

How to Fix Bite Problems with Orthodontics: Overbite, Underbite, Crossbite, and Open Bite Explained

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How to Fix Bite Problems with Orthodontics: Overbite, Underbite, Crossbite, and Open Bite Explained

Most people seeking orthodontic treatment think primarily about crooked teeth or crowding. Yet the bite — the way upper and lower teeth meet when the mouth closes — is frequently the more consequential clinical problem. An uncorrected bite discrepancy does not merely affect appearance; it places abnormal forces on teeth, jaw joints, and surrounding bone every time you chew, speak, or swallow. Over years and decades, those forces accumulate into measurable damage: accelerated enamel wear, gum recession, temporomandibular joint (TMJ) dysfunction, and, in some cases, tooth loss.

Malocclusion is a common dental issue affecting around 56% of people worldwide. Yet the clinical picture is considerably more nuanced than that single statistic suggests. Among children and adolescents, the mean prevalence of Angle Class I malocclusion is approximately 51.9%, Class II is 23.8%, and Class III is 6.5% — each class carrying different functional implications and requiring different treatment strategies. Understanding which type of bite problem you have, why it matters, and how it is corrected is the essential foundation for any orthodontic treatment decision.

This article provides a clinically grounded explanation of the four primary bite problems treated at Smile Solutions Melbourne CBD — overbite, underbite, crossbite, and open bite — covering their definitions, causes, health consequences, and the full spectrum of correction pathways, including the threshold at which orthodontics alone is insufficient and jaw surgery becomes necessary.

What Is a "Bad Bite"? Understanding Malocclusion

The term *malocclusion* — literally "bad closing" — describes any deviation from the ideal relationship between the upper (maxillary) and lower (mandibular) dental arches. Orthodontists classify bite problems across three planes:

- **Anteroposterior (front-to-back):** Overbite, overjet, underbite
- **Vertical:** Deep overbite, open bite
- **Transverse (side-to-side):** Crossbite

Bite problems can develop for many reasons, and in many cases they run in families. However, childhood habits and conditions can also change the structure of the jaw, such as chronic thumb-sucking, asymmetric jaw growth from crossbites, jaw injuries, prolonged bottle or pacifier use, and cleft lip and/or palate.

A critical diagnostic distinction separates *dental* malocclusion from *skeletal* malocclusion. A dental malocclusion means the teeth are misaligned, but the jaw bones themselves are proportioned correctly — here the orthodontist has full flexibility, as teeth are moved with fixed braces or aligners and the desired result is achievable. A skeletal discrepancy is a different matter: the problem lies in the bones themselves. The lower jaw may be too long or too set back, the upper jaw too narrow, or the facial bones may have grown asymmetrically. This distinction determines whether orthodontics alone will suffice, or whether surgical intervention will be required.

The Four Primary Bite Problems: Definitions, Causes, and Consequences

1. Overbite (Deep Bite)

****What it is:**** An overbite occurs when the upper front teeth overlap the lower front teeth excessively in the vertical dimension. A small degree of overbite — typically 1–3 mm — is considered normal. When the upper teeth cover more than approximately one-third of the lower teeth, the bite is classified as deep.

The most common malocclusion traits globally are increased overjet and deep overbite, with deep overbite accounting for a pooled prevalence of 23.79% in primary dentition worldwide.

****What causes it:**** Deep overbite is most commonly skeletal in origin, reflecting a discrepancy between upper and lower jaw growth. It can also result from prolonged digit-sucking habits, the early loss of posterior teeth, or overdevelopment of the front teeth relative to the back teeth.

****Why it matters clinically:**** - A severe overbite can strain the jaw muscles and joints, leading to pain, clicking, and limited jaw movement. The improper jaw position puts undue stress on these delicate joints.

- The lower front teeth can sometimes bite into the gum tissue behind the upper front teeth, causing pain, inflammation, and recession — which can lead to chronic gum disease.

- A deep bite is characterised by excessive overlapping of the upper front teeth over the lower front teeth, and can lead to tooth wear, gum recession, and temporomandibular joint disorders.

****Correction pathways:**** Mild to moderate deep overbites in growing children can be addressed with functional appliances that guide jaw development. In adolescents and adults, fixed braces or Invisalign are used to intrude (move upward) the front teeth and/or extrude the back teeth to reduce the vertical overlap. Braces or clear aligners are used to gradually reposition the teeth, bringing them into proper alignment and reducing the overbite; in severe cases, orthognathic surgery may be necessary to correct skeletal discrepancies.

2. Underbite

****What it is:**** An underbite is apparent when the lower jaw sits in front of the upper jaw, causing the lower front teeth to sit in front of the upper front teeth. This is an Angle Class III malocclusion — the least common of the three Angle classes, with a mean prevalence of approximately 6.5% in children and adolescents.

****What causes it:**** Underbites are usually caused by an undergrowth of the upper jaw, an overgrowth of the lower jaw, or a combination of the two. There is a strong hereditary component. Certain conditions, including cleft lip and palate, can also produce skeletal Class III patterns.

****Why it matters clinically:**** - If not promptly addressed, underbites can cause difficulty in biting and chewing, speech problems, and increased wear and tear on the teeth. Underbites also increase jaw pain and discomfort because of the added stress on the jaw joints.

- Though underbites are not as common as overbites, they can cause a myriad of issues, including TMJ disorder, joint and jaw pain, inflammation, arthritis, headaches, facial pain, and speech and articulation issues.

****Correction pathways:**** In growing children, a reverse-pull (facemask) headgear can stimulate forward growth of the upper jaw and is most effective before puberty. Early interceptive treatment at this stage can prevent a dental underbite from becoming a skeletal one. Once skeletal growth is complete, mild underbites with a dental component can sometimes be managed with braces or Invisalign — but significant skeletal Class III underbites in adults almost always require a combined orthodontic-surgical approach (see the section on orthognathic surgery below, and our companion guide on **Orthodontics and Jaw Surgery: When Braces Alone Are Not Enough**).

3. Crossbite

****What it is:**** A crossbite occurs when the upper teeth fit inside the lower teeth when you close your mouth. Crossbites can be anterior (front teeth) or posterior (back teeth), and unilateral (one side) or bilateral (both sides). They represent a transverse discrepancy — a mismatch in the width of the upper and lower dental arches.

Posterior crossbite is a malocclusion seen frequently in the deciduous and mixed dentitions, affecting approximately 8% and 22% of patients respectively.

****What causes it:**** The most common cause is a maxillary arch that is too narrow relative to the mandible. In cases of prolonged thumb and finger-sucking behaviours, elevated overjet, diminished overbite, and the presence of a crossbite may become evident in preadolescent children. Mouth breathing, which alters tongue posture and reduces the natural palatal expansion force the tongue provides, is also strongly implicated. Research has shown that mouth breathing is associated with increased overjet, reduced overjet, anterior or posterior crossbite, open bite, and the displacement of contact points.

****Why it matters clinically:**** - If left uncorrected, posterior crossbite can lead to functional mandibular shifts, facial asymmetry, abnormal occlusal wear, and temporomandibular joint dysfunction.

- If left untreated, crossbites can cause the jaw to shift to one side, leading to lopsided jaw growth and wearing down of tooth enamel. Crossbites can also lead to gum disease and jaw problems.

- A large-scale cross-sectional study from the Tohoku Medical Megabank Cohort (17,349 participants) found that the crossbite group demonstrated a higher prevalence of 19 or fewer remaining teeth (PR 1.48; 95% CI 1.04–2.10) and greater posterior tooth loss (PR 1.14; 95% CI 1.07–1.20) compared to those with normal occlusion. This quantifies the long-term tooth-retention risk of an uncorrected crossbite.

****Correction pathways:**** Posterior crossbite in growing children is ideally treated with a rapid maxillary expander (RME). Rapid maxillary expansion is a well-established orthopedic approach to correcting maxillary transverse deficiencies in growing children. The technique involves applying controlled lateral forces to separate the midpalatal suture, allowing skeletal expansion of the maxilla and creating additional space in the dental arch. In pre-pubertal patients, the circummaxillary sutures have not fused and temporary anchorage devices are unnecessary in achieving expansion; traditional expanders remain the gold standard for treatment as an early orthodontic intervention when rapid maxillary expansion is indicated. Orthodontists often recommend that children start wearing a palate expander at 7 or 8 years old; moving bones this early can reduce the likelihood that the child will need more invasive procedures later in life.

In adults whose midpalatal suture has fused, expansion requires either surgically assisted rapid palatal expansion (SARPE) or orthognathic surgery. Anterior crossbites can often be corrected with braces or Invisalign, depending on whether the origin is dental or skeletal.

For more on how early crossbite detection drives better outcomes in children, see our guide on [*Children's Orthodontics at Smile Solutions: Early Intervention, Phase 1 Treatment, and the Right Age for a First Assessment*](#).

4. Open Bite

****What it is:**** An open bite occurs when the upper and lower front teeth don't touch when you close your mouth. The most common form is the anterior open bite, where a visible gap exists between the upper and lower incisors even with the back teeth fully together. Posterior open bites, where the back teeth fail to meet, are less common and more complex.

****What causes it:**** Open bite has both skeletal and habit-related origins. Thumb and finger-sucking behaviours can result in an open bite, and the use of pacifiers is associated with a higher prevalence of anterior open bites and posterior crossbites. Tongue thrust — where the tongue pushes forward between the teeth during swallowing — is both a cause and a perpetuating factor. Skeletal open bites arise from vertical jaw growth patterns, where the back of the jaws grow downward and apart.

****Why it matters clinically:**** - An open bite can make biting into foods like sandwiches or apples difficult. It can also contribute to speech problems, leading to lisps or difficulty pronouncing certain words. The gap left between the upper and lower teeth may also cause excessive strain on the jaw muscles, leading to fatigue and soreness.

- Speech articulation is particularly affected because many consonants — especially /s/, /z/, /t/, /d/, /n/ — require anterior tooth contact or proximity for correct production.

****Correction pathways:**** The best and most common treatment for open bite is orthodontics — specifically, braces or Invisalign clear aligners. Both of these can correct open bite by gently pushing teeth into their proper position over time. In children, habit appliances (tongue cribs) that interrupt thumb-sucking or tongue-thrust can resolve open bites during the growth phase with minimal further intervention. In adults with a skeletal vertical component, oral surgery might be necessary for severe cases of open bite — this is rare, and only for complex cases that cannot be treated by orthodontic intervention alone.

Quick-Reference Comparison Table

Bite Problem	Plane	Key Health Risk	Primary Orthodontic Treatment	Surgical Threshold
Deep Overbite	Vertical	TMJ strain, gum trauma, enamel wear	Braces / Invisalign (intrusion/extrusion mechanics)	Severe skeletal deep bite with vertical jaw discrepancy
Underbite	Anteroposterior	Chewing difficulty, TMJ pain, speech issues	Braces / Invisalign (mild dental); facemask in children	Skeletal Class III — most adult cases
Crossbite	Transverse	Jaw asymmetry, enamel wear, tooth loss risk	RME expander (children); braces / Invisalign (dental)	Fused suture in adults (SARPE or orthognathic surgery)
Open Bite	Vertical	Chewing dysfunction, speech/articulation issues	Braces / Invisalign; habit appliances in children	Skeletal vertical open bite in adults

When Orthodontics Alone Is Not Enough: The Surgical Threshold

The most important clinical decision in bite correction is determining whether the problem is *dental* (tooth position) or *skeletal* (jaw position). Orthognathic surgery can correct conditions that nonsurgical treatments cannot. Braces can move your teeth into new positions — but they cannot move your jaw or change its shape.

Orthognathic surgery is designed to correct conditions of the jaw and lower face related to structure, growth, airway issues including sleep apnea, TMJ disorders, and malocclusion problems primarily arising from skeletal disharmonies — orthodontic dental bite problems that cannot be treated easily with braces.

The American Association of Oral and Maxillofacial Surgeons (AAOMS) provides published norms against which jaw discrepancies are measured. The AAOMS notes that significant skeletal discrepancies — often two or more standard deviations from normal — may indicate the need for jaw surgery. In practical terms, this means:

- An ****underbite**** where the lower jaw protrudes substantially beyond the upper, with a reverse overjet that cannot be orthodontically compensated without compromising tooth angulation - A ****skeletal open bite**** driven by vertical jaw divergence that cannot be closed by tooth movement alone without risking relapse - A ****severe deep overbite**** with significant vertical jaw discrepancy - A ****crossbite**** in an adult with a fused midpalatal suture requiring transverse skeletal expansion beyond what dental movement can achieve

Orthognathic surgery is the revision by ostectomy, osteotomy, or osteoplasty of the upper jaw (maxilla) and/or the lower jaw (mandible) intended to alter the relationship of the jaws and teeth. These surgical procedures are intended to correct skeletal jaw and craniofacial deformities that may be associated with significant functional impairment, and to reposition the jaws when conventional orthodontic therapy alone is unable to provide a satisfactory, functional dental occlusion within the limits of the available alveolar bone.

The combined orthodontic-surgical pathway typically involves 12–18 months of pre-surgical orthodontic preparation to align the teeth within each arch, followed by the surgical procedure itself, then a further 6–12 months of post-surgical orthodontic refinement. Orthognathic surgery has a success rate of around 93.9%, and most people who have it report an improved quality of life. Initial jaw surgery recovery takes about six weeks, but the jaw continues to heal over the next several months — it might be a year before the jaw heals completely.

At Smile Solutions Melbourne CBD, the availability of oral and maxillofacial surgeons on-site means that patients requiring combined orthodontic-surgical treatment can be managed collaboratively within a single practice, without external referrals. For a full explanation of this pathway, see our guide on ***Orthodontics and Jaw Surgery (Orthognathic Surgery): When Braces Alone Are Not Enough***.

Why Early Diagnosis Matters: The Case for Interceptive Treatment

Identifying and addressing crossbites, open bites, and overbites early can significantly simplify treatment and often lead to more stable and predictable outcomes. Early intervention can guide jaw growth, making it easier to correct skeletal issues while facial bones are developing and potentially preventing the need for more invasive procedures like jaw surgery.

The American Association of Orthodontists recommends that children receive their first orthodontic evaluation by age 7 — precisely because several bite problems are far more tractable when the jaws are still growing. A posterior crossbite corrected with a palatal expander in a seven-year-old typically requires two to three months of appliance wear; the same problem in a twenty-five-year-old may require surgical assistance. The diagnostic window matters enormously.

For parents wondering what signs to watch for, our guide on **Children's Orthodontics at Smile Solutions: Early Intervention, Phase 1 Treatment, and the Right Age for a First Assessment** covers the clinical indicators — including mouth breathing, asymmetric jaw development, and thumb-sucking past age four — that warrant an early specialist consultation.

Bite Correction and the Cosmetic Smile Makeover Connection

It is worth noting that bite problems have direct implications for cosmetic dentistry outcomes. Porcelain veneers, composite bonding, and other restorative work placed on a misaligned bite are subject to abnormal occlusal forces — forces that can fracture ceramics, debond restorations, and produce uneven wear over time. This is why orthodontic bite correction almost always precedes cosmetic restorative work in a properly sequenced smile makeover.

At Smile Solutions, the integration of registered specialist orthodontists with in-house prosthodontists and cosmetic dentists allows bite correction and aesthetic treatment to be planned as a single coordinated sequence. For more on this multidisciplinary approach, see our guide on **Combined Orthodontic and Cosmetic Smile Makeovers at Smile Solutions: When Alignment and Aesthetics Work Together**.

Key Takeaways

- **Malocclusion is common and clinically significant:** Malocclusion affects around 56% of people worldwide, and while up to 93% of children and adolescents have some degree of malocclusion, not all cases require treatment — but those that impair function, cause wear, or strain the TMJ should be assessed by a specialist orthodontist. - **Each bite problem has distinct health consequences:** Deep overbites risk TMJ strain and gum trauma; underbites cause chewing difficulty and joint pain; crossbites are associated with jaw asymmetry and long-term tooth loss; open bites impair chewing function and speech articulation. - **The dental vs. skeletal distinction is the pivotal diagnostic question:** Dental malocclusions can be corrected with braces or Invisalign alone; skeletal discrepancies — particularly in adults — may require orthognathic surgery in combination with orthodontic treatment. - **Early intervention in children changes the treatment equation:** Crossbites and skeletal underbites treated during growth phases may be resolved with appliances that are non-surgical, shorter in duration, and more stable in outcome than equivalent treatment started in adulthood. - **Bite correction is foundational to cosmetic dentistry:** Any restorative or aesthetic dental work should be preceded by orthodontic bite correction to ensure long-term functional stability and prevent premature failure of restorations.

Conclusion

Bite problems are not simply cosmetic concerns. Overbite, underbite, crossbite, and open bite each represent a specific biomechanical failure that, left uncorrected, imposes cumulative damage on teeth, bone, gum tissue, and jaw joints. The good news is that modern orthodontics — including fixed braces, Invisalign clear aligners, and where necessary, combined surgical-orthodontic treatment — offers a reliable correction pathway for every severity level.

The key is accurate, specialist-level diagnosis. A registered specialist orthodontist will distinguish dental from skeletal malocclusion, identify the optimal treatment timing, and design a plan that addresses both function and aesthetics. At Smile Solutions Melbourne CBD, that diagnostic capability is supported by iTero 3D digital scanning, CBCT imaging, and an on-site multidisciplinary team — the same infrastructure described in our guide on **Orthodontic Technology at Smile Solutions: iTero Scanning, Dental Monitoring, and the In-House Laboratory Advantage**.

If you recognise any of the bite patterns described in this article — in yourself or your child — the most important next step is an assessment with a specialist orthodontist. To understand what that consultation involves, see our guide on **Step-by-Step: What to Expect at Your Orthodontic Consultation and Treatment Journey at Smile Solutions**.

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