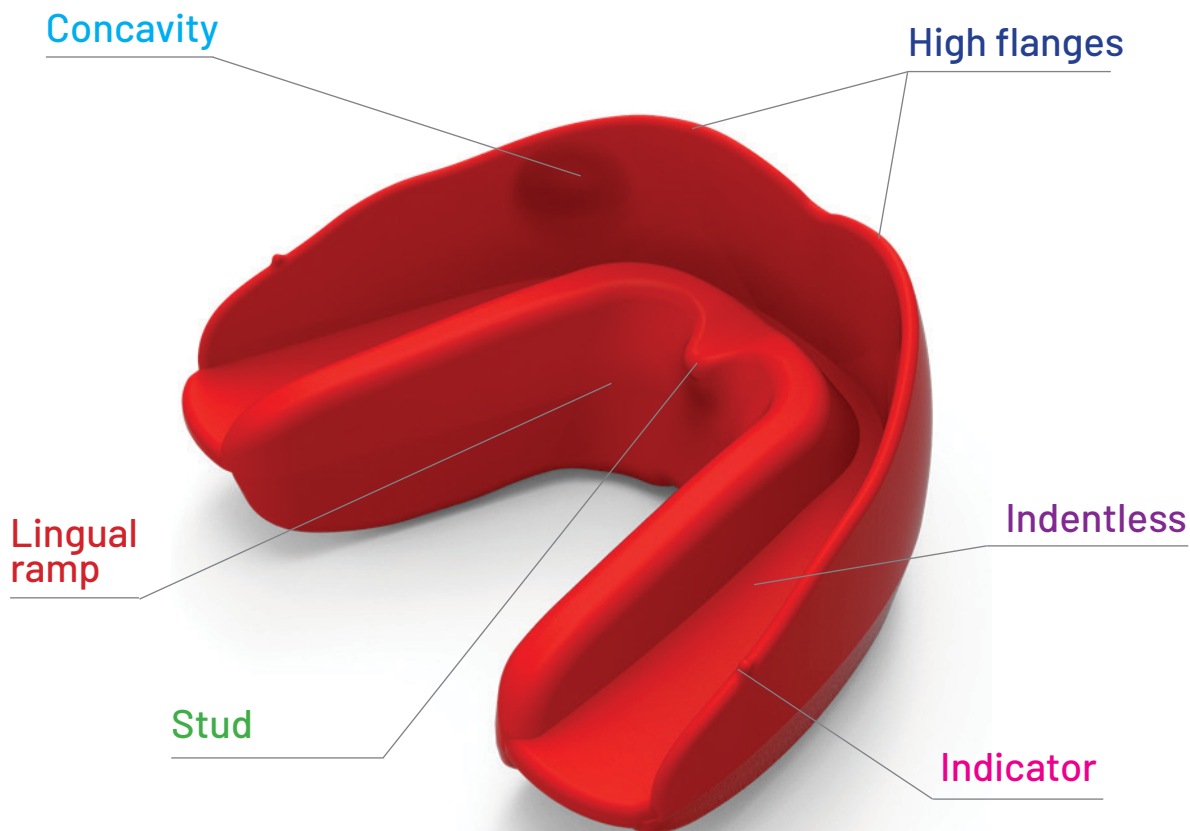
The new AMCOP Bio-Activators are appliances made with fully elastic and thermoactive materials. They have a vestibular flange and a lingual flange that leaves a free central area in which teeth have the possibility of positioning without any kind of constraints. These two flanges are connected between them through an occlusal guide, with the aim to keep the two arches in ideal occlusion, simulating a Class 1 relationship and with a propulsive and retropulsive effect. The AMCOP Bio-Activators don't have indentation. In this way, both the dental arches are involved at the same time, with an orthopedic multidimensional action; this stabilization in a multidimensional sense is made possible by a vertical, transverse, sagittal and torsional action.

In young patients this is a natural method, because teeth are not forced, but they are simply oriented in the prepared guides, encouraging in this way, a correct dental eruption in a correct bone-tooth-alveolus relationship during the phase of the jaws harmonic growth towards an ideal shape. It is a remarkably effective method, because the appliances performs a gentle and continuous action on the teeth, supporting their displacement exploiting the great elasticity of the materials used.

MATERIALS

The appliance is made with a blend of polymer/elastomer. The material is very elastic, soft and non-deformable. Moreover, it is thermoactive, adaptable to different kind of arches. It is possible to modify possible interferences caused by the flange, with instruments that perform heat. There is also the possibility to expand the appliance, by immersing it in hot water at about 70 degrees Celsius for thirty seconds. To fix it with the new shape, just immerse it in cold water. You can easily make retouching or shortenings with rubber and brush, and you can add gloss with a flame gun. The materials are available with different consistency of Shore gradation, 51 and 60 Shore. The choice of hardness is dictated by the operational needs that the clinical case presents.

DESCRIPTION OF THE APPLIANCE



Indicator: to detect the size of the appliance

Concavity: near the canine crown to avoid interference with them

High flanges: vestibular up to the boundary with the arches with a lip-bumper function and for proprioceptive stimulation of the bone matrix

Lingual ramp: tongue guide on the palate

Stud: for the correct positioning of the tongue on the palate

Indentless: for a specifically orthopedic action of the jaws

LIMIT

The Bio-Activators will not rotate canines, premolars and molars, they don't correct the position of the transversal axes, mesialized teeth or the severe skeletal dysmorphism.

MERIT

The Bio-activator never causes caries, even without a good oral hygiene, and it never provokes periodontal lesions. The appliance doesn't consider the extraction of healthy teeth when there are dental crowdings in the arch. In the years of experimentation there have not been reported cases of root resorption.

THE THERAPY

The therapy is based on the functional balance of the bucco-dental apparatus, in association with functional exercises. You can talk about functional therapy only when the patient performs a gymnastic through voluntary muscles exercises (guaranteed by the Bio-Activators plastic effect). The activator's use is established both, day-with active phase exercises- and at night-in passive condition. For about a week the activator has to be used only during the day. The patient has to perform nasal breathing and swallowing functional rehabilitation exercises continuing with the nibbling action for a period of 20/30 minutes at maximum, three times a day. After about a week, you have to wear the activator also during the night, allowing the patient, oral breathing, to start breathing through the nose. It is possible, during the first nights, that patients loses the activator, above all patients who breath through the mouth, but with a permanent use they will manage to keep it all night. Upon awakening it is possible to feel sensitivity to the incisors, especially the lower ones, but with the activator removal, this feeling will fade in about 30 minutes.

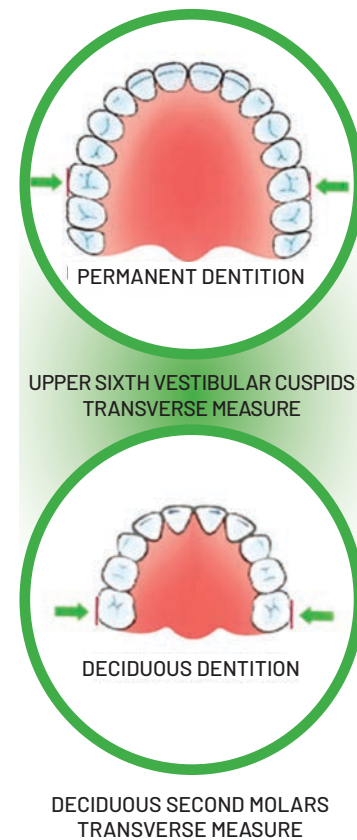
ADVICE

The appliance must not injure cheeks or gums; if it happens, it will be necessary to make adjustments. It is important, during use, to keep the teeth always clean, to avoid bleedings due to the gingivitis. During the appliance use, you shouldn't feel sensations as: strong tension, contraction, teeth, mouth, neck, back pain...

MAINTENANCE

The activator hygiene should be done daily with natural mouthwash (without alcohol), immersing the retainer for a few minutes and leaving it to air dry. Alternately it is recommended to immerse the activator in a container (water glass) and disinfectant tablets. In case of mucous membranes various types allergic reactions, it is recommended to stop the treatment and to consult the dentist who prescribed it. The retainer has to be replaced if torn or flat or when it loses its effectiveness, due to usage deformations, every 4-6 months at maximum.

HOW TO FIND THE CORRECT ACTIVATOR MEASURE



INDICATIONS BASED ON AVERAGE STATISTICAL DATA*

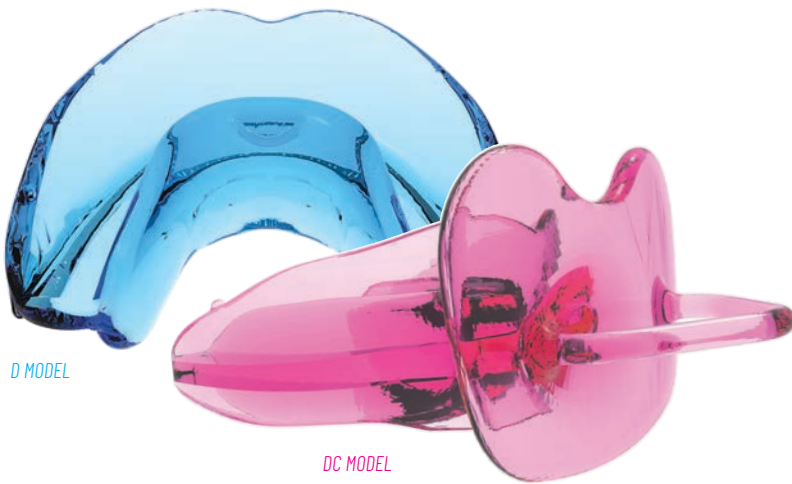
AGE	MODEL	DENTURE
3-5 years	D....	Decidual Dentition
5-7 years	Mis. 1	Decidual And Mixed Dentition
7-9 years	Mis. 2	Mixed Dentition
9-11 years	Mis. 3	Mixed Dentition
11-14 years	Mis. 4	Permanent Dentition
14+ years	Mis. 5	Ermanent Overlapping Dentition

*varies according to the shape of the mouth

RANGE PRESENTATION

The activators have different colors-referred to skeletal classes and arches morphologies - and abbreviations. The activator's dimension is identified by the transverse distance that separates the vestibular cusps of the upper sixths. On the upper flanges edges, corresponding to the first molars, there are two buttons as a reference for the appliance transverse dimension. Moreover, the activators are designed for deciduous mixed and permanent dentitions, and are suitable from 3 years on.

BIO ACTIVATOR • DECIDUAL TEETH



In children, prevention becomes the first rehabilitation form for the child's health and also for the general psycho-physical well-being.

D MODEL

Is particularly important in the dentoskeletal growth stimulation for very young children with different types of arches, with skull and facial distortions for the neuromuscular system reconditioning when the teeth are closed during the night hours.

DC MODEL

It is characterized by an external grip that makes it similar to a pacifier to make the appliance's use particularly pleasing to the young patient from the psycho-emotional point of view.

DECIDUOUS TEETH INDICATIONS

- Used in deciduous teeth
- It develops a functional, orthopedic-osteopathic action
- It corrects the dental arches deviations
- It corrects the bilateral and monolateral cross bites
- It corrects anterior open bites
- It corrects the dysfunctional bad habits
- It places the tongue in a correct posture at the palatine spot
- It improves swallowing and nasal breathing in oral respirators
- It eliminates any tongue and muscles disturbance on teeth
- It is indicated for thumb sucking
- It determines a teeth pre-alignment

MEASURES & CODES

MODEL		1/45 mm	2/49 mm
DA	Light blue	BIO-DA1	BIO-DA2
DCA	Light blue with Pacifier	BIO-DCA1	BIO-DCA2
DR	Pink	BIO-DR1	BIO-DR2
DCR	Pink with Pacifier	BIO-DCR1	BIO-DCR2



BIO-ACTIVATOR • FIRST CLASS



The class 1 appliances are divided in four types of arch shape. They are engaged in basal skeletal disharmonies, responsible for horizontal occlusal deficits, as transverse insufficiencies, or vertical ones, as open or deep bites, where there aren't alterations from class 2 and 3 dental classes.

F MODEL

Adapted shape to a complete cranial morphology with narrow palate and high and dental arches, frequently in the tall/thin subjects with oval facial contour.
Cranial index: dolichocephalic

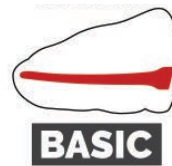
S MODEL

Suitable shape to a more oval cranial morphology and with more rounded dental arches
Cranial index: mesocefalo

CLASS I INDICATIONS

- Used in deciduous, mixed and permanent dentition;
- It influences the neuro-muscular system through a true gymnastic guaranteed by the appliance elastic effect
- It corrects and harmonizes the various arches deviations with a consequent cranio-cervico-mandibular system improvement
- It unblocks the occlusion, balances the TMJ and corrects the meridian lines
- It corrects bad habits, positioning the tongue in a correct posture to the palatal spot and improving the swallowing and the nasal breathing in the oral respirators
- It determines a pre-alignment teeth

OCCLUSAL FLOORS



BASIC



INTEGRAL

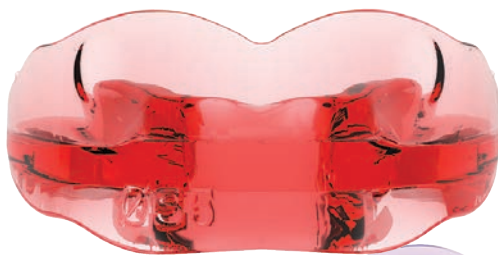
BASIC indicated for the increase of the vertical dimension, for the alveolar ridges remodeling, as it is equipped with a thickening of the occlusal plane in the anterior area.

INTEGRAL indicated for an orthopedic-osteopathic action for the occlusal curves alteration therapy, such as the anterior/lateral deep bite, and for a correct dental arches balance.

MEASURES & CODES

MODEL		1/45 mm	2/50 mm	3/55 mm	4/60 mm	5/65 mm
F	BASIC	-	-	BIO-BF3	BIO-BF4	BIO-BF5
F	INTEGRAL	BIO-F1	BIO-F2	BIO-F3	BIO-F4	BIO-F5
S	BASIC	BIO-BS1	BIO-BS2	BIO-BS3	BIO-BS4	BIO-BS5
S	INTEGRAL	BIO-S1	BIO-S2	BIO-S3	BIO-S4	BIO-S5

BIO-ACTIVATOR • FIRST CLASS



ØS MODEL



C MODEL

ØS MODEL

Suitable shape to a squared-like cranial morphology, which characterizes a face with pronounced traits, frontal drift and prominent mandibular corners, square chin with squared-shaped dental arches

Cranial index: mesocefalo

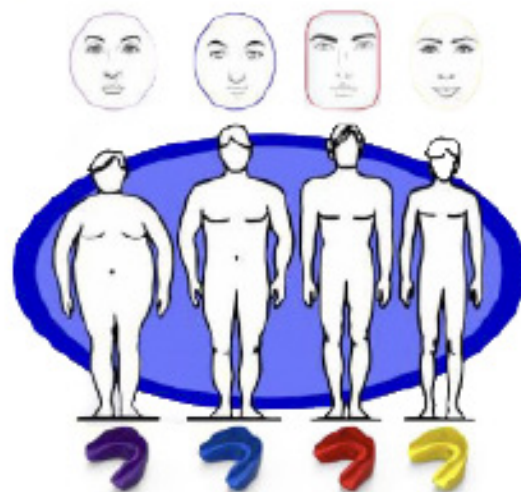
C MODEL

Suitable shape for an expanding cranial morphology with wide and rounded dental arches with a low palate, typical of a face roundish contour, in a burly subject.

Cranial index: brachycephalic

FIRST CLASS INDICATIONS

- It eliminates the tongue and muscles interferences on the teeth
- It is indicated for thumb sucking
- It is indicated in bruxism and nocturnal snoring
- It is indicated for the bilateral and monolateral cross bites
- For muscle-tensive problems as headache, articular pains, neck pain...
- It is indicated for the dental arch expansion
- It is indicated also like restraint and for the relapse arch treatment after therapy with multibrackets



MEASURES & CODES

MODEL		1/45 mm	2/50 mm	3/55 mm	4/60 mm	5/65 mm
ØS	BASIC	BIO-BØS1	BIO-BØS2	BIO-BØS3	BIO-BØS4	BIO-BØS5
ØS	INTEGRAL	BIO-ØS1	BIO-ØS2	BIO-ØS3	BIO-ØS4	BIO-ØS5
C	BASIC	-	-	BIO-BC3	BIO-BC4	BIO-BC5
C	INTEGRAL	BIO-C1	BIO-C2	BIO-C3	BIO-C4	BIO-C5

BIO-ACTIVATOR • SECOND & THIRD CLASS



CLASS 2 and 3 INDICATIONS

- It is used in deciduous, mixed and permanent dentition
- Functional, orthopedic and osteopathic action
- It corrects the arches deviations with a cranio-cervical-mandibular system improvement
- It unlocks the occlusion balancing the TMJ and corrects the midline lines
- It corrects the dysfunctional bad habits
- It positions the tongue in a correct posture at the palatine spot
- It improves swallowing and the nasal breathing in oral breathers
- It eliminates any interference of the tongue and dysfunctional orbicular muscles on the teeth
- It is indicated for thumb sucking
- It determines a teeth pre-alignment

SC MODEL

Appliance for the Angle skeletal Class II treatment. It corrects the Class II skeletal classes repositioning the jaw in a Class I key.

It is indicated for the Class II dysmorphism for the retrognathia mandibular treatment to influence the progress of the jaw (in retrusion) with a well-defined orthopedic effect. It was designed with a mandibular anterior sliding plane that places the incisors edge to edge, providing a lengthening of the mandibular bone base with the increase of the vertical dimension in case of deep bite, for the back tilt of the lower incisors and the pro-incision of the upper incisors (overjet) with consequent temporomandibular reconditioning joints.

TC MODEL

Appliance for the Angle skeletal Class III treatment. It corrects the third skeletal classes repositioning the Class I key jaw.

It is indicated in Class III dysmorphism for the mandibular pseudo-prognathic treatment. It is also indicated for inverse and anterior open bites. It is suitable to procure the arches correct functioning in a regular incisive key relationship, through the upper teeth obtained position in an inner sliding plane and, on the contrary, applying a posterior pressure on the inferior arch, to stop the mandibular growth action. It reconditions the anterior segment, controlling dysfunctional muscle forces with a proper labial competence restoration. It is also indicated for a dysfunctional tongue re-education in a correct rest posture and in correct swallowing.

MEASURES & CODES

MODEL	1/45 mm	2/50 mm	3/55 mm	4/60 mm	5/65 mm
SC CLASS II	BIO-SC1	BIO-SC2	BIO-SC3	BIO-SC4	BIO-SC5
TC CLASS III	BIO-TC1	BIO-TC2	BIO-TC3	BIO-TC4	BIO-TC5

SPECIFIC BIO-ACTIVATOR • OPEN



INDICATIONS

Before starting the treatment with the **OPEN** appliance it is necessary, through an accurate cephalometric analysis in latero-lateral projection of the skull telerradiographs, to understand the type of Open Bite that must be specifically skeletal. The specific orthodontic-orthopaedic action, provided by the appliance, occurs through an unblocking of certain craniofacial skeletal structures in anteroflexion movement with the restoration, in equilibrium, of the occlusal plane, with consequent resolution of the anterior open bite (Open Bite). The occlusal plane of the **OPEN** Bio-Activator is raised posteriorly and has the purpose of a specific thrust action on the posterior molars. The occlusal elevation will have a “fulcrum-like” function, which restores the occlusal plane to horizontal. The appliance has been designed with an occlusal guide suitable for different types of arch form.

OPEN is a new elastodontic appliance from the A.M.C.O.P. Bio-Activators line, indicated for the treatment of dental arches with skeletal malocclusion, of the anterior open bite type (Open Bite); which has as its determining cause, atypical swallowing habits and a specific skeletal cranio-mandibular imbalance. The appliance must be prescribed by the orthodontist after a correct diagnosis for a proper planning of the treatment to be performed. It should be noted that this appliance replaces the application of clamps on Class I A.M.C.O.P. Bio-Activators. The appliance is designed with an occlusal guide suitable for different types of arch form. For functional tongue training, as with the A.M.C.O.P. Bio-Activators, there is a button in the palmar area, at the palatine spot (upper retroincisive palatine area).

CONTRAINDICATIONS

- Specific joint problems
Temporo-Mandibular joints (TMJ)
- Dental elements with accentuated mobility of periodontal character
- Full-blown gingivitis.

MEASURES & CODES

1/45 mm 2/50 mm 3/55 mm 4/60 mm 5/65 mm

OPEN BIO-OPEN1 BIO-OPEN2 BIO-OPEN3 BIO-OPEN4 BIO-OPEN5

SPECIFIC BIO-ACTIVATOR • ELASTOOSAS



INDICATIONS

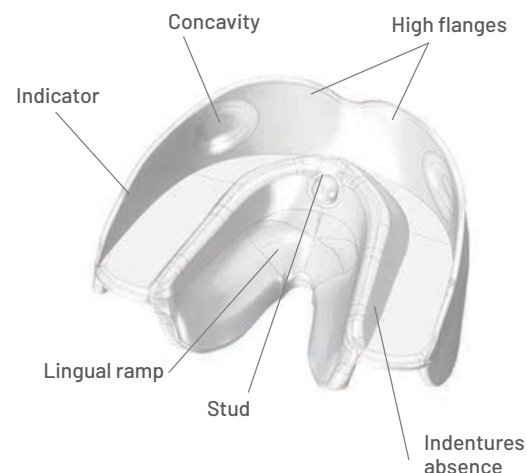
The appliance for snoring at night, **ELASTOOSAS**, consists of two occlusal splints joined together by a sliding and retractable occlusal guide, so that a monobloc type of appliance is composed which is suitable for containing the teeth of the upper and lower dental arch in their entirety. The appliance is designed with an occlusal guide suitable for containing the different types of arch form. They can be distinguished from each other by different colours and abbreviations on the front right of the lower flange. The main elements that make up the appliance, so that the desired action can be achieved, concern, first of all, the shaping of a reference guide to the lower arch which is more forward (protruded) than normal, and an occlusion plane adequately raised to accompany a particular shaping of ramp type, which extends along the entire perimeter of the lower lingual flanges, having the specific function of a true lingual elevator supported by a "reper" (Button) suitable for the stimulus (Input) of the tongue itself in the palatine area, retro-incisive zone (Lingual Spot). These elements are generally decisive for the recovery of a correct nasal breathing, as they allow to further free the pharyngeal area.

ELASTOOSAS** is a new elastodontic appliance from the A.M.C.O.P. Bio-Activators line. It is made of thermoelastic medical material and has the aim of clearing the airways by means of a specific functional action, thus substantially reducing snoring.

The **ELASTOOSAS** appliance is also indicated in case of:

- Bruxism (nocturnal grinding)
- Certain tension problems of a neuro-muscular nature
- Muscle tension headaches in predisposed patients.

** The appliance is recommended for use by dentists with specific training in the treatment of respiratory problems in a multidisciplinary approach with ENT specialists.*



CONTRAINDICATIONS

The **ELASTOOSAS** appliance is contraindicated in the following cases in case of:

- Joint problems Temporo-Mandibular joints (TMJ)
- Dental elements with accentuated mobility of periodontal character
- Full-blown gingivitis
- Can move teeth

MEASURES & CODES

MODEL	1/45 mm	2/50 mm	3/55 mm	4/60 mm	5/65 mm
OSAS	-	-	BIO-OSAS3	BIO-OSAS4	BIO-OSAS5

SPECIFIC BIO-ACTIVATOR • INTEGRAL PLUS



The Bio-Activator **INTEGRAL PLUS** is a new elastodontic appliance from the A.M.C.O.P. line, indicated for the treatment of the dental arches, during the alignment phase of the dental elements that compose them, with fixed appliances as of the multibrackets type. By means of a special guide placed in the inner wall of the upper and lower flanges, suitable to accommodate inside them the different types of fixed appliances with the aim of improving, at the same time as the alignment of the teeth, functional, skeletal, articular and neuro-muscular problems.

INDICATIONS

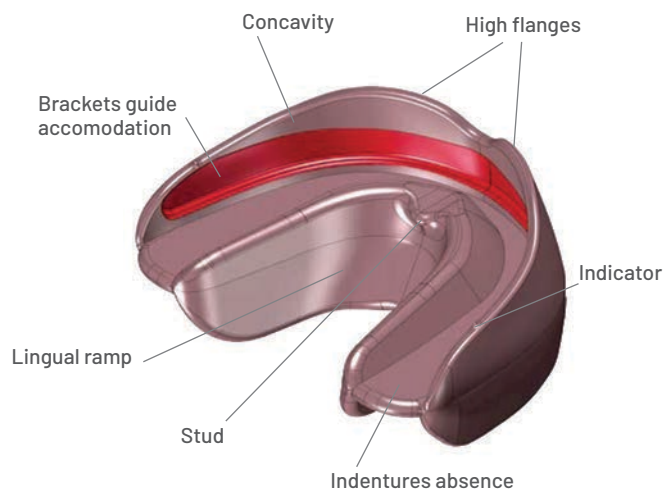
With the use of the **INTEGRAL PLUS** appliance, it will be possible to improve the craniofacial skeletal complex, considering the relationships between the bones of the skull and face, with the teeth and their respective bone bases in a global context that includes the dento-parodontal, skeletal, neuro-muscular and temporomandibular joint (TMJ) systems.

The appliance has been designed with the shaping of a specific occlusal guide, so that it can be adapted to different types of arch shape.

The button in the plantar area corresponding to the palatine spot (upper retroincisive palatine area) is always present for functional tongue education.

The **INTEGRAL PLUS** appliance is also indicated in case of:

- Joint problems
 - Temporo-Mandibular joints (TMJ)
- Bruxism (nocturnal grinding)
- Determined tension problems of a neuro-muscular nature
- Muscle tension headaches in predisposed patients.



CONTRAINDICATIONS

The **INTEGRAL PLUS** appliance is contraindicated in the following cases:

- Presence of steel arches
- Presence of reverse curves
- Presence of inter-arch elastics
- Presence of occlusal elevations
- Dental elements with accentuated mobility of periodontal character
- Confirmed gingivitis

MEASURES & CODES

MODEL	1/45 mm	2/50 mm	3/55 mm	4/60 mm	5/65 mm
INTEGRAL PLUS	-	-	BIO-IP3	BIO-IP4	BIO-IP5

TREATED CASES • DECIDUAL TEETH

M.D.E. female, 2 years old, presented with an anterior Open Bite malocclusion, protracted thumb sucking, atypical swallowing, upper arch contraction.



Parents report difficulty breathing and recurrent colds.

The treatment plan involves the use of a pacifier-shaped A.M.C.O.P. DC elastodontic appliance, which does not require impression taking and is ideal for 2-3 year old patients with obvious malocclusions.

The special appliance is worn passively every night and about 1 hour during the day for about 6 months in order to re-store a Class I bilateral molar and canine relationship and correct maxillary and mandibular development with Open Bite correction. Once the correction of the molar relationship has been achieved, the closure of the anterior Open Bite the appliance will be worn by the patient for about 6 more months in order to continue the lingual re-education and stabilise the result obtained.



TREATED CASES • FIRST CLASS

Patient aged 6,5 years, mild skeletal class I, upper arch contraction associated with atypical swallowing.



The therapy sequence consists of the following steps:

- elastodontic therapy with A.M.C.O.P. Integral F
- speech therapy
- second Elastodontic Step at 9/10 years with A.M.C.O.P. Integral F.



TREATED CASES • SECOND CLASS

R.G. female, 9 years old, presents malocclusion with an upper arch contraction with slight Cross bite on the left and absence of space for the eruption of 12 and 22, mandibular contraction with absence of space for 33-43, dental misalignment, atypical swallowing.



The treatment plan involves the use of an A.M.C.O.P. S **INTEGRAL** elastodontic appliance, which enables the correct development of the jaws, their coordination and correct lingual function. The appliance is worn passively every night and about 1 hour during the day for about 8 months in order to restore a first Class bilateral molar and canine relationship and the correct maxillary and mandibular development with the correction of the posterior Cross Bite and the creation of the correct space for the eruption of 12 and 22.

Once the correction of the molar relationship, the resolution of the Cross Bite and after the eruption of 12 and 22 has been achieved, the appliance will be worn by the patient for about another 8 months in order to continue the lingual re-education and stabilise the result obtained.



Results

The results obtained show the great importance of elastodontic therapy in restoring normal occlusion very quickly, given the plasticity of skeletal structures during the growth peak. The A.M.C.O.P. **INTEGRAL** appliance is also used as a neuromuscular re-educator in order to obtain a dental and at the same time muscular result so that the case remains stable over time.

TREATED CASES • SECOND CLASS

D.E female, 9,5 years old, presented with skeletal Class II malocclusion, Class II molar and canine right and left, Deep Bite.



Malocclusion is the cause of periodontal problems on 41. Skeletal and dental malocclusion is also associated with postural problems, as can be seen from the radiography, which shows compression of the first cervical vertebrae with an increase in the cervical curve created by posterior sliding of the mandible. The therapy through elastodontic appliances allows the recovery of the vertical dimension and the restoration of the correct arch form; the duration of the therapy is about 18 months with restraint that is always with the same appliance for another 7-8 months. Currently, 10 years after therapy, great occlusal stability is found. The resolution of the skeletal and dental malocclusion is associated with a clear recovery of the posture with consequent improvement of the cervical curve, as it is possible to read in the final radiography. Once the correction of the molar and anterior ratio has been achieved, the appliance will be worn by the patient only during the night to stabilise the result obtained and guide the eruption of the permanent dental elements.

Results

The results obtained show bilateral Class I molar and canine teeth and excellent intercuspation, centring of the midline and frenula. Elastodontic Therapy was instrumental in resolving skeletal Class II as well as excess Overbite and Overjet.

The examination of the initial latero-lateral radiography shows the cervical hyperlordosis with hyperextension of the head on the neck, the hyoid bone is positioned down and backwards, note the reduction of the joint spaces C2 C3 C4.

The latero-lateral radiography performed at the end of the treatment shows a normal cervical lordosis and a correct position of the hyoid bone and therefore normalization of the articular spaces between C2 C3 C4. Correct posture was achieved with elastodontic treatment alone.

TREATED CASES • SECOND CLASS

P.B. female, 9.5 years old, presented with skeletal Class II malocclusion, Class II molar and canine right and left, midline displaced left, altered inclination of 11 and 21, inferior crowding with lingualisation of 32.



The mechanism of operation of elastodontic appliances is such that through the more or less high elasticity of the material it is possible to intervene in a three-dimensional way within a reality that is also three-dimensional, such as the oral cavity; unlike the common standard functional appliances able to work two-dimensionally due to an occlusal relationship often altered by the presence of plates or showers that make the therapy less biological by preventing the achievement of intercuspation during the therapy itself.

Materials and Methods

Therapy with elastodontic appliances allows the recovery of the vertical dimension and the restoration of the correct arch form; the duration of therapy is about 18 months with restraint using the same appliance for another 7-8 months.

Currently, 9 years after the therapy, great occlusal stability is found. The resolution of skeletal and dental malocclusion is associated with a clear recovery of posture with consequent improvement of the cervical curve. Once the correction of the molar and anterior ratio has been achieved, the appliance will only be worn by the patient at night to stabilise the result obtained and guide the eruption of the permanent teeth.



Results

The results obtained show bilateral Class I molar and canine and excellent intercuspation, centring of the midline and frenum, correction of the axes of 11 and 21. Elastodontic therapy was determined to resolve Class II skeletal as well as excess Overbite and Overjet. Correct posture was achieved with elastodontic treatment alone.

Conclusions

Preventive orthodontics by means of elastodontic appliances therefore represents an important step forward in the field of developmental orthodontics as it is able to solve most orthodontic problems by transforming many of these cases into ideal occlusions from an aesthetic and functional point of view. With elastodontic appliances it is possible to correct malocclusions and at the same time solve the related postural problems.

TREATED CASES • THIRD CLASS

B.P. female, 3 years old, presented with skeletal Class III malocclusion, Class III molar and canine right and left, anterior reverse bite.



The therapy involves the use of the A.M.C.O.P. TC which is an elastodontic appliance expressly dedicated to the treatment of Class III malocclusions in deciduous, mixed and permanent dentition, between 3 and 12 years of age. Its purpose is to prevent mandibular slippage and to free the premaxilla to obtain a correct anterior relationship, thus creating a Class I occlusion that prevents recurrences of Overjet and Overbite. Another function is to act by stimulating maxillary growth and inhibiting mandibular growth, modifying the Overjet; it is therefore a myofunctional regulator that tends to rebalance muscular forces correctly: it rehabilitates tongue posture, re-educates swallowing and stimulates correct breathing.



Materials and Methods

This type of malocclusion is present in the parents.

The treatment plan provides for the use of an A.M.C.O.P. TC elastodontic appliance, to be worn for 1 hour during the day and every night in a passive mode for the first 6 months and then for a further 10 months only at night in order to restore a Class I bilateral molar-canine relationship and the correct maxillary advancement and inhibit excessive mandibular growth. After the skeletal problem has been solved, the case is monitored with six-monthly visits in order to re-intervene if the problem occurs again. Once the correction of the molar and anterior ratio has been achieved, the appliance will be worn by the patient only during the night to stabilise the result obtained and guide the eruption of the permanent teeth.

Results

The results obtained show the great importance of elastodontic therapy in restoring normal occlusion very quickly, given the plasticity of skeletal structures at the age of 3 years. The A.M.C.O.P. TC appliance can be used effectively for Class III dental and skeletal malocclusions, provided there is sufficient skeletal growth in the same direction.



TREATED CASES • OPEN

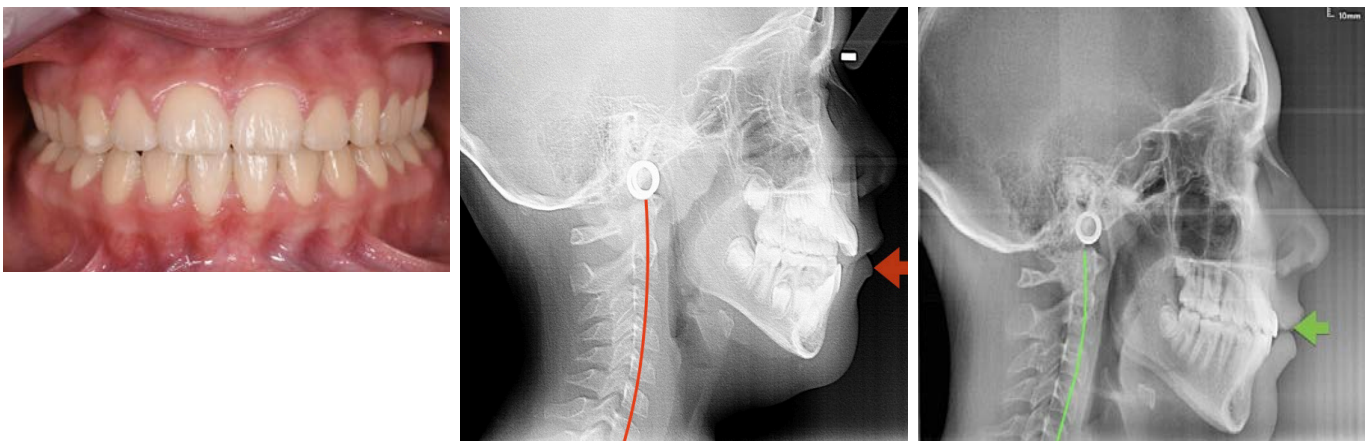
Patient 7 years old dental and skeletal Open Bite from bad habits (prolonged finger sucking) combined with short lingual frenulum.



Malocclusion is characterised by contraction of the upper jaw with reduced space for the eruption of permanent teeth.

The therapy sequence involves the following steps:

- motivation
- speech therapy
- lingual frenectomy + speech therapy
- elastodontic therapy
- elastodontic restraint for about 12 months.



Therapy: A.M.C.O.P. **OPEN** appliance with a high posterior mastication plane to promote the correct development of the maxilla with the consequent closure of the skeletal and dental Open Bite.

Open Bite malocclusion is complex in its therapy and stabilisation, through Elastodontic Therapy and the new A.M.C.O.P. **OPEN** appliances it is possible to obtain an irreversible skeletal and dental result and at the same time a great postural advantage, as can be seen from the comparison telerradiographs that show the normalisation of the cervical curve at the end of the therapy. All this demonstrates the three-dimensionality of the therapy, i.e. the effect: skeletal, dental and postural.

TREATED CASES • ELASTOOSAS

C.S. Patient aged 3 years, Dental Class III, Open Bite, severe upper arch contraction, bilateral Cross Bite, atypical swallowing, oral respiration, sleep disturbance, OSAS.



The present case shows a serious skeletal problem such as contraction of the upper jaw associated with atypical swallowing and difficult breathing. In these cases the appliance indicated is **ELASTOOSAS**. Its function is to expand and coordinate the upper and lower arches.

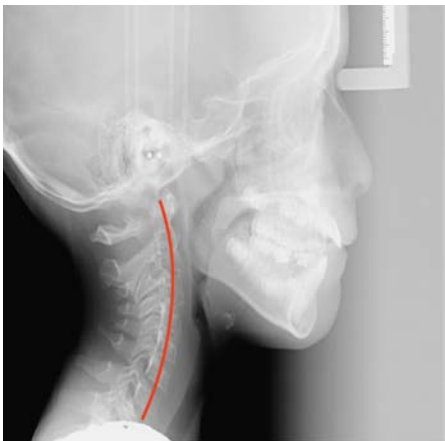
Patient aged 8 years Open skeletal and anterior dental bites, breathing difficulties (paediatric OSAS)



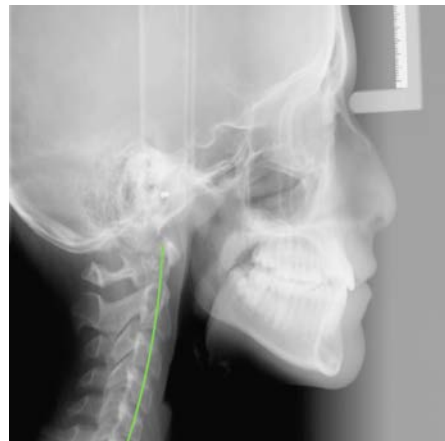
Initial case

Case after 7 months

Final case after 24 months



May 2016 - Pre-treatment



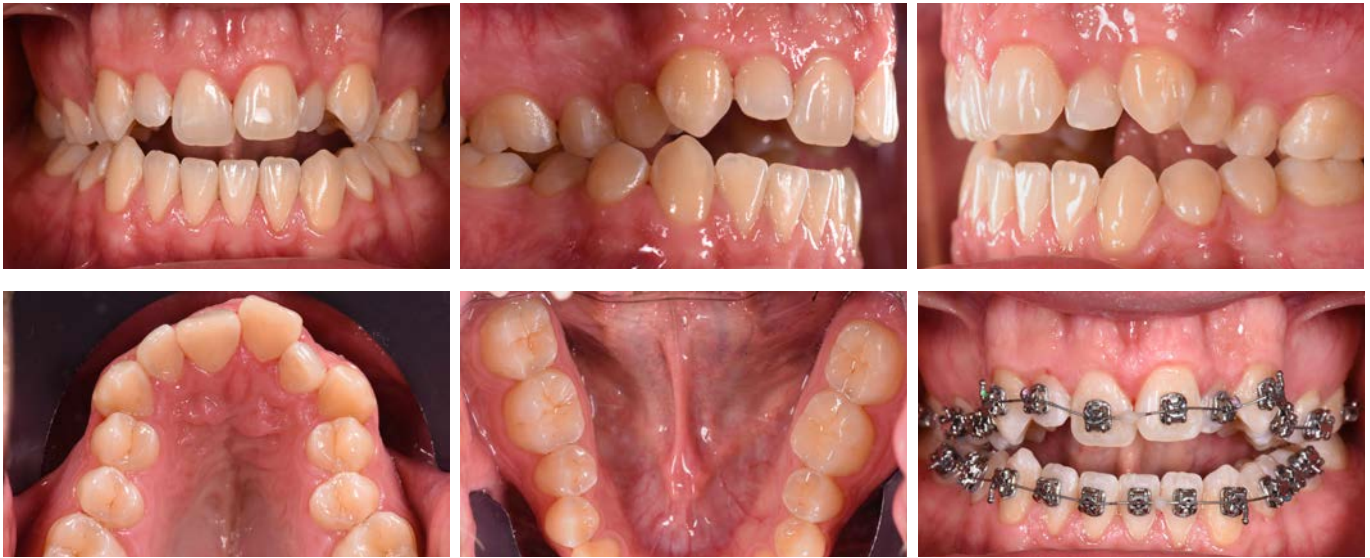
November 2020 - Post treatment

Malocclusion is characterised by contraction of the upper jaw with reduced space for the eruption of permanent teeth. The therapy sequence involves the following steps:

- motivation
- speech therapy
- A.M.C.O.P. elastodontic therapy
- elastodontic restraint for about 12 months.

TREATED CASES • INTEGRAL PLUS

V.P. Patient 32 years old, Open Bite Class II-, atypical swallowing, anterior lingual interposition, right lower midline deviation, upper arch contraction, right and left dental Cross Bite, premaxilla hyper development.








The initial therapy involved the use of the multi-brackets appliance in order to favour an initial dental alignment with the use of the 0.13 CuNiTi arch for about 12 weeks, after which it was decided to introduce the A.M.C.O.P. INTEGRAL PLUS elastodontic appliance into the therapy in order to favour the transverse development of the arches and at the same time eliminate the interference of the tongue, which represents the main cause of the anterior open bite. Note how in this case the A.M.C.O.P. INTEGRAL PLUS appliance favoured the development of the arches and the increase of the transverse diameter in only 7 months of therapy



Only after completing the transverse development of the arches and after rehabilitating the tongue is it decided to proceed to the final closure of the bite with inter-arch elastics in order to finish the therapy and obtain the correct intercuspation. Retention in these cases will be with the A.M.C.O.P. **OPEN** elastodontic appliance in order to control and stabilise the lingual function and at the same time reinforce the result obtained.

SUMMARY TABLE

MEASURES & CODES							
MODEL			1/45 mm	2/49 mm	3/55 mm	4/60 mm	5/65 mm
	DA	Light blue	BIO-DA1	BIO-DA2	-	-	-
	DCA	Light Blue with a Pacifier	BIO-DCA1	BIO-DCA2	-	-	-
	DR	Pink	BIO-DR1	BIO-DR2	-	-	-
	DCR	Pink with a Pacifier	BIO-DCR1	BIO-DCR2	-	-	-

MEASURES & CODES							
MODEL			1/45 mm	2/50 mm	3/55 mm	4/60 mm	5/65 mm
	F	BASIC	-	-	BIO-BF3	BIO-BF4	BIO-BF5
		INTEGRAL	BIO-F1	BIO-F2	BIO-F3	BIO-F4	BIO-F5
	S	BASIC	BIO-BS1	BIO-BS2	BIO-BS3	BIO-BS4	BIO-BS5
		INTEGRAL	BIO-S1	BIO-S2	BIO-S3	BIO-S4	BIO-S5
	ØS	BASIC	BIO-BØS1	BIO-BØS2	BIO-BØS3	BIO-BØS4	BIO-BØS5
		INTEGRAL	BIO-ØS1	BIO-ØS2	BIO-ØS3	BIO-ØS4	BIO-ØS5
	C	BASIC	-	-	BIO-BC3	BIO-BC4	BIO-BC5
		INTEGRAL	BIO-C1	BIO-C2	BIO-C3	BIO-C4	BIO-C5
	SC	II CLASSE	BIO-SC1	BIO-SC2	BIO-SC3	BIO-SC4	BIO-SC5
	TC	III CLASSE	BIO-TC1	BIO-TC2	BIO-TC3	BIO-TC4	BIO-TC5
	OPEN		BIO-OPEN1	BIO-OPEN2	BIO-OPEN3	BIO-OPEN4	BIO-OPEN5
	OSAS		-	-	BIO-OSAS3	BIO-OSAS4	BIO-OSAS5
	INTEGRAL PLUS		-	-	BIO-IP3	BIO-IP4	BIO-IP5

HARD version available on request

Suitcase	12 pz	24 pz
	BIO-VALIG12	BIO-VALIG24



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