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Let's be honest, getting your teeth straightened isn't exactly cheap. And where you live can dramatically impact the final bill. Retainers are often needed after braces to maintain alignment **Braces for kids and teens** health. We're talking about cost variations – how much more or less those braces or aligners might set you back depending on your postcode. Think about it: a bustling city with high rents is likely going to have orthodontic practices with higher overheads, and those costs often trickle down to the patient. On the other hand, a smaller town with lower operating expenses might offer more competitive pricing.

It's not just rent, though. The demand for orthodontic treatment also plays a role. Areas with a high concentration of families or a strong emphasis on aesthetics might see higher prices due to increased demand. Conversely, a region where orthodontic treatment isn't as common might have lower prices to attract patients. Even the local economy matters. A thriving economy often translates to more disposable income, potentially leading to higher prices for non-essential services like orthodontics.

So, before you sign on the dotted line, do your research. Get quotes from multiple orthodontists in your area, and even consider expanding your search to neighboring towns or cities. You might be surprised at the variations you find. A little bit of homework could save you a significant chunk of change – and leave you with a brighter, straighter smile, both literally and figuratively.

*** Complexity of the child's orthodontic case. —**

- *** Type of orthodontic treatment needed for the child.**
- *** Complexity of the child's orthodontic case.**
- *** Duration of the orthodontic treatment plan.**
- *** Geographic location and its cost of living.**
- *** Orthodontist's experience and specialization.**
- *** Use of advanced technology or techniques.**
- *** Insurance coverage and payment options.**

Okay, let's talk about how where you live, specifically whether it's in the city or the country, can seriously impact the cost of... well, pretty much everything. I mean, we all kind of *know* this, right? But let's dig into it a bit, especially when we're thinking about the overall expense of, say, running a business or even just living your life.

Imagine two dentists. One sets up shop in a bustling downtown core, all skyscrapers and constant foot traffic. The other hangs their shingle in a quiet, rural town where everyone knows everyone. Right off the bat, their expenses are going to look wildly different. The city dentist is likely paying sky-high rent for their office space. They might need to offer higher salaries to attract and retain staff who are also dealing with the high cost of city living. Their marketing budget might be bigger, too, because they're competing with dozens of other practices just a few blocks away.

The rural dentist, on the other hand, probably has much lower rent. They might own their building outright. Their staff's cost of living is lower, so salaries can be more reasonable. Word-of-mouth marketing might be enough to keep them busy.

But it's not *all* sunshine and savings for the rural dentist. They might have to travel further for supplies, meaning higher transportation costs. Finding qualified staff in a smaller talent pool could be a challenge. And while their marketing costs might be lower, reaching a broader audience could be tougher.

This urban vs. rural divide applies to so much more than just dentists, of course. Think about farmers: city dwellers pay a premium for fresh, locally-sourced produce, while the farmer struggles with transportation costs and accessing markets. Think about tech startups: a Silicon Valley address might attract investors, but the insane cost of living makes it difficult to compete for talent.

Ultimately, the "best" location depends entirely on the specific situation. There are trade-offs to be made on both sides. But understanding how location impacts expenses is crucial for anyone trying to make smart financial decisions, whether they're running a business, planning a career, or just trying to make their paycheck stretch a little further. It's not just about where you *want* to be, but where you can afford to thrive.

* Duration of the orthodontic treatment plan.

Regional Economics: How Local Economic Conditions Impact Orthodontic Fees

So, you're thinking about braces, huh? That's fantastic! A straighter smile can do wonders. But before you dive headfirst into the world of wires and retainers, let's talk about something that might be on your mind – the cost. And a big piece of that cost puzzle? Location, location, location.

It's no secret that the price of pretty much anything varies depending on where you live. Orthodontic treatment is no exception. Why is that? Well, it all boils down to regional economics – how the economic climate of your specific area influences the price of running a business, including an orthodontic practice.

Think about it. A bustling metropolis like New York City or San Francisco has significantly higher overhead than a smaller town in, say, rural Kansas. Rent for office space is astronomical, salaries for staff are higher to keep up with the cost of living, and even things like utilities and insurance are more expensive. All those increased costs get factored into the orthodontist's fees.

Furthermore, the demand for orthodontic services plays a role. In areas with higher average incomes, people are often more willing to invest in elective procedures like braces. This higher demand can sometimes lead to slightly inflated prices. Conversely, in areas with lower average incomes, orthodontists might adjust their fees to remain competitive and accessible to a wider range of patients.

The local job market also contributes. A region with a thriving economy and low unemployment often sees more disposable income floating around, which again, can influence the demand for and pricing of orthodontic services.

So, what does this mean for you, the person considering braces? It means that doing your research and getting quotes from multiple orthodontists in your area is crucial. Don't just assume that the first price you hear is the only one out there. Explore your options, and be mindful of the economic realities of your region. You might be surprised by the range of prices you find, and understanding how local economics impacts those fees can help you make a more informed and budget-conscious decision. Ultimately, a beautiful and healthy smile should be accessible, and understanding the role of location can help you navigate the financial aspect of achieving it.

*** Geographic location and its cost of living.**

Okay, let's talk about how where a business sets up shop – especially in real estate – can seriously impact what they charge customers, specifically within the context of treatment prices. Think of it like this: that swanky downtown office with the panoramic views? Beautiful, sure, but also probably costing a fortune in rent. And guess who ultimately foots the bill? Yep, the customer.

The basic idea is pretty straightforward. Real estate is a major overhead expense for many businesses. Prime locations, like a bustling city center or a trendy neighborhood, usually mean higher rent, property taxes, and even insurance. These costs get baked into the overall operating expenses of the business. To stay afloat and hopefully even turn a profit, the business has to factor those costs into the pricing of their services or products – in this case, "treatments," whatever those may be.

Imagine a therapist's office. If they're in a high-rent district, they'll likely need to charge more per session than a therapist in a less expensive area. They might offer the same quality of care, but the difference in price is simply due to the cost of doing business in that location. The fancy waiting room and the convenient parking aren't free, after all.

It's not just rent, either. Location can influence other overhead costs. A business in a prestigious area might feel pressure to maintain a certain image, leading to higher spending on things like office decor, marketing materials, and even employee salaries to attract top talent. These expenses, in turn, contribute to higher treatment prices.

Of course, there's a balancing act involved. Businesses can't just charge exorbitant prices simply because they're in a fancy location. They have to consider the local market, competitor pricing, and what customers are willing to pay. Sometimes, a business might choose a less expensive location to offer more competitive pricing, even if it means sacrificing some visibility or prestige.

Ultimately, the correlation between office location costs and treatment prices is a significant one. While other factors like the quality of service, expertise, and demand also play a role, the cost of real estate and related overhead expenses is a fundamental driver of pricing decisions. It all boils down to the simple economic principle: businesses need to cover their costs, and location is often a major cost driver.

*** Orthodontist's experience and specialization.**

Okay, let's talk about how where your orthodontist sets up shop can impact your wallet. We're focusing on the idea that competition, specifically the sheer number of orthodontists clustered in a certain area, plays a big role in the overall cost of braces or Invisalign.

Think of it like this: if you're the only coffee shop in town, you can charge a premium for your latte. People who need their caffeine fix have no other choice. But if there are five coffee places on the same block, all vying for the same customers, prices tend to be more competitive. They might offer discounts, loyalty programs, or slightly lower prices to lure you in.

The same principle applies to orthodontics. In areas saturated with orthodontists, each practice is essentially competing for patients. This competition can lead to more affordable treatment options. Orthodontists might lower their fees, offer flexible payment plans, or include extra services (like retainers) in the overall price to stand out from the crowd. They know that if they're too expensive, potential patients can easily walk down the street to a more budget-friendly option.

Conversely, in more rural areas or smaller towns where orthodontists are few and far between, there's less pressure to lower prices. Patients might be willing to pay more simply because they don't have

the option to shop around easily. The convenience of a nearby orthodontist might outweigh the desire to find the absolute lowest price.

So, location matters. A thriving orthodontic ecosystem in a densely populated area can be a real boon for consumers, driving down prices through healthy competition. While other factors like the complexity of your case, the orthodontist's experience, and the type of treatment you choose will certainly influence the final bill, the number of orthodontists nearby can be a significant piece of the pricing puzzle. It pays to do your research and see what the competitive landscape looks like in your area before committing to a treatment plan.

*** Use of advanced technology or techniques.**

Alright, let's talk about getting the best bang for your buck, and how location plays a sneaky-big role in that. We're all chasing deals, right? Maybe you see a screaming good price on that widget, or that service, or, heck, even a vacation package. But hold on a sec before you click "buy now." We need to factor in the elephant in the room: travel.

Travel Considerations: Weighing travel costs against potentially lower prices elsewhere.

See, that amazing deal you found might be located halfway across the country, or even just a few hours away. Suddenly, that initial cost savings starts to look a little less shiny. Think about it: plane tickets, gas, tolls, overnight stays if the distance is significant. All those expenses quietly add up. It's like finding a cheap pair of shoes at a store that charges a fortune for shipping – the final price might not be so cheap after all.

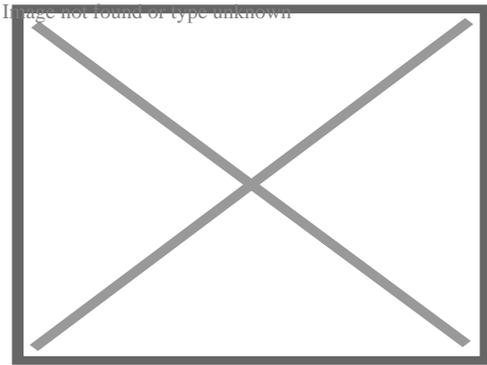
The key is to do the math. Figure out exactly how much it will cost you to get to that "deal" location. Then compare that total cost – the item's price *plus* the travel expenses – to the price you could get locally. Sometimes, even if the local option is initially more expensive, the fact that you don't have to

travel makes it the more economical choice in the long run. Plus, you factor in the value of your time! Is that cross-country trip worth it for a relatively small saving, or would you rather spend that time doing something you enjoy?

It's a balancing act, a bit of a puzzle. But taking travel costs into account is crucial to making smart spending decisions. Don't let the allure of a lower price blind you to the hidden expenses of getting there. A little bit of planning can save you a whole lot of money – and maybe even a headache or two.

About orthodontics

Orthodontics



Connecting the arch-wire on brackets with wire

Occupation

Names

Orthodontist

Occupation type

Specialty

Activity sectors

Dentistry

Description

Education required

Dental degree, specialty training

Fields of employment

Private practices, hospitals

Orthodontics^{[a][b]} is a dentistry specialty that addresses the diagnosis, prevention, management, and correction of mal-positioned teeth and jaws, as well as misaligned bite patterns.^[2] It may also address the modification of facial growth, known as **dentofacial orthopedics**.

Abnormal alignment of the teeth and jaws is very common. The approximate worldwide prevalence of malocclusion was as high as 56%.^[3] However, conclusive scientific evidence for the health benefits of orthodontic treatment is lacking, although patients with completed treatment have reported a higher quality of life than that of untreated patients undergoing orthodontic treatment.^{[4][5]} The main reason for the prevalence of these malocclusions is

diets with less fresh fruit and vegetables and overall softer foods in childhood, causing smaller jaws with less room for the teeth to erupt.^[6] Treatment may require several months to a few years and entails using dental braces and other appliances to gradually adjust tooth position and jaw alignment. In cases where the malocclusion is severe, jaw surgery may be incorporated into the treatment plan. Treatment usually begins before a person reaches adulthood, insofar as pre-adult bones may be adjusted more easily before adulthood.

History

[edit]

Though it was rare until the Industrial Revolution,^[7] there is evidence of the issue of overcrowded, irregular, and protruding teeth afflicting individuals. Evidence from Greek and Etruscan materials suggests that attempts to treat this disorder date back to 1000 BC, showcasing primitive yet impressively well-crafted orthodontic appliances. In the 18th and 19th centuries, a range of devices for the "regulation" of teeth were described by various dentistry authors who occasionally put them into practice.^[8] As a modern science, orthodontics dates back to the mid-1800s.^[9] The field's influential contributors include Norman William Kingsley^[9] (1829–1913) and Edward Angle^[10] (1855–1930). Angle created the first basic system for classifying malocclusions, a system that remains in use today.^[9]

Beginning in the mid-1800s, Norman Kingsley published *Oral Deformities*, which is now credited as one of the first works to begin systematically documenting orthodontics. Being a major presence in American dentistry during the latter half of the 19th century, not only was Kingsley one of the early users of extraoral force to correct protruding teeth, but he was also one of the pioneers for treating cleft palates and associated issues. During the era of orthodontics under Kingsley and his colleagues, the treatment was focused on straightening teeth and creating facial harmony. Ignoring occlusal relationships, it was typical to remove teeth for a variety of dental issues, such as malalignment or overcrowding. The concept of an intact dentition was not widely appreciated in those days, making bite correlations seem irrelevant.^[8]

In the late 1800s, the concept of occlusion was essential for creating reliable prosthetic replacement teeth. This idea was further refined and ultimately applied in various ways when dealing with healthy dental structures as well. As these concepts of prosthetic occlusion progressed, it became an invaluable tool for dentistry.^[8]

It was in 1890 that the work and impact of Dr. Edwards H. Angle began to be felt, with his contribution to modern orthodontics particularly noteworthy. Initially focused on prosthodontics, he taught in Pennsylvania and Minnesota before directing his attention towards dental occlusion and the treatments needed to maintain it as a normal condition, thus becoming known as the "father of modern orthodontics".^[8]

By the beginning of the 20th century, orthodontics had become more than just the straightening of crooked teeth. The concept of ideal occlusion, as postulated by Angle and incorporated into a classification system, enabled a shift towards treating malocclusion, which is any deviation from normal occlusion.^[8] Having a full set of teeth on both arches was highly sought after in orthodontic treatment due to the need for exact relationships between them. Extraction as an orthodontic procedure was heavily opposed by Angle and those who followed him. As occlusion became the key priority, facial proportions and aesthetics were neglected. To achieve ideal occlusals without using external forces, Angle postulated that having perfect occlusion was the best way to gain optimum facial aesthetics.^[8]

With the passing of time, it became quite evident that even an exceptional occlusion was not suitable when considered from an aesthetic point of view. Not only were there issues related to aesthetics, but it usually proved impossible to keep a precise occlusal relationship achieved by forcing teeth together over extended durations with the use of robust elastics, something Angle and his students had previously suggested. Charles Tweed^[11] in America and Raymond Begg^[12] in Australia (who both studied under Angle) re-introduced dentistry extraction into orthodontics during the 1940s and 1950s so they could improve facial esthetics while also ensuring better stability concerning occlusal relationships.^[13]

In the postwar period, cephalometric radiography^[14] started to be used by orthodontists for measuring changes in tooth and jaw position caused by growth and treatment.^[15] The x-rays showed that many Class II and III malocclusions were due to improper jaw relations as opposed to misaligned teeth. It became evident that orthodontic therapy could adjust mandibular development, leading to the formation of functional jaw orthopedics in Europe and extraoral force measures in the US. These days, both functional appliances and extraoral devices are applied around the globe with the aim of amending growth patterns and forms. Consequently, pursuing true, or at least improved, jaw relationships had become the main objective of treatment by the mid-20th century.^[8]

At the beginning of the twentieth century, orthodontics was in need of an upgrade. The American Journal of Orthodontics was created for this purpose in 1915; before it, there were no scientific objectives to follow, nor any precise classification system and brackets that lacked features.^[16]

Until the mid-1970s, braces were made by wrapping metal around each tooth.^[9] With advancements in adhesives, it became possible to instead bond metal brackets to the teeth.^[9]

In 1972, Lawrence F. Andrews gave an insightful definition of the ideal occlusion in permanent teeth. This has had meaningful effects on orthodontic treatments that are administered regularly,^[16] and these are: 1. Correct interarchal relationships 2. Correct crown angulation (tip) 3. Correct crown inclination (torque) 4. No rotations 5. Tight contact points 6. Flat Curve of Spee (0.0–2.5 mm),^[17] and based on these principles, he discovered a treatment system called the straight-wire appliance system, or the pre-adjusted edgewise system. Introduced in

1976, Larry Andrews' pre-adjusted edgewise appliance, more commonly known as the straight wire appliance, has since revolutionized fixed orthodontic treatment. The advantage of the design lies in its bracket and archwire combination, which requires only minimal wire bending from the orthodontist or clinician. It's aptly named after this feature: the angle of the slot and thickness of the bracket base ultimately determine where each tooth is situated with little need for extra manipulation.^{[18][19][20]}

Prior to the invention of a straight wire appliance, orthodontists were utilizing a non-programmed standard edgewise fixed appliance system, or Begg's pin and tube system. Both of these systems employed identical brackets for each tooth and necessitated the bending of an archwire in three planes for locating teeth in their desired positions, with these bends dictating ultimate placements.^[18]

Evolution of the current orthodontic appliances

[edit]

When it comes to orthodontic appliances, they are divided into two types: removable and fixed. Removable appliances can be taken on and off by the patient as required. On the other hand, fixed appliances cannot be taken off as they remain bonded to the teeth during treatment.

Fixed appliances

[edit]

Fixed orthodontic appliances are predominantly derived from the edgewise appliance approach, which typically begins with round wires before transitioning to rectangular archwires for improving tooth alignment. These rectangular wires promote precision in the positioning of teeth following initial treatment. In contrast to the Begg appliance, which was based solely on round wires and auxiliary springs, the Tip-Edge system emerged in the early 21st century. This innovative technology allowed for the utilization of rectangular archwires to precisely control tooth movement during the finishing stages after initial treatment with round wires. Thus, almost all modern fixed appliances can be considered variations on this edgewise appliance system.

Early 20th-century orthodontist Edward Angle made a major contribution to the world of dentistry. He created four distinct appliance systems that have been used as the basis for many orthodontic treatments today, barring a few exceptions. They are E-arch, pin and tube, ribbon arch, and edgewise systems.

E-arch

[edit]

Edward H. Angle made a significant contribution to the dental field when he released the 7th edition of his book in 1907, which outlined his theories and detailed his technique. This approach was founded upon the iconic "E-Arch" or 'the-arch' shape as well as inter-maxillary elastics.^[21] This device was different from any other appliance of its period as it featured a rigid framework to which teeth could be tied effectively in order to recreate an arch form that followed pre-defined dimensions.^[22] Molars were fitted with braces, and a powerful labial archwire was positioned around the arch. The wire ended in a thread, and to move it forward, an adjustable nut was used, which allowed for an increase in circumference. By ligation, each individual tooth was attached to this expansive archwire.^[8]

Pin and tube appliance

[edit]

Due to its limited range of motion, Angle was unable to achieve precise tooth positioning with an E-arch. In order to bypass this issue, he started using bands on other teeth combined with a vertical tube for each individual tooth. These tubes held a soldered pin, which could be repositioned at each appointment in order to move them in place.^[8] Dubbed the "bone-growing appliance", this contraption was theorized to encourage healthier bone growth due to its potential for transferring force directly to the roots.^[23] However, implementing it proved troublesome in reality.

Ribbon arch

[edit]

Realizing that the pin and tube appliance was not easy to control, Angle developed a better option, the ribbon arch, which was much simpler to use. Most of its components were already prepared by the manufacturer, so it was significantly easier to manage than before. In order to attach the ribbon arch, the occlusal area of the bracket was opened. Brackets were only added to eight incisors and mandibular canines, as it would be impossible to insert the arch into both horizontal molar tubes and the vertical brackets of adjacent premolars. This lack of understanding posed a considerable challenge to dental professionals; they were unable to make corrections to an excessive Spee curve in bicuspid teeth.^[24] Despite the complexity of the situation, it was necessary for practitioners to find a resolution. Unparalleled to its counterparts, what made the ribbon arch instantly popular was that its archwire had remarkable spring qualities and could be utilized to accurately align teeth that were

misaligned. However, a major drawback of this device was its inability to effectively control root position since it did not have enough resilience to generate the torque movements required for setting roots in their new place.^[8]

Edgewise appliance

[edit]

In an effort to rectify the issues with the ribbon arch, Angle shifted the orientation of its slot from vertical, instead making it horizontal. In addition, he swapped out the wire and replaced it with a precious metal wire that was rotated by 90 degrees in relation—henceforth known as Edgewise.^[25] Following extensive trials, it was concluded that dimensions of 22 × 28 mils were optimal for obtaining excellent control over crown and root positioning across all three planes of space.^[26] After debuting in 1928, this appliance quickly became one of the mainstays for multibanded fixed therapy, although ribbon arches continued to be utilized for another decade or so beyond this point too.^[8]

Labiolingual

[edit]

Prior to Angle, the idea of fitting attachments on individual teeth had not been thought of, and in his lifetime, his concern for precisely positioning each tooth was not highly appraised. In addition to using fingersprings for repositioning teeth with a range of removable devices, two main appliance systems were very popular in the early part of the 20th century. Labiolingual appliances use bands on the first molars joined with heavy lingual and labial archwires affixed with soldered fingersprings to shift single teeth.

Twin wire

[edit]

Utilizing bands around both incisors and molars, a twin-wire appliance was designed to provide alignment between these teeth. Constructed with two 10-mil steel archwires, its delicate features were safeguarded by lengthy tubes stretching from molars towards canines. Despite its efforts, it had limited capacity for movement without further modifications, rendering it obsolete in modern orthodontic practice.

Begg's Appliance

[edit]

Returning to Australia in the 1920s, the renowned orthodontist, Raymond Begg, applied his knowledge of ribbon arch appliances, which he had learned from the Angle School. On top of this, Begg recognized that extracting teeth was sometimes vital for successful outcomes and sought to modify the ribbon arch appliance to provide more control when dealing with root positioning. In the late 1930s, Begg developed his adaptation of the appliance, which took three forms. Firstly, a high-strength 16-mil round stainless steel wire replaced the original precious metal ribbon arch. Secondly, he kept the same ribbon arch bracket but inverted it so that it pointed toward the gums instead of away from them. Lastly, auxiliary springs were added to control root movement. This resulted in what would come to be known as the Begg Appliance. With this design, friction was decreased since contact between wire and bracket was minimal, and binding was minimized due to tipping and uprighting being used for anchorage control, which lessened contact angles between wires and corners of the bracket.

Tip-Edge System

[edit]

Begg's influence is still seen in modern appliances, such as Tip-Edge brackets. This type of bracket incorporates a rectangular slot cutaway on one side to allow for crown tipping with no incisal deflection of an archwire, allowing teeth to be tipped during space closure and then uprighted through auxiliary springs or even a rectangular wire for torque purposes in finishing. At the initial stages of treatment, small-diameter steel archwires should be used when working with Tip-Edge brackets.

Contemporary edgewise systems

[edit]

Throughout time, there has been a shift in which appliances are favored by dentists. In particular, during the 1960s, when it was introduced, the Begg appliance gained wide popularity due to its efficiency compared to edgewise appliances of that era; it could produce the same results with less investment on the dentist's part. Nevertheless, since then, there have been advances in technology and sophistication in edgewise appliances, which led to the opposite conclusion: nowadays, edgewise appliances are more efficient than the Begg appliance, thus explaining why it is commonly used.

Automatic rotational control

[edit]

At the beginning, Angle attached eyelets to the edges of archwires so that they could be held with ligatures and help manage rotations. Now, however, no extra ligature is needed due to either twin brackets or single brackets that have added wings touching underneath the wire (Lewis or Lang brackets). Both types of brackets simplify the process of obtaining moments that control movements along a particular plane of space.

Alteration in bracket slot dimensions

[edit]

In modern dentistry, two types of edgewise appliances exist: the 18- and 22-slot varieties. While these appliances are used differently, the introduction of a 20-slot device with more precise features has been considered but not pursued yet.^[27]

Straight-wire bracket prescriptions

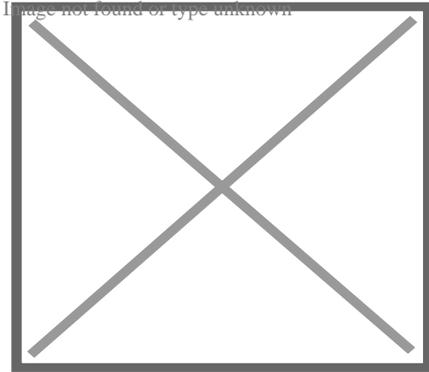
[edit]

Rather than rely on the same bracket for all teeth, L.F. Andrews found a way to make different brackets for each tooth in the 1980s, thanks to the increased convenience of bonding.^[28] This adjustment enabled him to avoid having multiple bends in archwires that would have been needed to make up for variations in tooth anatomy. Ultimately, this led to what was termed a "straight-wire appliance" system – an edgewise appliance that greatly enhanced its efficiency.^[29] The modern edgewise appliance has slightly different construction than the original one. Instead of relying on faciolingual bends to accommodate variations among teeth, each bracket has a correspondingly varying base thickness depending on the tooth it is intended for. However, due to individual differences between teeth, this does not completely eliminate the need for compensating bends.^[30] Accurately placing the roots of many teeth requires angling brackets in relation to the long axis of the tooth. Traditionally, this mesiodistal root positioning necessitated using second-order, or tip, bends along the archwire. However, angling the bracket or bracket slot eliminates this need for bends.

Given the discrepancies in inclination of facial surfaces across individual teeth, placing a twist, otherwise known as third-order or torque bends, into segments of each rectangular archwire was initially required with the edgewise appliance. These bends were necessary for all patients and wires, not just to avoid any unintentional movement of suitably placed teeth or when moving roots facially or lingually. Angulation of either brackets or slots can minimize the need for second-order or tip bends on archwires. Contemporary edgewise appliances come with brackets designed to adjust for any facial inclinations, thereby eliminating or reducing any third-order bends. These brackets already have angulation and torque values built in so that each rectangular archwire can be contorted to form a custom fit without inadvertently shifting any correctly positioned teeth. Without bracket angulation and torque, second-order or tip bends would still be required on each patient's archwire.

Methods

[edit]



Upper and lower jaw functional expanders

A typical treatment for incorrectly positioned teeth (malocclusion) takes from one to two years, with braces being adjusted every four to 10 weeks by orthodontists,^[31] while university-trained dental specialists are versed in the prevention, diagnosis, and treatment of dental and facial irregularities. Orthodontists offer a wide range of treatment options to straighten crooked teeth, fix irregular bites, and align the jaws correctly.^[32] There are many ways to adjust malocclusion. In growing patients, there are more options to treat skeletal discrepancies, either by promoting or restricting growth using functional appliances, orthodontic headgear, or a reverse pull facemask. Most orthodontic work begins in the early permanent dentition stage before skeletal growth is completed. If skeletal growth has completed, jaw surgery is an option. Sometimes teeth are extracted to aid the orthodontic treatment (teeth are extracted in about half of all the cases, most commonly the premolars).^[33]

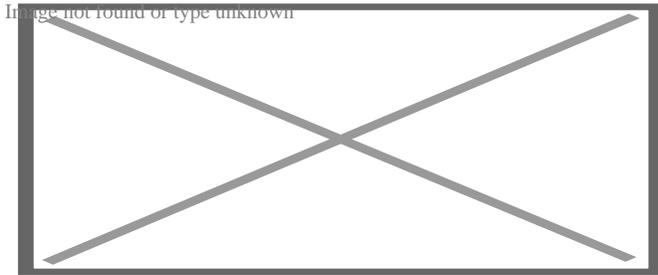
Orthodontic therapy may include the use of fixed or removable appliances. Most orthodontic therapy is delivered using appliances that are fixed in place,^[34] for example, braces that are adhesively bonded to the teeth. Fixed appliances may provide greater mechanical control of the teeth; optimal treatment outcomes are improved by using fixed appliances.

Fixed appliances may be used, for example, to rotate teeth if they do not fit the arch shape of the other teeth in the mouth, to adjust multiple teeth to different places, to change the tooth angle of teeth, or to change the position of a tooth's root. This treatment course is not preferred where a patient has poor oral hygiene, as decalcification, tooth decay, or other complications may result. If a patient is unmotivated (insofar as treatment takes several months and requires commitment to oral hygiene), or if malocclusions are mild.

The biology of tooth movement and how advances in gene therapy and molecular biology technology may shape the future of orthodontic treatment.^[35]

Braces

[edit]



Dental braces

Braces are usually placed on the front side of the teeth, but they may also be placed on the side facing the tongue (called lingual braces). Brackets made out of stainless steel or porcelain are bonded to the center of the teeth using an adhesive. Wires are placed in a slot in the brackets, which allows for controlled movement in all three dimensions.

Apart from wires, forces can be applied using elastic bands,^[36] and springs may be used to push teeth apart or to close a gap. Several teeth may be tied together with ligatures, and different kinds of hooks can be placed to allow for connecting an elastic band.^[37]^[36]

Clear aligners are an alternative to braces, but insufficient evidence exists to determine their effectiveness.^[38]

Treatment duration

[edit]

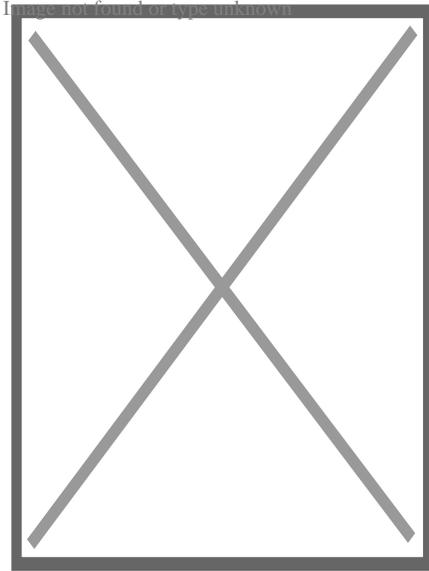
The time required for braces varies from person to person as it depends on the severity of the problem, the amount of room available, the distance the teeth must travel, the health of the teeth, gums, and supporting bone, and how closely the patient follows instructions. On average, however, once the braces are put on, they usually remain in place for one to three years. After braces are removed, most patients will need to wear a retainer all the time for the first six months, then only during sleep for many years.^[39]

Headgear

[edit]

Orthodontic headgear, sometimes referred to as an "extra-oral appliance", is a treatment approach that requires the patient to have a device strapped onto their head to help correct malocclusion—typically used when the teeth do not align properly. Headgear is most often

used along with braces or other orthodontic appliances. While braces correct the position of teeth, orthodontic headgear—which, as the name suggests, is worn on or strapped onto the patient's head—is most often added to orthodontic treatment to help alter the alignment of the jaw, although there are some situations in which such an appliance can help move teeth, particularly molars.



Full orthodontic headgear with headcap, fitting straps, facebow, and elastics

Whatever the purpose, orthodontic headgear works by exerting tension on the braces via hooks, a facebow, coils, elastic bands, metal orthodontic bands, and other attachable appliances directly into the patient's mouth. It is most effective for children and teenagers because their jaws are still developing and can be easily manipulated. (If an adult is fitted with headgear, it is usually to help correct the position of teeth that have shifted after other teeth have been extracted.) Thus, headgear is typically used to treat a number of jaw alignment or bite problems, such as overbite and underbite.^[40]

Palatal expansion

[edit]

Palatal expansion can be best achieved using a fixed tissue-borne appliance. Removable appliances can push teeth outward but are less effective at maxillary sutural expansion. The effects of a removable expander may look the same as they push teeth outward, but they should not be confused with actually expanding the palate. Proper palate expansion can create more space for teeth as well as improve both oral and nasal airflow.^[41]

Jaw surgery

[edit]

Jaw surgery may be required to fix severe malocclusions.^[42] The bone is broken during surgery and stabilized with titanium (or bioresorbable) plates and screws to allow for healing to take place.^[43] After surgery, regular orthodontic treatment is used to move the teeth into their final position.^[44]

During treatment

[edit]

To reduce pain during the orthodontic treatment, low-level laser therapy (LLLT), vibratory devices, chewing adjuncts, brainwave music, or cognitive behavioral therapy can be used. However, the supporting evidence is of low quality, and the results are inconclusive.^[45]

Post treatment

[edit]

After orthodontic treatment has been completed, there is a tendency for teeth to return, or relapse, back to their pre-treatment positions. Over 50% of patients have some reversion to pre-treatment positions within 10 years following treatment.^[46] To prevent relapse, the majority of patients will be offered a retainer once treatment has been completed and will benefit from wearing their retainers. Retainers can be either fixed or removable.

Removable retainers

[edit]

Removable retainers are made from clear plastic, and they are custom-fitted for the patient's mouth. It has a tight fit and holds all of the teeth in position. There are many types of brands for clear retainers, including Zendura Retainer, Essix Retainer, and Vivera Retainer.^[47] A Hawley retainer is also a removable orthodontic appliance made from a combination of plastic and metal that is custom-molded to fit the patient's mouth. Removable retainers will be worn for different periods of time, depending on the patient's need to stabilize the dentition.^[48]

Fixed retainers

[edit]

Fixed retainers are a simple wire fixed to the tongue-facing part of the incisors using dental adhesive and can be specifically useful to prevent rotation in incisors. Other types of fixed retainers can include labial or lingual braces, with brackets fixed to the teeth.^[48]

Palatal expander

○

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Palatal expander Orthodontic headgear

○

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Orthodontic headgear An X-ray taken for skull analysis

○

Image not found or type unknown

An X-ray taken for skull analysis

Top (left) and bottom retainers

○

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Top (left) and bottom retainers

Clear aligners

[edit]

Clear aligners are another form of orthodontics commonly used today, involving removable plastic trays. There has been controversy about the effectiveness of aligners such as Invisalign or Byte; some consider them to be faster and more freeing than the alternatives.^[49]

Training

[edit]

There are several specialty areas in dentistry, but the specialty of orthodontics was the first to be recognized within dentistry.^[50] Specifically, the American Dental Association recognized orthodontics as a specialty in the 1950s.^[50] Each country has its own system for training and registering orthodontic specialists.

Australia

[edit]

In Australia, to obtain an accredited three-year full-time university degree in orthodontics, one will need to be a qualified dentist (complete an AHPRA-registered general dental degree) with a minimum of two years of clinical experience. There are several universities in Australia that offer orthodontic programs: the University of Adelaide, the University of Melbourne, the University of Sydney, the University of Queensland, the University of Western Australia, and the University of Otago.^[51] Orthodontic courses are accredited by the Australian Dental Council and reviewed by the Australian Society of Orthodontists (ASO). Prospective applicants should obtain information from the relevant institution before applying for admission.^[52] After completing a degree in orthodontics, specialists are required to be

registered with the Australian Health Practitioner Regulation Agency (AHPRA) in order to practice.^{[53][54]}

Bangladesh

[edit]

Dhaka Dental College in Bangladesh is one of the many schools recognized by the Bangladesh Medical and Dental Council (BM&DC) that offer post-graduation orthodontic courses.^{[55][56]} Before applying to any post-graduation training courses, an applicant must have completed the Bachelor of Dental Surgery (BDS) examination from any dental college. ^[55] After application, the applicant must take an admissions test held by the specific college. ^[55] If successful, selected candidates undergo training for six months. ^[57]

Canada

[edit]

In Canada, obtaining a dental degree, such as a Doctor of Dental Surgery (DDS) or Doctor of Medical Dentistry (DMD), would be required before being accepted by a school for orthodontic training.^[58] Currently, there are 10 schools in the country offering the orthodontic specialty. ^[58] Candidates should contact the individual school directly to obtain the most recent pre-requisites before entry.^[58] The Canadian Dental Association expects orthodontists to complete at least two years of post-doctoral, specialty training in orthodontics in an accredited program after graduating from their dental degree.

United States

[edit]

Similar to Canada, there are several colleges and universities in the United States that offer orthodontic programs. Every school has a different enrollment process, but every applicant is required to have graduated with a DDS or DMD from an accredited dental school. ^{[59][60]} Entrance into an accredited orthodontics program is extremely competitive and begins by passing a national or state licensing exam.^[61]

The program generally lasts for two to three years, and by the final year, graduates are required to complete the written American Board of Orthodontics (ABO) exam. ^[61] This exam is also broken down into two components: a written exam and a clinical exam. ^[61] The written exam is a comprehensive exam that tests for the applicant's knowledge of basic sciences and clinical concepts.^[61] The clinical exam, however, consists of a Board Case Oral Examination (BCOE), a Case Report Examination (CRE), and a Case Report Oral Examination (CROE). ^[61] Once certified, certification must then be renewed every ten years. ^[61] Orthodontic

programs can award a Master of Science degree, a Doctor of Science degree, or a Doctor of Philosophy degree, depending on the school and individual research requirements.^[62]

United Kingdom

[edit]

This section **relies largely or entirely on a single source**. Relevant discussion may be found on the talk page. Please help improve this article by introducing citations to additional sources.



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Throughout the United Kingdom, there are several Orthodontic Specialty Training Registrar posts available.^[63] The program is full-time for three years, and upon completion, trainees graduate with a degree at the Masters or Doctorate level.^[63] Training may take place within hospital departments that are linked to recognized dental schools.^[63] Obtaining a Certificate of Completion of Specialty Training (CCST) allows an orthodontic specialist to be registered under the General Dental Council (GDC).^[63] An orthodontic specialist can provide care within a primary care setting, but to work at a hospital as an orthodontic consultant, higher-level training is further required as a post-CCST trainee.^[63] To work within a university setting as an academic consultant, completing research toward obtaining a Ph.D. is also required.^[63]

See also

[edit]

- Orthodontic technology
- Orthodontic indices
- List of orthodontic functional appliances
- Molar distalization
- Mouth breathing
- Obligate nasal breathing

Notes

[edit]

- [^] Also referred to as *orthodontia*
- [^] "Orthodontics" comes from the Greek *orthos* ('correct, straight') and *-odont-* ('tooth').^[1]

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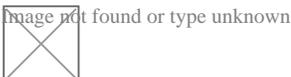
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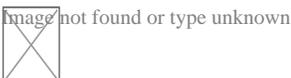
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Orthodontics

Diagnosis

- Bolton analysis
- Cephalometric analysis
- Cephalometry
- Dentition analysis
- Failure of eruption of teeth
- Little's Irregularity Index
- Malocclusion
- Scissor bite
- Standard anatomical position
- Tooth ankylosis
- Tongue thrust

Conditions

- Overbite
- Overjet
- Open bite
- Crossbite
- Dental crowding
- Dental spacing
- Bimaxillary Protrusion
- Prognathism
- Retrognathism
- Maxillary hypoplasia
- Condylar hyperplasia
- Overeruption
- Mouth breathing
- Temporomandibular dysfunction

Appliances

- ACCO appliance
- Archwire
- Activator appliance
- Braces
- Damon system
- Elastics
- Frankel appliance
- Invisalign
- Lingual arch
- Lip bumper
- Herbst Appliance
- List of orthodontic functional appliances
- List of palatal expanders
- Lingual braces
- Headgear
- Orthodontic technology
- Orthodontic spacer
- Palatal lift prosthesis
- Palatal expander
- Quad helix
- Retainer
- SureSmile
- Self-ligating braces
- Splint activator
- Twin Block Appliance

Procedures

- Anchorage (orthodontics)
- Cantilever mechanics
- Fiberotomy
- Interproximal reduction
- Intrusion (orthodontics)
- Molar distalization
- SARPE
- Serial extraction

Materials

- Beta-titanium
- Nickel titanium
- Stainless steel
- TiMolium
- Elgiloy
- Ceramic
- Composite
- Dental elastics

- Edward Angle
- Spencer Atkinson
- Clifford Ballard
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- American Board of Orthodontics
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- Canadian Association of Orthodontists
- Indian Orthodontic Society
- Italian Academy of Orthodontic Technology
- Society for Orthodontic Dental Technology (Germany)

Journals

- American Journal of Orthodontics and Dentofacial Orthopedics
- The Angle Orthodontist
- Journal of Orthodontics

Institution

- Angle School of Orthodontia

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Dentistry

Specialties

- Endodontics
- Oral and maxillofacial pathology
- Oral and maxillofacial radiology
- Oral and maxillofacial surgery
- Orthodontics and dentofacial orthopedics
- Pediatric dentistry
- Periodontics
- Prosthodontics
- Dental public health
- Cosmetic dentistry
- Dental implantology
- Geriatric dentistry
- Restorative dentistry
- Forensic odontology
- Dental traumatology
- Holistic dentistry

Dental surgery

- Dental extraction
- Tooth filling
- Root canal therapy
- Root end surgery
- Scaling and root planing
- Teeth cleaning
- Dental bonding
- Tooth polishing
- Tooth bleaching
- Socket preservation
- Dental implant

Organisations

- American Association of Orthodontists
- British Dental Association
- British Dental Health Foundation
- British Orthodontic Society
- Canadian Association of Orthodontists
- Dental Technologists Association
- General Dental Council
- Indian Dental Association
- National Health Service

By country

- Canada
- Philippines
- Israel
- United Kingdom
- United States

See also

- Index of oral health and dental articles
- Outline of dentistry and oral health
- Dental fear
- Dental instruments
- Dental material
- History of dental treatments
 - Ancient Rome
- Infant oral mutilation
- Mouth assessment
- Oral hygiene

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Cleft lip and cleft palate

Related specialities

- Advance practice nursing
- Audiology
- Dentistry
- Dietetics
- Genetics
- Oral and maxillofacial surgery
- Orthodontics
- Orthodontic technology
- Otolaryngology
- Pediatrics
- Pediatric dentistry
- Physician
- Plastic surgery
- Psychiatry
- Psychology
- Respiratory therapy
- Social work
- Speech and language therapy

Related syndromes

- Hearing loss with craniofacial syndromes
- Pierre Robin syndrome
- Popliteal pterygium syndrome
- Van der Woude syndrome

National and international organisations

- Cleft Lip and Palate Association
- Craniofacial Society of Great Britain and Ireland
- Interplast
- North Thames Regional Cleft Lip and Palate Service
- Operation Smile
- Overseas Plastic Surgery Appeal
- Shriners Hospitals for Children
- Smile Train
- Transforming Faces Worldwide
- Smile Angel Foundation (China)

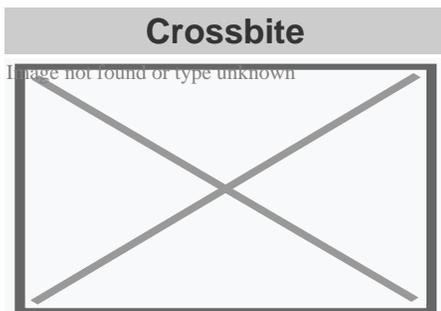
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About crossbite



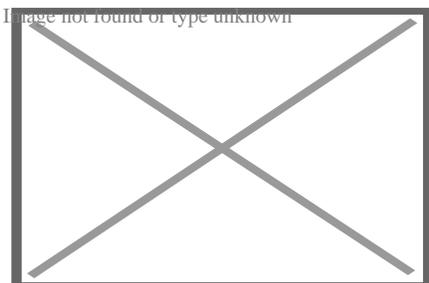
Unilateral posterior crossbite

Specialty Orthodontics

In dentistry, **crossbite** is a form of malocclusion where a tooth (or teeth) has a more buccal or lingual position (that is, the tooth is either closer to the cheek or to the tongue) than its corresponding antagonist tooth in the upper or lower dental arch. In other words, crossbite is a lateral misalignment of the dental arches.^{[1][2]}

Anterior crossbite

[edit]



Class 1 with anterior crossbite

An anterior crossbite can be referred as negative overjet, and is typical of class III skeletal relations (prognathism).

Primary/mixed dentitions

[edit]

An anterior crossbite in a child with baby teeth or mixed dentition may happen due to either dental misalignment or skeletal misalignment. Dental causes may be due to displacement of one or two teeth, where skeletal causes involve either mandibular hyperplasia, maxillary hypoplasia or combination of both.

Dental crossbite

[edit]

An anterior crossbite due to dental component involves displacement of either maxillary central or lateral incisors lingual to their original erupting positions. This may happen due to delayed eruption of the primary teeth leading to permanent teeth moving lingual to their primary predecessors. This will lead to anterior crossbite where upon biting, upper teeth are behind the lower front teeth and may involve few or all frontal incisors. In this type of crossbite, the maxillary and mandibular proportions are normal to each other and to the cranial base. Another reason that may lead to a dental crossbite is crowding in the maxillary arch. Permanent teeth will tend to erupt lingual to the primary teeth in presence of crowding. Side-effects caused by dental crossbite can be increased recession on the buccal of lower incisors and higher chance of inflammation in the same area. Another term for an anterior crossbite due to dental interferences is *Pseudo Class III Crossbite or Malocclusion*.

Single tooth crossbite

[edit]

Single tooth crossbites can occur due to uneruption of a primary teeth in a timely manner which causes permanent tooth to erupt in a different eruption pattern which is lingual to the primary tooth.^[3] Single tooth crossbites are often fixed by using a finger-spring based appliances.^[4]^[5] This type of spring can be attached to a removable appliance which is used by patient every day to correct the tooth position.

Skeletal crossbite

[edit]

An anterior crossbite due to skeletal reasons will involve a deficient maxilla and a more hyperplastic or overgrown mandible. People with this type of crossbite will have dental compensation which involves proclined maxillary incisors and retroclined mandibular incisors. A proper diagnosis can be made by having a person bite into their centric relation will show mandibular incisors ahead of the maxillary incisors, which will show the skeletal discrepancy between the two jaws.^[6]

Posterior crossbite

[edit]

Bjork defined posterior crossbite as a malocclusion where the buccal cusps of canine, premolar and molar of upper teeth occlude lingually to the buccal cusps of canine, premolar and molar of lower teeth.^[7] Posterior crossbite is often correlated to a narrow maxilla and upper dental arch. A posterior crossbite can be unilateral, bilateral, single-tooth or entire segment crossbite. Posterior crossbite has been reported to occur between 7–23% of the population.^{[8][9]} The most common type of posterior crossbite to occur is the unilateral crossbite which occurs in 80% to 97% of the posterior crossbite cases.^{[10][3]} Posterior crossbites also occur most commonly in primary and mixed dentition. This type of crossbite usually presents with a *functional shift of the mandible towards the side of the crossbite*. Posterior crossbite can occur due to either skeletal, dental or functional abnormalities. One of the common reasons for development of posterior crossbite is the size difference between maxilla and mandible, where maxilla is smaller than mandible.^[11] Posterior crossbite can result due to

- Upper Airway Obstruction where people with "adenoid faces" who have trouble breathing through their nose. They have an open bite malocclusion and present with development of posterior crossbite.^[12]
- Prolong digit or suckling habits which can lead to constriction of maxilla posteriorly^[13]
- Prolong pacifier use (beyond age 4)^[13]

Connections with TMD

[edit]

Unilateral posterior crossbite

[edit]

Unilateral crossbite involves one side of the arch. The most common cause of unilateral crossbite is a narrow maxillary dental arch. This can happen due to habits such as digit sucking, prolonged use of pacifier or upper airway obstruction. Due to the discrepancy between the maxillary and mandibular arch, neuromuscular guidance of the mandible causes mandible to shift towards the side of the crossbite.^[14] This is also known as Functional mandibular shift. This shift can become structural if left untreated for a long time during growth, leading to skeletal asymmetries. Unilateral crossbites can present with following features in a child

- Lower midline deviation^[15] to the crossbite side
- Class 2 Subdivision relationships
- Temporomandibular disorders ^[16]

Treatment

[edit]

A child with posterior crossbite should be treated immediately if the child shifts their mandible on closing, which is often seen in a unilateral crossbite as mentioned above. The best age to treat a child with crossbite is in their mixed dentition when their palatal sutures have not fused to each other. Palatal expansion allows more space in an arch to relieve crowding and correct posterior crossbite. The correction can include any type of palatal expanders that will expand the palate which resolves the narrow constriction of the maxilla.^[9] There are several therapies that can be used to correct a posterior crossbite: braces, 'Z' spring or cantilever spring, quad helix, removable plates, clear aligner therapy, or a Delaire mask. The correct therapy should be decided by the orthodontist depending on the type and severity of the crossbite.

One of the keys in diagnosing the anterior crossbite due to skeletal vs dental causes is diagnosing a CR-CO shift in a patient. An adolescent presenting with anterior crossbite may be positioning their mandible forward into centric occlusion (CO) due to the dental interferences. Thus finding their occlusion in centric relation (CR) is key in diagnosis. For anterior crossbite, if their CO matches their CR then the patient truly has a skeletal component to their crossbite. If the CR shows a less severe class 3 malocclusion or teeth not in anterior crossbite, this may mean that their anterior crossbite results due to dental interferences.^[17]

Goal to treat unilateral crossbites should definitely include removal of occlusal interferences and elimination of the functional shift. Treating posterior crossbites early may help prevent the occurrence of Temporomandibular joint pathology.^[18]

Unilateral crossbites can also be diagnosed and treated properly by using a Deprogramming splint. This splint has flat occlusal surface which causes the muscles to deprogram themselves and establish new sensory engrams. When the splint is removed, a proper centric relation bite can be diagnosed from the bite.^[19]

Self-correction

[edit]

Literature states that very few crossbites tend to self-correct which often justify the treatment approach of correcting these bites as early as possible.^[9] Only 0–9% of crossbites self-correct. Lindner et al. reported that 50% of crossbites were corrected in 76 four-year-old children.^[20]

See also

[edit]

- List of palatal expanders
- Palatal expansion
- Malocclusion

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External links

[edit]

Classification

- ICD-10: K07.2
- ICD-9-CM: 524.27

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Orthodontics

Diagnosis

- Bolton analysis
- Cephalometric analysis
- Cephalometry
- Dentition analysis
- Failure of eruption of teeth
- Little's Irregularity Index
- Malocclusion
- Scissor bite
- Standard anatomical position
- Tooth ankylosis
- Tongue thrust

Conditions

- Overbite
- Overjet
- Open bite
- Crossbite
- Dental crowding
- Dental spacing
- Bimaxillary Protrusion
- Prognathism
- Retrognathism
- Maxillary hypoplasia
- Condylar hyperplasia
- Overeruption
- Mouth breathing
- Temporomandibular dysfunction

Appliances

- ACCO appliance
- Archwire
- Activator appliance
- Braces
- Damon system
- Elastics
- Frankel appliance
- Invisalign
- Lingual arch
- Lip bumper
- Herbst Appliance
- List of orthodontic functional appliances
- List of palatal expanders
- Lingual braces
- Headgear
- Orthodontic technology
- Orthodontic spacer
- Palatal lift prosthesis
- Palatal expander
- Quad helix
- Retainer
- SureSmile
- Self-ligating braces
- Splint activator
- Twin Block Appliance

Procedures

- Anchorage (orthodontics)
- Cantilever mechanics
- Fiberotomy
- Interproximal reduction
- Intrusion (orthodontics)
- Molar distalization
- SARPE
- Serial extraction

Materials

- Beta-titanium
- Nickel titanium
- Stainless steel
- TiMolium
- Elgiloy
- Ceramic
- Composite
- Dental elastics

- Edward Angle
- Spencer Atkinson
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- L. F. Andrews

Notable contributors

Organizations

- American Association of Orthodontists
- American Board of Orthodontics
- British Orthodontic Society
- Canadian Association of Orthodontists
- Indian Orthodontic Society
- Italian Academy of Orthodontic Technology
- Society for Orthodontic Dental Technology (Germany)

Journals

- American Journal of Orthodontics and Dentofacial Orthopedics
- The Angle Orthodontist
- Journal of Orthodontics

Institution

- Angle School of Orthodontia

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Dental disease involving the jaw

General

- Jaw abnormality
- malocclusion
- Orthodontics
- Gnathitis

Size

- Micrognathism
- Maxillary hypoplasia

Maxilla and Mandible

- Cherubism
- Congenital epulis
- Torus mandibularis
- Torus palatinus

Other

- Jaw and base of cranium
 - Prognathism
 - Retrognathism
- Dental arch
 - Crossbite
 - Overbite
- Temporomandibular joint disorder

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About patient

For the state of being, see Patience. For other uses, see Patient (disambiguation).

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Part of a series on Patients

Patients

Concepts

- Doctor-patient relationship
- Medical ethics
- Patient participation
- Patient-reported outcome
- Patient safety

Consent

- Informed consent
- Adherence
- Informal coercion
- Motivational interviewing
- Involuntary treatment

Rights

- Patients' rights
- Pregnant patients' rights
- Disability rights movement
- Patient's Charter
- Medical law

Approaches

- Patient advocacy
- Patient-centered care
- Patient and public involvement

Abuse

- Patient abuse
- Elder abuse

Medical sociology

- Sick role

A **patient** is any recipient of health care services that are performed by healthcare professionals. The patient is most often ill or injured and in need of treatment by a physician, nurse, optometrist, dentist, veterinarian, or other health care provider.

Etymology

[edit]

The word patient originally meant 'one who suffers'. This English noun comes from the Latin word *patiens*, the present participle of the deponent verb, *patior*, meaning 'I am suffering', and akin to the Greek verb

πάσχειν ('*paskhein* 'to suffer') and its cognate noun

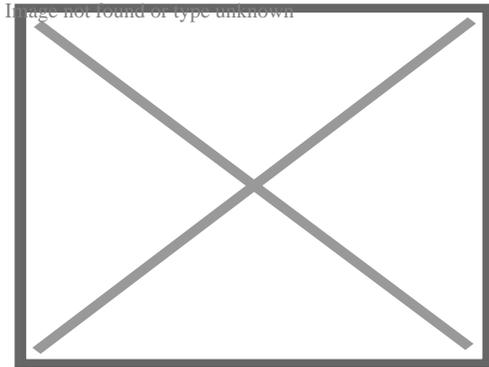
πάθος ('*pathos*).

This language has been construed as meaning that the role of patients is to passively accept and tolerate the suffering and treatments prescribed by the healthcare providers, without

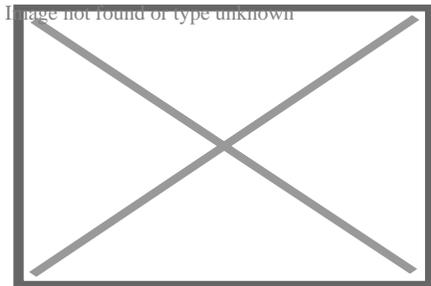
engaging in shared decision-making about their care.[¹]

Outpatients and inpatients

[edit]



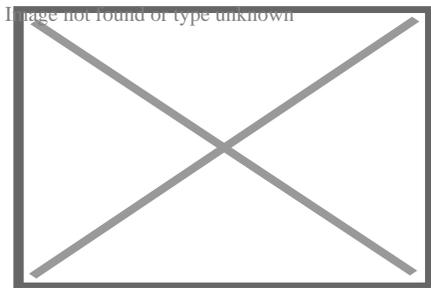
Patients at the Red Cross Hospital in Tampere, Finland during the 1918 Finnish Civil War



Receptionist in Kenya attending to an outpatient

An **outpatient** (or **out-patient**) is a patient who attends an outpatient clinic with no plan to stay beyond the duration of the visit. Even if the patient will not be formally admitted with a note as an outpatient, their attendance is still registered, and the provider will usually give a note explaining the reason for the visit, tests, or procedure/surgery, which should include the names and titles of the participating personnel, the patient's name and date of birth, signature of informed consent, estimated pre-and post-service time for history and exam (before and after), any anesthesia, medications or future treatment plans needed, and estimated time of discharge absent any (further) complications. Treatment provided in this fashion is called ambulatory care. Sometimes surgery is performed without the need for a formal hospital admission or an overnight stay, and this is called outpatient surgery or day surgery, which has many benefits including lowered healthcare cost, reducing the amount of medication prescribed, and using the physician's or surgeon's time more efficiently. Outpatient surgery is suited best for more healthy patients undergoing minor or intermediate procedures (limited urinary-tract, eye, or ear, nose, and throat procedures and procedures involving superficial skin and the extremities). More procedures are being performed in a surgeon's office, termed

office-based surgery, rather than in a hospital-based operating room.



A mother spends days sitting with her son, a hospital patient in Mali

An **inpatient** (or **in-patient**), on the other hand, is "admitted" to stay in a hospital overnight or for an indeterminate time, usually, several days or weeks, though in some extreme cases, such as with coma or persistent vegetative state, patients can stay in hospitals for years, sometimes until death. Treatment provided in this fashion is called inpatient care. The admission to the hospital involves the production of an admission note. The leaving of the hospital is officially termed *discharge*, and involves a corresponding discharge note, and sometimes an assessment process to consider ongoing needs. In the English National Health Service this may take the form of "Discharge to Assess" - where the assessment takes place after the patient has gone home.^[2]

Misdiagnosis is the leading cause of medical error in outpatient facilities. When the U.S. Institute of Medicine's groundbreaking 1999 report, *To Err Is Human*, found up to 98,000 hospital patients die from preventable medical errors in the U.S. each year,^[3] early efforts focused on inpatient safety.^[4] While patient safety efforts have focused on inpatient hospital settings for more than a decade, medical errors are even more likely to happen in a doctor's office or outpatient clinic or center.^[citation needed]

Day patient

[edit]

A **day patient** (or **day-patient**) is a patient who is using the full range of services of a hospital or clinic but is not expected to stay the night. The term was originally used by psychiatric hospital services using of this patient type to care for people needing support to make the transition from in-patient to out-patient care. However, the term is now also heavily used for people attending hospitals for day surgery.

Alternative terminology

[edit]

Because of concerns such as dignity, human rights and political correctness, the term "patient" is not always used to refer to a person receiving health care. Other terms that are

sometimes used include **health consumer**, **healthcare consumer**, **customer** or **client**. However, such terminology may be offensive to those receiving public health care, as it implies a business relationship.

In veterinary medicine, the **client** is the owner or guardian of the patient. These may be used by governmental agencies, insurance companies, patient groups, or health care facilities. Individuals who use or have used psychiatric services may alternatively refer to themselves as consumers, users, or survivors.

In nursing homes and assisted living facilities, the term **resident** is generally used in lieu of *patient*.^[5] Similarly, those receiving home health care are called *clients*.

Patient-centered healthcare

[edit]

See also: Patient participation

The doctor–patient relationship has sometimes been characterized as silencing the voice of patients.^[6] It is now widely agreed that putting patients at the centre of healthcare^[7] by trying to provide a consistent, informative and respectful service to patients will improve both outcomes and patient satisfaction.^[8]

When patients are not at the centre of healthcare, when institutional procedures and targets eclipse local concerns, then patient neglect is possible.^[9] Incidents, such as the Stafford Hospital scandal, Winterbourne View hospital abuse scandal and the Veterans Health Administration controversy of 2014 have shown the dangers of prioritizing cost control over the patient experience.^[10] Investigations into these and other scandals have recommended that healthcare systems put patient experience at the center, and especially that patients themselves are heard loud and clear within health services.^[11]

There are many reasons for why health services should listen more to patients. Patients spend more time in healthcare services than regulators or quality controllers, and can recognize problems such as service delays, poor hygiene, and poor conduct.^[12] Patients are particularly good at identifying soft problems, such as attitudes, communication, and 'caring neglect',^[9] that are difficult to capture with institutional monitoring.^[13]

One important way in which patients can be placed at the centre of healthcare is for health services to be more open about patient complaints.^[14] Each year many hundreds of thousands of patients complain about the care they have received, and these complaints contain valuable information for any health services which want to learn about and improve patient experience.^[15]

See also

[edit]

- Casualty
- e-Patient
- Mature minor doctrine
- Nurse-client relationship
- Patient abuse
- Patient advocacy
- Patient empowerment
- Patients' Bill of Rights
- Radiological protection of patients
- Therapeutic inertia
- Virtual patient
- Patient UK

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External links

[edit]

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Wikimedia Commons has media related to ***Patients***.

not found or type unknown

Look up ***patient*** in Wiktionary, the free dictionary.

- *Jadad AR, Rizo CA, Enkin MW (June 2003). "I am a good patient, believe it or not". *BMJ.* **326** (7402): 1293–5. doi:10.1136/bmj.326.7402.1293. PMC 1126181. PMID 12805157.* a peer-reviewed article published in the British Medical Journal's (BMJ) first issue dedicated to patients in its 160-year history
- *Sokol DK (21 February 2004). "How (not) to be a good patient". *BMJ.* **328** (7437): 471. doi:10.1136/bmj.328.7437.471. PMC 344286.* review article with views on the meaning of the words "good doctor" vs. "good patient"
- "Time Magazine's Dr. Scott Haig Proves that Patients Need to Be Googlers!" – Mary Shomons response to the Time Magazine article "When the Patient is a Googler"

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Articles about hospitals

History of hospitals, Hospital network, Category:Hospitals

Common hospital components

- Accreditation
- Bed
- Coronary care unit
- Emergency department
- Emergency codes
- Hospital administrators
- Hospital information system
- Hospital medicine
- Hospital museum
- Hospitalist
- Intensive care unit
- Nocturnist
- On-call room
- Operating theater
- Orderly
- Patients
- Pharmacy
- Wards

Archaic forms

- Almshouse
- Asclepeion (Greece)
- Bimaristan (Islamic)
- Cottage hospital (England)
- Hôtel-Dieu (France)
- Valetudinaria (Roman)
- Vaishya lying in houses (India)
- Xenodochium (Middle Ages)

- Geographic service area**
 - Base hospital (Australia)
 - Community hospital
 - General hospital
 - Regional hospital or District hospital
 - Municipal hospital

- Complexity of services**
 - Day hospital
 - Secondary hospital
 - Tertiary referral hospital
 - Teaching hospital
 - Specialty hospital

- Unique physical traits**
 - Hospital ship
 - Hospital train
 - Mobile hospital
 - Underground hospital
 - Virtual Hospital

- Limited class of patients**
 - Military hospital
 - Combat support hospital
 - Field hospital
 - Prison hospital
 - Veterans medical facilities
 - Women's hospital

- Funding**
 - Charitable hospital
 - For-profit hospital
 - Non-profit hospital
 - State hospital
 - Private hospital
 - Public hospital
 - Voluntary hospital
 - Defunct

Condition treated

- Cancer
- Children's hospital
- Eye hospital
- Fever hospital
- Leper colony
- Lock hospital
- Maternity hospital
- Psychiatric hospital
- Rehabilitation hospital
- Trauma center
- Verterinary hospital

Century established

- 5th
- 6th
- 7th
- 8th
- 9th
- 10th
- 11th
- 12th
- 13th
- 14th
- 15th
- 16th
- 17th
- 18th
- 19th
- 20th
- 21st

Lists of hospitals in: Africa, Asia, Europe, North America, Oceania, South America

Authority control databases: National

- Germany
- United States
- Japan
- Czech Republic
- 2
- Latvia
- Israel

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- [The Role of Location in Overall Expense](#)
- [Out of Pocket Expenses to Consider](#)

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