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Myofunctional Orthodontics in Interceptive Dentistry: A Narrative Review of Early Detection and Management of Malocclusion in Paediatric Patients, with Emphasis on the Myobrace System

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ABSTRACT :

Background: Malocclusion affects a large proportion of children worldwide and often becomes evident in the primary or early mixed dentition. Functional factors such as prolonged sucking habits, mouth breathing and abnormal tongue and lip activity can influence jaw growth and tooth position and are potentially modifiable.

Objective: To review the biological rationale, early-detection strategies, clinical use and evidence base of myofunctional orthodontics in paediatric patients, with particular attention to the Myobrace system and cost considerations.

Methods: Narrative review of systematic reviews, randomised and controlled clinical studies and Cochrane reviews identified through targeted searches of the published literature, without date restriction.

Results: Malocclusion prevalence is high and appears early. Non-nutritive sucking, bottle feeding and mouth breathing are associated with malocclusion, and risk rises with habit duration. Early treatment of Class II malocclusion reduces incisal trauma but offers few other advantages over adolescent treatment. Prefabricated myofunctional appliances, including Myobrace, produce mainly dentoalveolar change. In randomised trials they were generally less effective than Twin Block or activator appliances on some outcomes, although a multicentre trial found no difference in clinical effectiveness from an activator at significantly lower cost. Patient compliance is the main determinant of success.

Conclusions: Myofunctional orthodontics is a useful interceptive adjunct when combined with early detection, careful case selection and compliance support. Current evidence is of low quality and does not yet show that it reduces later need for fixed appliances. Long-term, well-designed trials are required.

Keywords: myofunctional orthodontics; interceptive orthodontics; malocclusion; Myobrace; paediatric dentistry; oral habits

1. Introduction

Malocclusion is among the most common oral health conditions of childhood. A systematic review and meta-analysis of children and adolescents estimated a worldwide prevalence of 56% (95% CI 11–99%), and the prevalence did not change meaningfully between the primary and permanent dentitions [1]. The authors concluded that this early onset should lead clinicians and policymakers to adopt preventive strategies from a younger age [1]. A separate pooled analysis of 53 population-based studies reported Class I, Class II and Class III distributions of 74.7%, 19.56% and 5.93% in the permanent dentition and 73%, 23% and 4% in the mixed dentition, and noted that malocclusion is regarded by the World Health Organization as the third most prevalent oral health problem after dental caries and periodontal disease [2]. Beyond appearance, children with malocclusion are more likely to report a negative impact on quality of life [3].

The aetiology of malocclusion is multifactorial. Genetic influences interact with environmental and functional factors, including infant feeding, non-nutritive sucking habits and breathing mode, all of which act on the developing craniofacial complex [4,5]. Moss's functional matrix hypothesis provides a biological framework for this: skeletal growth is regarded as largely responsive to the functional demands of the surrounding soft tissues, spaces and muscles rather than being governed solely by intrinsic skeletal programming [6]. If part of the dentofacial deformity is secondary to dysfunction, then correcting the dysfunction while the child is growing is, in principle, a rational preventive strategy.

Interceptive orthodontics aims to recognise and eliminate developing irregularities and their causes in the primary and mixed dentitions, so that the

permanent dentition erupts into a more favourable environment. The conventional two-phase approach has been tested in randomised trials. A Cochrane review of 17 studies (721 participants) found that early treatment of prominent upper incisors reduced incisal trauma compared with a single course of treatment in adolescence, but showed no other advantages from starting early [7]. This sharpens the clinical question: which early interventions are justified, and in whom? One answer is to target the functional causes of malocclusion directly, which is the premise of myofunctional orthodontics.

Myofunctional therapy and prefabricated myofunctional appliances (PMAs) have grown in popularity over recent decades [8]. The Myobrace system (Myofunctional Research Co., Australia) is among the best known, and is used in interceptive treatment of malocclusion in the mixed dentition together with habit correction and myofunctional exercises [9]. Its promotion often emphasises a “no-braces” approach, whereas the published evidence is mixed and of limited quality. A balanced appraisal is therefore needed.

Objective. This review aims to (i) summarise the burden and functional aetiology of malocclusion in children; (ii) describe a practical approach to early detection; (iii) outline the principles of myofunctional orthodontics and the components and clinical use of the Myobrace system; (iv) appraise the evidence for effectiveness; and (v) discuss cost considerations, including whether early myofunctional intervention can realistically reduce the need for later fixed orthodontic treatment.

2. Materials and Methods

Study design. This is a narrative review. It was not conducted as a registered systematic review and does not follow the full PRISMA 2020 procedures for searching, screening and risk-of-bias assessment [10].

Literature identification. The published literature was searched using web-based searches and by checking the reference lists of key reviews and trials. Search terms included combinations of “myofunctional appliance”, “prefabricated myofunctional appliance”, “Myobrace”, “Trainer for Kids”, “interceptive orthodontics”, “Class II malocclusion”, “Class III malocclusion”, “non-nutritive sucking”, “mouth breathing”, “early treatment” and “cost”. No date limits were applied.

Eligibility and prioritisation. Priority was given to Cochrane and other systematic reviews, randomised controlled trials, and controlled clinical studies in children. Case reports and narrative reviews were used only to describe appliance design and clinical use, and are identified as such. Studies in adults were not considered.

Synthesis and appraisal. Findings were synthesised narratively. No formal risk-of-bias scoring was performed by the author; instead, the reviewers’ own quality ratings and the design features reported in the original articles (randomisation, blinding, registration, follow-up, sample size) are described where relevant. Because of the non-systematic search and single-author selection, relevant studies may have been missed.

Ethical considerations. This review used published data only. Ethical approval and informed consent were not required.

3. Results and Discussion

3.1 *Why early detection matters*

Prevalence figures differ by population group, so local epidemiology should inform what a clinician expects to find. For example, Class II was most prevalent among Caucasian groups and Class I among African groups in pooled data, while Class III in the mixed dentition was highest in Mongoloid groups [2]. Overall, however, the finding that malocclusion is already present in the primary dentition at similar rates to the permanent dentition [1] means that the window for observation and intervention opens early.

The strongest trial evidence that early identification pays off relates to trauma. Prominent upper incisors affect roughly one in four 12-year-old children in the UK, and in the Cochrane review incisal trauma occurred in 27 of 117 children treated early compared with 47 of 120 treated in adolescence [7]. An updated review judged the evidence for reduced incisal trauma with early treatment to be of low to moderate quality [11]. The same reviews found no other clear benefit of starting early [7,11]. The practical message is that early detection is valuable because it allows timely, selective intervention and appropriate timing, not because early treatment is automatically superior in every case.

3.2 *Functional aetiology: the modifiable causes*

Several functional factors are repeatedly associated with malocclusion (Table 1). In a systematic review of 21 studies, children who were bottle-fed had higher odds of malocclusion than breast-fed children, breastfeeding appeared protective, and persistent non-nutritive sucking habits were associated with increased odds of malocclusion, with duration of the habit influencing the likelihood of occlusal defects [4]. A meta-analysis comparing the two habits

found that pacifier sucking carried a higher risk than digit sucking for most malocclusion features, with a risk ratio of 1.42 (95% CI 1.18–1.70) for posterior crossbite in the primary dentition, whereas pacifier suckers were less likely than digit suckers to develop an increased overjet [12].

Table 1. Functional factors associated with malocclusion in children.

Functional factor	Reported association	Key evidence
Non-nutritive sucking (digit, pacifier)	Anterior open bite, increased overjet and posterior crossbite; risk rises with duration of the habit. Digit and pacifier habits differ in the features they produce.	Systematic reviews and meta-analysis [4,12]
Bottle feeding vs breastfeeding	Higher odds of malocclusion with bottle feeding; breastfeeding appears protective.	Systematic review of 21 studies [4]
Mouth breathing	Lower SNB (about 2°), higher ANB (about 1°) and steeper mandibular plane (about 4°), narrower airway, labial inclination of upper incisors; Class II and crossbite more frequent.	Meta-analysis, 7 studies, 387 mouth-breathing children and 433 nasal-breathing controls [5]
Oral habits and orofacial myofunctional disorders	Associations between habits, mouth breathing, atypical orofacial function and malocclusion in preschool children.	Cross-sectional studies [13–15]

Values for mouth breathing are rounded from pooled mean differences reported in the cited meta-analysis. Associations do not by themselves prove causation.

Mouth breathing deserves particular attention because it links the dental and medical spheres. Pooled data showed that mouth-breathing children had a lower SNB angle and higher ANB angle than nasal-breathing controls, a steeper mandibular plane, and a narrower pharyngeal airway, and the authors concluded that mouth breathing can contribute to underdevelopment of the mandible [5]. Where nasal obstruction is organic, for example adenotonsillar enlargement or allergic rhinitis, the cause needs medical assessment. A myofunctional appliance cannot be expected to compensate for a physically blocked nasal airway.

3.3 A practical approach to early detection

Screening for developing malocclusion fits naturally into routine paediatric dental care. It can begin at the first dental visit and be repeated at recall appointments through the transition to the mixed dentition. Table 2 outlines a pragmatic checklist. It reflects common clinical practice and the associations described above, and should be read as a clinical framework rather than a trial-validated protocol.

Table 2. Early-detection checklist for paediatric patients.

Domain	What to assess	Why it matters
History	Breast or bottle feeding; duration of digit or pacifier habit; nail or lip biting; snoring, restless sleep, nasal congestion, allergy or adenotonsillar history.	Duration of sucking habits influences risk [4]; airway problems need medical assessment [5].
Breathing and lips	Lip seal at rest, open-mouth posture, nasal patency, dry lips or mouth.	Mouth breathing is associated with Class II features, crossbite and narrowed airway [5].
Tongue and swallow	Resting tongue posture, tongue thrust or interposition, swallowing pattern, lingual frenum.	Orofacial myofunctional disorders are associated with malocclusion in preschool children [15].
Face and skeleton	Profile, lip competence, vertical proportions, mandibular position and symmetry.	Identifies skeletal contribution and whether growth-related timing is relevant [16].
Occlusion	Overjet and incisor protrusion, open or deep bite, crossbite with or without functional shift, crowding, midline, molar relationship, eruption path.	Prominent upper incisors carry a higher risk of trauma [7].
Records and referral	Photographs and study models; radiographs only when clinically justified; referral to ENT, paediatrician, speech therapist or orthodontist where indicated.	Supports monitoring, timing and shared care.

Adapted by the author from the associations cited in this review.

Timing is important. Many habits begin and cease spontaneously in children under six, and persistence beyond that age is more concerning [9]. For skeletal Class II correction with functional appliances, treatment timed with the pubertal growth phase is generally considered most favourable; one study of Twin Block therapy found timing in relation to skeletal maturation to be a key determinant of response [16]. A child identified early therefore need not be treated immediately: habit counselling, myofunctional exercises and monitoring may be appropriate until a suitable window.

3.4 Principles of myofunctional orthodontics

Orofacial myofunctional therapy (OMT) refers to treatment of dysfunction of the facial and oral muscles, with the aim of improving functions such as breathing, chewing and swallowing and strengthening the muscles involved [9]. A systematic review has examined the effectiveness of OMT in orthodontic patients [17]. In contemporary practice, OMT is delivered either through exercises alone or with an appliance that guides tongue posture, lip seal and tooth eruption.

Prefabricated myofunctional appliances differ from conventional custom-made functional appliances in several ways. They are typically soft, ready-made and non-customised, worn part-time and often combined with myofunctional training, like the conventional activator, whereas appliances such as the Twin Block and Herbst are worn full-time [18]. Their stated aim is to address the aetiological factors of malocclusion, namely dysfunctional orofacial muscle activity and tongue posture, and to improve airway and occlusion in the developing dentition [18]. An overview of the history and evidence for PMAs is available [8], and the role of functional appliances in contemporary practice has been reviewed [19].

3.5 The Myobrace system

Description. Myobrace is an intraoral appliance system used in interceptive orthodontics, designed mainly for children in the mixed dentition (commonly described as 8–12 years) [9]. It works on the premise of improving the balance of facial muscles, restoring tongue posture and guiding tooth eruption and arch form. It is constructed on an edge-to-edge incisal relationship between the arches and comprises a single block; a hard nylon inner core is described as the main structural difference from other Trainer System appliances [18]. The goals described for the system include a myofunctional effect, dental alignment and mandibular growth [18].

Components. Described components include tooth guides to align the teeth, labial and buccal shields to prevent lip and cheek interposition, a tongue tag to provide a proprioceptive cue for tongue posture, a tongue guard to discourage tongue thrusting and promote nasal breathing, and a lip bumper to reduce mentalis hyperactivity [9].

Stages and age variants. The system is described as progressing through stages that address habit correction, arch development, tooth alignment and retention [9]. Different variants are described for different age bands (Table 3). These descriptions derive largely from manufacturer-related material summarised in a review of limited methodological quality [9], and current product ranges should be confirmed with the manufacturer.

Table 3. Myobrace variants and stated indications, as described in the literature.

Variant	Age band	Stated indications
Myobrace for Juniors	3–6 years (three stages)	Mouth breathing, tongue position and swallowing, habit correction including pacifier use, early open bite and crossbite [9]
Myobrace for Kids	6–10 years (three stages)	Mouth breathing and habits; Class II divisions 1 and 2, crowding, deep bite and open bite [9]
Myobrace for Teens	10–15 years (four stages)	Late mixed-dentition Class II, crowding, deep and open bite, habit correction [9]
Myobrace for Adults	Over 15 years (three stages)	Mild to moderate crowding, relapse after fixed treatment, moderate Class II; outcomes described as less predictable than in children [9]

Indications are as stated in the cited review and are not independent evidence of effectiveness for each indication.

Clinical protocol. Trials typically instruct wear of the appliance for about one to two hours daily plus overnight, built up gradually over the first weeks [18,20]. Sizing is based on the mesiodistal width of the upper incisors, measured with a ruler, with the canines located in their slots and the midlines coinciding [18]. Daily myofunctional exercises, correct swallowing and tongue posture and keeping the lips closed when not eating or talking are emphasised [9]. Adaptation can take time; in one randomised trial it took most children about two months to reach the required daily wear [18]. These practical points make compliance the central issue in management, as discussed below.

Case selection. Reasonable candidates are cooperative children in the mixed dentition with identifiable functional contributors (for example open-mouth posture, tongue interposition, lip incompetence or persistent habits), mild to moderate Class II division 1 features with crowding or overjet, and parents able to supervise daily wear. Less suitable are children with significant organic nasal obstruction, severe skeletal discrepancy, large overjet with poor lip coverage not expected to respond, or poor expected cooperation. These selection points are the author's clinical synthesis and are consistent with a controlled study that concluded the trainer can be used "with appropriate patient selection" [20].

3.6 Evidence for effectiveness

3.6.1 Functional appliances in Class II malocclusion generally

A systematic review and meta-analysis of removable functional appliances found them effective in the short term in Class II malocclusion, although effects were mainly dentoalveolar rather than skeletal [21]. A multicentre randomised trial of early Twin Block treatment similarly emphasised predominantly dentoalveolar changes [22]. This context matters when judging PMAs: even well-established functional appliances produce limited skeletal change, so the realistic expectation for PMAs is also principally dentoalveolar improvement, with possible benefits in function and habit control.

3.6.2 Myobrace and other prefabricated appliances versus conventional appliances

A systematic review of PMAs in Class II division 1 malocclusion included three randomised trials comparing PMAs with activators and three non-randomised studies comparing PMAs with untreated controls. It concluded that, in the short term, low-quality evidence suggested PMAs were generally less effective than activators, that no significant differences were seen between the appliances in the long term, and that the main advantage of PMAs seemed to be reduced cost [23]. A later systematic review and meta-analysis of PMAs on the vertical dimension found high inconsistency and low to moderate quality of included studies, leaving the certainty of results very low [24].

The individual trials (Table 4) show a mixed picture. In a multicentre randomised trial from Sweden in which the prefabricated appliance was a Myobrace, there was no significant difference from an Andresen activator in overjet, overbite, sagittal relation or lip seal. The success rate was low for both appliances, with treatment judged unsuccessful in 70% of the prefabricated-appliance group and 53% of the activator group, mainly because of poor compliance [25]. In contrast, a randomised trial of 60 children found greater Class II skeletal and dentofacial improvement with a modified activator than with the T4K trainer, although the trial was not registered and was unblinded [26].

Head-to-head trials against the Twin Block favour the Twin Block. In a randomised trial of 20 children, overjet reduction was -2.50 ± 1.00 mm with the T4K trainer and -3.75 ± 1.10 mm with the Twin Block, and the authors concluded that the Twin Block produced significantly better results [27]. In a randomised trial of 26 children comparing Myobrace with Twin Block, both appliances increased SNB and reduced ANB, with no significant between-group difference in SNA, SNB, ANB or Wits appraisal [18].

Table 4. Key comparative and controlled studies of prefabricated myofunctional appliances in children.

Study	Design and sample	Comparison	Main findings
Usumez et al. [20]	Controlled clinical study; 20 treated and 20 untreated Class II/1 children; about 13 months	Preorthodontic trainer vs untreated	Skeletal changes not distinguishable from controls; significant overjet reduction; changes basically dentoalveolar
Čirgić et al. [25]	Multicentre RCT, 12 general practices; overjet ≥ 6 mm	Prefabricated appliance (Myobrace) vs Andresen activator	No significant difference in overjet, overbite, sagittal relation, lip seal; unsuccessful in 70% vs 53%, mainly poor compliance
Idris et al. [26]	RCT; 60 children aged 8–12; 12 months	T4K trainer vs modified activator	Greater improvement with activator; trial unregistered and unblinded
Elhamouly et al. [27]	RCT; 20 children aged 9–12; 9 months	T4K trainer vs Twin Block	Both improved; overjet -2.50 vs -3.75 mm; Twin Block better
Madian and Elfouly [18]	RCT; 26 children aged 9–12; 6 months	Myobrace vs Twin Block	Both increased SNB and reduced ANB; no between-group skeletal difference; larger nasopharyngeal and oropharyngeal airway gains with Twin Block
An et al. [28]	Controlled study; 13 treated (mean 8.2 years) and 10 untreated; mean 12.9 months	Myobrace vs untreated	Skeletal, dentoalveolar and soft-tissue changes with significant reduction in anteroposterior discrepancy
Mohammed et al. [23]	Systematic review; 3 RCTs and 3 non-randomised studies	PMAs vs activators; PMAs vs untreated	Short term: low-quality evidence PMAs less effective than activators; long term: no significant differences; main advantage reduced cost

RCT, randomised controlled trial; PMAs, prefabricated myofunctional appliances.

3.6.3 Controlled studies against untreated growth

Because growth alone can change Class II relationships, untreated controls are essential. In a controlled study of 20 children treated with a preorthodontic trainer and 20 untreated controls, treated children showed several cephalometric changes, but only the increase in total facial height, lower incisor proclination and overjet reduction differed significantly from controls. The authors concluded the changes were basically dentoalveolar and that the reduction in overjet was mainly related to lower incisor proclination [20]. A more recent controlled study of children treated with Myobrace for a mean

of 12.9 months, compared with 10 untreated children, reported skeletal, dentoalveolar and soft-tissue changes with a significant reduction in anteroposterior discrepancy, but with small groups [28]. Dental arch dimensional changes after treatment with a prefabricated functional appliance have also been reported [29].

3.6.4 Airway and function

Reports of oropharyngeal airway changes after treatment with the T4K trainer and with Myobrace in Class II retrognathic children have been published [30,31]. In the randomised trial comparing Myobrace with Twin Block, nasopharyngeal, oropharyngeal and laryngopharyngeal airway areas all increased within each group, but the Twin Block produced significantly larger gains in the nasopharyngeal and oropharyngeal areas, leading the authors to suggest that patients with airway problems might benefit more from the Twin Block [18]. A meta-analysis of myofunctional therapy in children with obstructive sleep apnoea, which mostly examined exercise-based therapy, reported a 43% reduction in the apnoea–hypopnoea index and suggested it can serve as an adjunct treatment in mild to moderate disease [32]. Sleep-disordered breathing should therefore be managed through medical referral, with any myofunctional treatment as part of a multidisciplinary plan, not as a standalone cure.

3.6.5 Class III and other malocclusions

The best randomised evidence for early Class III treatment concerns facemask and related orthopaedic appliances rather than myofunctional appliances. An original Cochrane review found some evidence that a facemask is effective in the short term compared with no treatment [33], and an updated review of 29 studies involving 1169 children aged 5–13 years concluded that non-surgical treatments can substantially improve the bite and jaw relationship immediately after treatment, while noting that the studies were small, unblinded and unable to show whether one treatment is better than another [34]. The evidence for Myobrace in Class III malocclusion consists mainly of case reports summarised in a review of limited methodological quality [9], so claims in this area should be treated as preliminary.

3.6.6 Reviews specific to Myobrace and their limitations

A systematic review of six articles on management of malocclusion with Myobrace concluded that the appliance can be an alternative treatment for Class II and Class III malocclusion and can correct overbite, overjet, crowding, molar relationship and lip seal [9]. However, the review searched a single database, included case reports and an article-level summary rather than primary trials, and received a “not approved” status in open peer review because of the absence of PRISMA-compliant methods and risk-of-bias assessment [9]. It is useful for describing the appliance, but it should not be used as strong evidence of efficacy.

3.7 Cost considerations: can early myofunctional treatment reduce the cost of fixed orthodontics?

The clearest economic evidence comes from a trial-based cost-minimisation analysis of 97 children with large overjet, in which a prefabricated appliance (Myobrace) was compared with an Andresen activator. Direct and societal costs were significantly lower for the prefabricated appliance, the number of visits was lower on an intention-to-treat basis, and there was no difference in retreatment rate; the authors concluded that it was the preferred approach for reducing a large overjet in the mixed dentition because it minimised costs while clinical outcomes were not different, although the success rate of both appliances was low [35]. A systematic review likewise identified reduced cost as the main advantage of PMAs [23]. Case-report literature describes further practical advantages such as impression-free use and applicability in non-compliant or allergic patients, although these are descriptive claims rather than trial outcomes [36].

It is important not to overstate this. These data show that PMAs can be cheaper than other removable appliances. They do not show that early myofunctional treatment reduces the later need for, or cost of, fixed orthodontic treatment. No randomised trial identified for this review used later need for fixed appliances as a primary outcome. In published reports, children with residual malocclusion after myofunctional treatment have still required further treatment [18,36], and the Cochrane evidence suggests two-phase treatment does not otherwise shorten or simplify treatment beyond reducing trauma [7]. The potential for cost saving is therefore plausible but unproven, and depends on three conditions:

- **Compliance.** If the appliance is not worn as instructed, the child has gained little and the cost saving is lost; failure due to poor compliance was frequent in the multicentre trial [25].
- **Selection.** Benefit is more likely when functional contributors are clear and the discrepancy is mild to moderate, and less likely in significant skeletal discrepancies [20,21].
- **Outcome that matters.** A saving on fixed appliances can only be claimed if the severity of malocclusion at the end of the mixed dentition is lower, or if fixed treatment is shorter or avoided, which requires long-term trials with those end points.

3.8 Limitations of the evidence and clinical implications

Several limitations affect the evidence base. Samples are small, many trials last between 6 and 12 months, blinding is generally not possible, and some trials were not registered [18,26,27]. Control groups are often absent for ethical reasons [18]. Reviewers consistently rate the quality of evidence as low [23,24]. Outcomes are mostly cephalometric or dental, with few reporting patient-centred outcomes, long-term stability, or later need for fixed appliances. Compliance, which is the main determinant of success, is usually poorly measured. Finally, much of the descriptive literature on Myobrace comes from case reports and manufacturer-related sources.

Within these limits, the evidence supports the following practical positions:

- Early detection is worthwhile. High prevalence and early onset support systematic screening in paediatric dental care [1].
- Address function first. Habits, breathing mode and tongue and lip posture are modifiable contributors, and children with suspected airway obstruction need medical assessment [4,5].
- Use Myobrace and similar appliances selectively. They are reasonable low-cost options for mild to moderate Class II division 1 features and functional problems in cooperative mixed-dentition patients [23,35].
- Set realistic expectations. Changes are mainly dentoalveolar, and a stage of fixed treatment may still be needed [20,36].
- Choose a more effective appliance where skeletal correction is the goal. In head-to-head trials the Twin Block gave larger effects than trainer-type appliances [18,27].
- Invest in compliance. Motivation, diaries, regular review and parental involvement are likely to matter more than the appliance brand [25].

Future research should include adequately powered, registered randomised trials with untreated controls, follow-up to the permanent dentition, patient-reported outcomes, objective compliance measurement, and prospective economic evaluations that include the later need for fixed appliances.

4. Conclusion

Malocclusion is common, begins early, and is influenced by modifiable functional factors. Systematic early detection allows these factors to be addressed and treatment to be timed appropriately. Myofunctional orthodontics, including the Myobrace system, is a useful interceptive adjunct for selected children, with reduced cost compared with some conventional removable appliances. However, the available evidence is of low quality, effects are mainly dentoalveolar, head-to-head trials generally favour the Twin Block for skeletal and airway outcomes, and there is no direct evidence yet that early myofunctional treatment reduces the later need for fixed appliances. Compliance and case selection are decisive. Myofunctional orthodontics is best viewed as one tool within a broader preventive and interceptive strategy rather than a replacement for conventional orthodontics when that is indicated.

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