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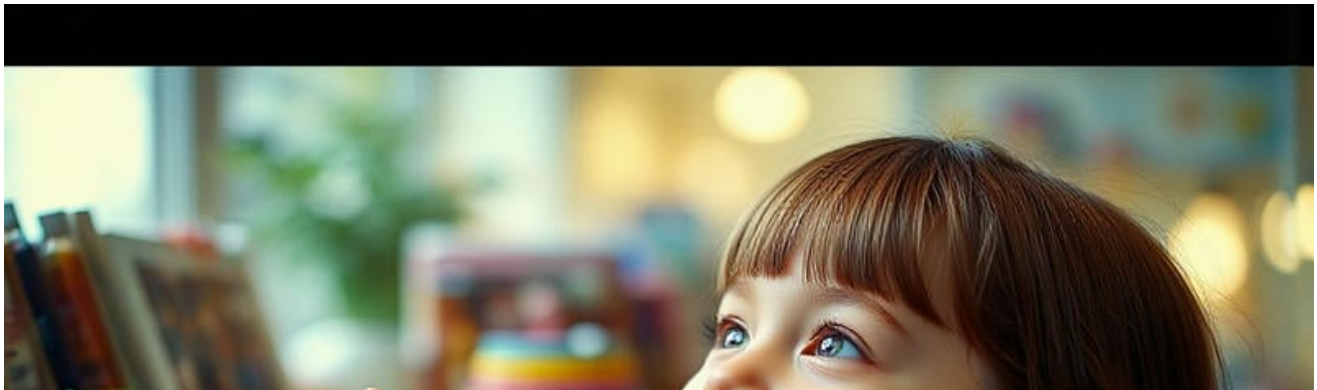

Archwires and Their Influence on Dental Movement

Explanation of what brackets are in orthodontics and their function in aligning teeth.

Explanation of what brackets are in orthodontics and their function in aligning teeth.

When it comes to pediatric orthodontics, selecting the right type of archwire is crucial for effective dental movement and treatment success. Various types of archwires are commonly used, each with its unique properties and applications.

Some kids may require early intervention to correct bite issues **Pediatric orthodontic care** thumb sucking.

The first type is the stainless steel archwire. Renowned for its strength and durability, stainless steel archwires are often used in the initial stages of treatment. They provide the necessary force to move teeth into their desired positions. Their rigidity ensures that they can withstand the stresses of orthodontic treatment, making them a reliable choice for young patients.

Another popular option is the nickel-titanium (NiTi) archwire. Known for its flexibility and shape memory, NiTi archwires are particularly useful in the early phases of treatment. They exert a gentle, continuous force on the teeth, which helps in aligning them gradually. This makes NiTi archwires ideal for younger patients who may have more sensitive teeth and gums.

Copper nickel-titanium (CuNiTi) archwires are another variation worth mentioning. These archwires combine the flexibility of NiTi with the added benefit of copper, which can enhance the wire's properties. CuNiTi archwires are often used in cases where a bit more force is needed to achieve the desired tooth movement.

Lastly, there are beta-titanium (TMA) archwires. These are known for their excellent flexibility and formability. TMA archwires are typically used in the later stages of treatment when more precise tooth movements are required. Their resilience makes them suitable for fine-tuning the positions of teeth.

In summary, the choice of archwire in pediatric orthodontics depends on the specific needs of the patient and the stage of treatment. Stainless steel, NiTi, CuNiTi, and TMA archwires each play a vital role in ensuring that young patients achieve the best possible outcomes in their orthodontic journey.

Certainly! Here's a short essay on how archwires apply force to move teeth during orthodontic treatment, focusing on their influence on dental movement:

Orthodontic treatment often involves the use of archwires, which play a crucial role in applying the necessary forces to move teeth into their desired positions. Understanding how these archwires work is essential for both patients and practitioners.

Archwires are thin, flexible metal wires that are attached to the brackets placed on the teeth. They serve as the medium through which the orthodontist applies controlled forces to the teeth. These forces are carefully calibrated to ensure that teeth move gradually and safely into alignment.

When an archwire is placed in the brackets, it exerts pressure on the teeth. This pressure creates a force that is transmitted through the periodontal ligament, a fibrous tissue that connects the tooth to the jawbone. The force applied by the archwire causes the periodontal ligament to stretch or compress, depending on the direction of the applied force.

This stretching or compressing of the periodontal ligament initiates a biological response in the surrounding bone. Osteoclasts, cells responsible for breaking down bone, become active on the side of the tooth where the ligament is compressed. Conversely, osteoblasts, cells that build new bone, are stimulated on the side where the ligament is stretched. This process, known as bone remodeling, allows the tooth to move gradually through the jawbone.

The type of movement achieved with archwires can vary. For example, round wires are often used in the initial stages of treatment to level and align the teeth. As treatment progresses, rectangular wires may be introduced to exert more precise control over tooth movement, allowing for tipping, rotation, and bodily movement of the teeth.

Moreover, the material of the archwire can influence the type and magnitude of force applied. Stainless steel wires provide strong, consistent forces, while nickel-titanium wires offer a more flexible and gentle force, which is beneficial in the early stages of treatment.

In summary, archwires are instrumental in orthodontic treatment, applying controlled forces to move teeth through the process of bone remodeling. The choice of wire type and material is tailored to the specific needs of each patient, ensuring effective and efficient dental movement.

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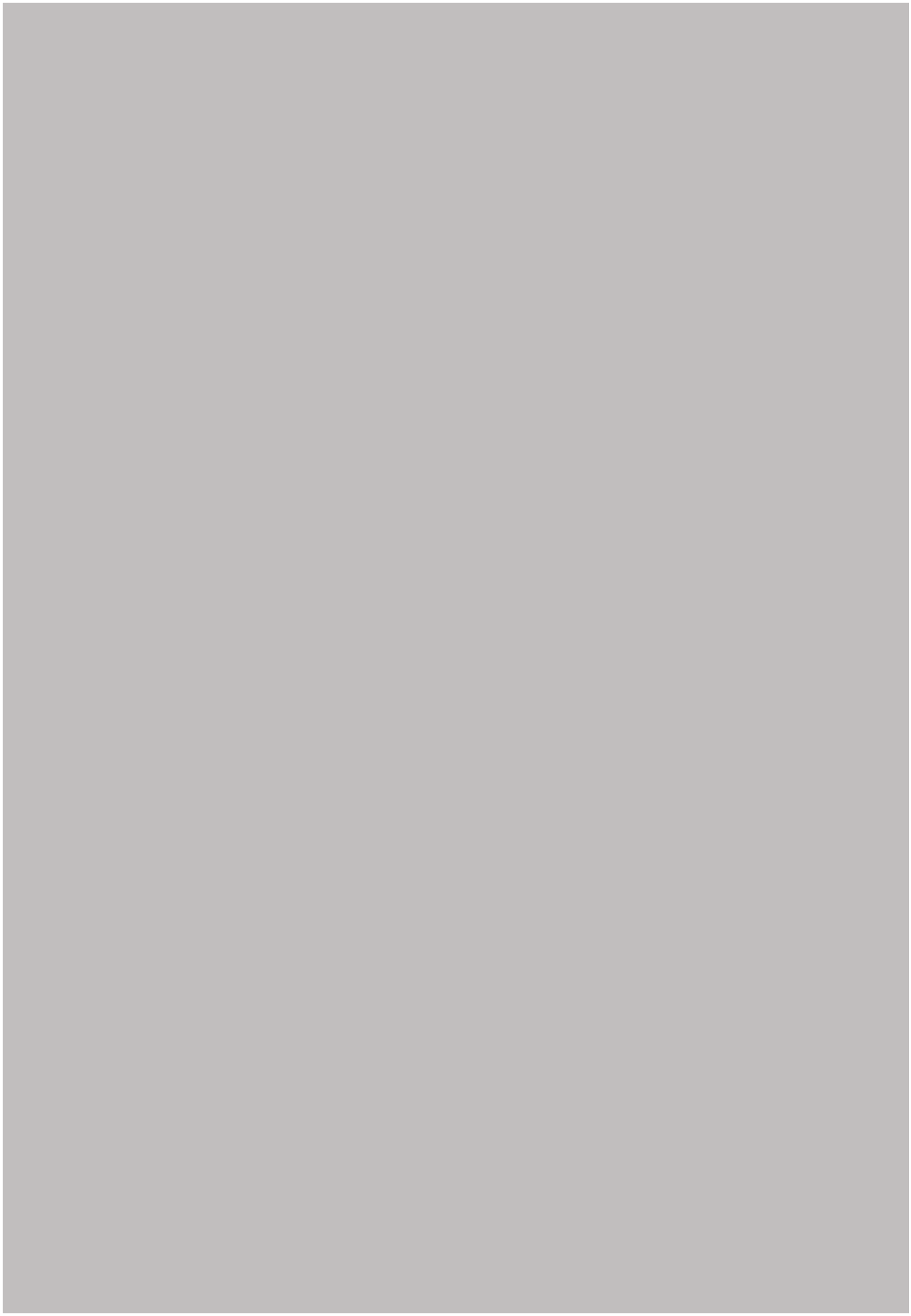

Overview of the process of attaching brackets to teeth and how they work with archwires to move teeth into proper alignment.

The importance of proper archwire selection for effective dental movement in children is a critical aspect of orthodontic treatment. This process involves choosing the right type of archwire to achieve the desired tooth movement while ensuring patient comfort and treatment efficiency.

Firstly, the material of the archwire plays a significant role. Commonly used materials include stainless steel, nickel-titanium, and beta-titanium. Stainless steel archwires are known for their strength and formability, making them ideal for the final stages of treatment where precise tooth positioning is crucial. Nickel-titanium archwires, on the other hand, offer excellent flexibility and are often used in the initial stages to align teeth gently. Beta-titanium archwires provide a balance between flexibility and strength, making them suitable for various stages of treatment.

Secondly, the cross-sectional dimensions of the archwire-whether round, rectangular, or square-affect the type of tooth movement. Round wires are typically used in the early stages to initiate tooth alignment due to their flexibility. Rectangular wires offer more control over tooth rotation and torque, which are essential in the later stages of treatment.

Moreover, the sequence of archwires used throughout the treatment is vital. Starting with a more flexible wire and gradually transitioning to stiffer ones allows for gradual and controlled tooth movement. This staged approach minimizes discomfort and reduces the risk of root resorption, a potential complication in orthodontic treatment.

In conclusion, the careful selection of archwires based on material, dimensions, and sequence is fundamental to achieving effective dental movement in children. It ensures not only the success of the orthodontic treatment but also the overall well-being and comfort of the young patient.

Benefits of using brackets in orthodontic treatment for kids, such as improved dental health, aesthetics, and self-esteem.

Certainly! When it comes to using archwires in young patients for orthodontic treatment, there are several common challenges and considerations that practitioners must keep in mind. Archwires play a crucial role in guiding the movement of teeth to achieve the desired alignment and bite correction. However, working with younger patients introduces unique factors that can influence the effectiveness and efficiency of treatment.

One of the primary challenges is the ongoing growth and development of a child's jaw and facial structure. Unlike adults, whose skeletal growth is largely complete, young patients experience continuous changes in their jaw size and shape. This dynamic environment can affect how teeth respond to the forces applied by the archwire. Orthodontists must carefully plan treatments that accommodate these growth patterns to ensure optimal results.

Another consideration is the cooperation and compliance of young patients. Orthodontic treatment requires regular adjustments and maintenance, which can be more challenging with children who may not fully understand the importance of adhering to the treatment plan. Ensuring that both the child and their parents are well-informed and motivated is essential for the success of the treatment.

Comfort and oral hygiene are also significant factors. Younger patients may experience more sensitivity and discomfort as their teeth move, which can lead to reluctance in wearing the archwires as prescribed. Additionally, maintaining good oral hygiene can be more difficult with braces, and young patients may need extra guidance and encouragement to keep their teeth and appliances clean to prevent issues like decalcification and gum disease.

Lastly, the psychological impact of wearing braces cannot be overlooked. Young patients may feel self-conscious about their appearance, which can affect their confidence and

social interactions. Orthodontists should address these concerns empathetically, providing support and reassurance throughout the treatment process.

In conclusion, using archwires in young patients presents unique challenges that require careful consideration of growth patterns, patient cooperation, comfort, oral hygiene, and psychological well-being. By addressing these factors, orthodontists can help ensure a successful and positive orthodontic experience for their young patients.

Potential challenges or considerations when using brackets for children, including comfort, maintenance, and compliance with treatment.

Certainly! Here's a short essay on the role of orthodontists in monitoring and adjusting archwires throughout treatment:

Orthodontists play a crucial role in the dynamic process of monitoring and adjusting archwires throughout orthodontic treatment. This continuous oversight ensures that the treatment progresses effectively and achieves the desired dental alignment and bite correction.

From the initial stages of treatment, orthodontists carefully select the appropriate type and size of archwire based on the patient's specific dental needs and the stage of treatment. As the treatment advances, regular appointments are scheduled to assess the progress and make necessary adjustments.

During these appointments, orthodontists evaluate the tension and position of the archwires. They look for signs of effective tooth movement, such as gradual alignment and proper spacing. If the teeth are not moving as expected, the orthodontist may need to replace the archwire with a different type or size to apply the correct amount of force.

Moreover, orthodontists are vigilant about patient comfort. They ensure that the archwires are not causing excessive discomfort or irritation. If a patient reports pain or if the orthodontist notices signs of irritation, adjustments are made promptly to alleviate any issues.

In addition to physical adjustments, orthodontists also provide guidance and education to patients about proper oral hygiene practices. This is essential because archwires can complicate cleaning routines, and maintaining good oral health is vital throughout the treatment process.

In summary, the role of orthodontists in monitoring and adjusting archwires is fundamental to the success of orthodontic treatment. Their expertise ensures that each patient receives personalized care, leading to optimal dental movement and a healthy, beautiful smile.

Tips for parents on how to care for their child's brackets and maintain oral hygiene during orthodontic treatment.

In orthodontic treatment, the influence of archwires on dental movement is profound. However, achieving successful outcomes also relies heavily on patient compliance and the maintenance of archwires. These elements are crucial, as they directly affect the efficacy of the orthodontic intervention.

Patient compliance refers to the degree to which a patient follows the recommendations and guidelines provided by their orthodontist. This includes attending scheduled appointments, adhering to prescribed adjustments, and maintaining good oral hygiene. Compliance is vital because it ensures that the treatment progresses as planned. When patients fail to comply, it can lead to delays, complications, or even the need for additional treatment.

One of the key aspects of patient compliance is the maintenance of archwires. Archwires are instrumental in applying the necessary forces to move teeth into their desired

positions. However, these wires can become bent, broken, or dislodged if not properly cared for. Patients must be diligent in avoiding hard or sticky foods that can damage the wires and must also be cautious during oral hygiene routines to prevent accidental bending or displacement.

Regular check-ups are essential for monitoring the condition of the archwires and making necessary adjustments. During these visits, the orthodontist can ensure that the wires are functioning correctly and make any needed modifications to keep the treatment on track. Additionally, patients should be educated on recognizing signs of wire issues, such as discomfort or changes in fit, and be encouraged to report these promptly.

In conclusion, while archwires play a critical role in dental movement, the success of orthodontic treatment is equally dependent on patient compliance and the diligent maintenance of these wires. By fostering a collaborative relationship between the patient and orthodontist and emphasizing the importance of these practices, we can enhance the likelihood of achieving optimal treatment outcomes.

About pediatrics

This article is about the branch of medicine. For the journal, see Pediatrics (journal). For the branch of dentistry, see Pedodontics.

Pediatrics

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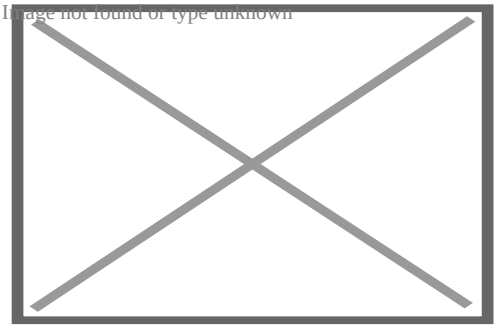

A pediatrician examines a neonate.

Focus	**Infants, Children, Adolescents, and Young Adults**
Subdivisions	*Paediatric cardiology, neonatology, critical care, pediatric oncology, hospital medicine, primary care, others (see below)*
Significant diseases	Congenital diseases, Infectious diseases, Childhood cancer, Mental disorders
Significant tests	World Health Organization Child Growth Standards
Specialist	**Pediatrician**
Glossary	Glossary of medicine

Pediatrics (American English) also spelled **paediatrics** (British English), is the branch of medicine that involves the medical care of infants, children, adolescents, and young adults. In the United Kingdom, pediatrics covers many of their youth until the age of 18.[1] The American Academy of Pediatrics recommends people seek pediatric care through the age of 21, but some pediatric subspecialists continue to care for adults up to 25.[2][3] Worldwide age limits of pediatrics have been trending upward year after year.[4] A medical doctor who specializes in this area is known as a **pediatrician**, or **paediatrician**. The word *pediatrics* and its cognates mean "healer of children", derived from the two Greek words: ÃÆ′Ã‚â€™Ã‚â€Ã‚Â¡Ã‚Æ′Ã¢â‚¬Å¡Ã‚â€Ã‚Â¿Ã‚Æ′Ã‚Â¢Ã‚Â¢Ã¢â‚¬Å¡Ã‚Â¬Ã‚Â¢Ã¢â€šÂ¬Ã‚Â¬Ã. *pais* "child") and ÃÆ′Ã‚â€™Ã‚â€Ã‚Â¡Ã‚Æ′Ã¢â‚¬Å¡Ã‚â€Ã‚Â¼Ã‚Æ′Ã¢â‚¬Å¡Ã‚â€Ã‚Â°ÃÆ′Ã‚â€™Ã‚â€Ã‚ (*iatros* "doctor, healer"). Pediatricians work in clinics, research centers, universities, general hospitals and children's hospitals, including those who practice pediatric subspecialties (e.g. neonatology requires resources available in a NICU).

History

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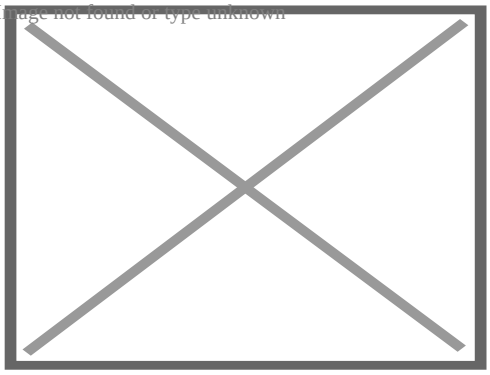

Part of Great Ormond Street Hospital in London, United Kingdom, which was the first pediatric hospital in the English-speaking world.

The earliest mentions of child-specific medical problems appear in the *Hippocratic Corpus*, published in the fifth century B.C., and the famous *Sacred Disease*. These publications discussed topics such as childhood epilepsy and premature births. From the first to fourth centuries A.D., Greek philosophers and physicians Celsus, Soranus of Ephesus, Aretaeus, Galen, and Oribasius, also discussed specific illnesses affecting children in their works, such as rashes, epilepsy, and meningitis.[5] Already Hippocrates, Aristotle, Celsus, Soranus, and Galen[6] understood the differences in growing and maturing organisms that necessitated different treatment: *Ex toto non sic pueri ut viri curari debent* ("In general, boys should not be treated in the same way as men").[7] Some of the oldest traces of pediatrics can be discovered in Ancient India where children's doctors were called *kumara bhrtya*.[6]

Even though some pediatric works existed during this time, they were scarce and rarely published due to a lack of knowledge in pediatric medicine. *Sushruta Samhita*, an ayurvedic text composed during the sixth century BCE, contains the text about pediatrics.[8] Another ayurvedic text from this period is *Kashyapa Samhita*.[9][10] A second century AD manuscript by the Greek physician and gynecologist Soranus of Ephesus dealt with neonatal pediatrics.[11] Byzantine physicians Oribasius, Aëtius of Amida, Alexander Trallianus, and Paulus Aegineta contributed to the field.[6] The Byzantines also built *brephotrophia* (crêches).[6] Islamic Golden Age writers served as a

bridge for Greco-Roman and Byzantine medicine and added ideas of their own, especially Haly Abbas, Yahya Serapion, Abulcasis, Avicenna, and Averroes. The Persian philosopher and physician al-Razi (865–925), sometimes called the father of pediatrics, published a monograph on pediatrics titled *Diseases in Children*.[12][13] Also among the first books about pediatrics was *Libellus [Opusculum] de aegritudinibus et remediis infantium* 1472 ("Little Book on Children Diseases and Treatment"), by the Italian pediatrician Paolo Bagellardo.[14][5] In sequence came Bartholomäus Metlinger's *Ein Regiment der Jungerkinder* 1473, Cornelius Roelans (1450–1525) no title Buchlein, or Latin compendium, 1483, and Heinrich von Louffenburg (1391–1460) *Versehung des Leibs* written in 1429 (published 1491), together form the *Pediatric Incunabula*, four great medical treatises on children's physiology and pathology.[6]

While more information about childhood diseases became available, there was little evidence that children received the same kind of medical care that adults did.[15] It was during the seventeenth and eighteenth centuries that medical experts started offering specialized care for children.[5] The Swedish physician Nils Rosén von Rosenstein (1706–1773) is considered to be the founder of modern pediatrics as a medical specialty,[16][17] while his work *The diseases of children, and their remedies* (1764) is considered to be "the first modern textbook on the subject".[18] However, it was not until the nineteenth century that medical professionals acknowledged pediatrics as a separate field of medicine. The first pediatric-specific publications appeared between the 1790s and the 1920s.[19]

Etymology

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The term pediatrics was first introduced in English in 1859 by Abraham Jacobi. In 1860, he became "the first dedicated professor of pediatrics in the world."[20] Jacobi is known as the *father of American pediatrics* because of his many contributions to the field.[21][22] He received his medical training in Germany and later practiced in New York City.[23]

The first generally accepted pediatric hospital is the *Hôpital des Enfants Malades* (French: *Hospital for Sick Children*), which opened in Paris in June 1802 on the site of a previous orphanage.[24] From its beginning, this famous hospital accepted patients up to the age of fifteen years,[25] and it continues to this day as the pediatric division of the Necker–Enfants Malades Hospital, created in 1920 by merging with the nearby *Necker Hospital*, founded in 1778.[26]

In other European countries, the Charité (a hospital founded in 1710) in Berlin established a separate Pediatric Pavilion in 1830, followed by similar institutions at Saint Petersburg in 1834, and at Vienna and Breslau (now WrocÃÆ′Ã‚â€™Ã‚Â¢Ã¢â€Â¬Ã‚Â¦Ã‚Æ′Ã‚Â¢Ã‚Â¢â‚¬Å¡Ã‚Â¬Ã‚â€¦Ã‚Âaw), both in 1837. In 1852 Britain's first pediatric hospital, the Hospital for Sick Children, Great Ormond Street was founded by Charles West.[24] The first Children's hospital in Scotland opened in 1860 in Edinburgh.[27] In the US, the first similar institutions were the Children's Hospital of Philadelphia, which opened in 1855, and then Boston Children's Hospital (1869).[28] Subspecialties in pediatrics were created at the Harriet Lane Home at Johns Hopkins by Edwards A. Park.[29]

Differences between adult and pediatric medicine

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The body size differences are paralleled by maturation changes. The smaller body of an infant or neonate is substantially different physiologically from that of an adult. Congenital defects, genetic variance, and developmental issues are of greater concern to pediatricians than they often are to adult physicians. A common adage is that children are not simply "little adults". The clinician must take into account the immature physiology of the infant or child when considering symptoms, prescribing medications, and diagnosing illnesses.[30]

Pediatric physiology directly impacts the pharmacokinetic properties of drugs that enter the body. The absorption, distribution, metabolism, and elimination of medications differ between developing children and grown adults.[30][31][32] Despite completed studies and reviews, continual research is needed to better understand

how these factors should affect the decisions of healthcare providers when prescribing and administering medications to the pediatric population.[30]

Absorption

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Many drug absorption differences between pediatric and adult populations revolve around the stomach. Neonates and young infants have increased stomach pH due to decreased acid secretion, thereby creating a more basic environment for drugs that are taken by mouth.[31][30][32] Acid is essential to degrading certain oral drugs before systemic absorption. Therefore, the absorption of these drugs in children is greater than in adults due to decreased breakdown and increased preservation in a less acidic gastric space.[31]

Children also have an extended rate of gastric emptying, which slows the rate of drug absorption.[31][32]

Drug absorption also depends on specific enzymes that come in contact with the oral drug as it travels through the body. Supply of these enzymes increase as children continue to develop their gastrointestinal tract.[31][32] Pediatric patients have underdeveloped proteins, which leads to decreased metabolism and increased serum concentrations of specific drugs. However, prodrugs experience the opposite effect because enzymes are necessary for allowing their active form to enter systemic circulation.[31]

Distribution

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Percentage of total body water and extracellular fluid volume both decrease as children grow and develop with time. Pediatric patients thus have a larger volume of distribution than adults, which directly affects the dosing of hydrophilic drugs such as beta-lactam antibiotics like ampicillin.[31] Thus, these drugs are administered at greater weight-based doses or with adjusted dosing intervals in children to account

for this key difference in body composition.[31][30]

Infants and neonates also have fewer plasma proteins. Thus, highly protein-bound drugs have fewer opportunities for protein binding, leading to increased distribution.[30]

Metabolism

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Drug metabolism primarily occurs via enzymes in the liver and can vary according to which specific enzymes are affected in a specific stage of development.[31] Phase I and Phase II enzymes have different rates of maturation and development, depending on their specific mechanism of action (i.e. oxidation, hydrolysis, acetylation, methylation, etc.). Enzyme capacity, clearance, and half-life are all factors that contribute to metabolism differences between children and adults.[31][32] Drug metabolism can even differ within the pediatric population, separating neonates and infants from young children.[30]

Elimination

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Drug elimination is primarily facilitated via the liver and kidneys.[31] In infants and young children, the larger relative size of their kidneys leads to increased renal clearance of medications that are eliminated through urine.[32] In preterm neonates and infants, their kidneys are slower to mature and thus are unable to clear as much drug as fully developed kidneys. This can cause unwanted drug build-up, which is why it is important to consider lower doses and greater dosing intervals for this population.[30][31] Diseases that negatively affect kidney function can also have the same effect and thus warrant similar considerations.[31]

Pediatric autonomy in healthcare

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A major difference between the practice of pediatric and adult medicine is that children, in most jurisdictions and with certain exceptions, cannot make decisions for themselves. The issues of guardianship, privacy, legal responsibility, and informed consent must always be considered in every pediatric procedure. Pediatricians often have to treat the parents and sometimes, the family, rather than just the child. Adolescents are in their own legal class, having rights to their own health care decisions in certain circumstances. The concept of legal consent combined with the non-legal consent (assent) of the child when considering treatment options, especially in the face of conditions with poor prognosis or complicated and painful procedures/surgeries, means the pediatrician must take into account the desires of many people, in addition to those of the patient.[*citation needed*]

History of pediatric autonomy

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The term autonomy is traceable to ethical theory and law, where it states that autonomous individuals can make decisions based on their own logic.[33] Hippocrates was the first to use the term in a medical setting. He created a code of ethics for doctors called the *Hippocratic Oath* that highlighted the importance of putting patients' interests first, making autonomy for patients a top priority in health care.[34]

In ancient times, society did not view pediatric medicine as essential or scientific.[35] Experts considered professional medicine unsuitable for treating children. Children also had no rights. Fathers regarded their children as property, so their children's health decisions were entrusted to them.[5] As a result, mothers, midwives, "wise women", and general practitioners treated the children instead of doctors.[35] Since mothers could not rely on professional medicine to take care of their children, they developed their own methods, such as using alkaline soda ash to remove the vernix at birth and treating teething pain with opium or wine. The absence of proper pediatric care, rights, and laws in health care to prioritize children's health led to many of their deaths. Ancient Greeks and Romans sometimes even killed healthy female babies and infants with deformities since they had no adequate medical treatment and no laws

prohibiting infanticide.[5]

In the twentieth century, medical experts began to put more emphasis on children's rights. In 1989, in the United Nations Rights of the Child Convention, medical experts developed the Best Interest Standard of Child to prioritize children's rights and best interests. This event marked the onset of pediatric autonomy. In 1995, the American Academy of Pediatrics (AAP) finally acknowledged the Best Interest Standard of a Child as an ethical principle for pediatric decision-making, and it is still being used today.[34]

Parental authority and current medical issues

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The majority of the time, parents have the authority to decide what happens to their child. Philosopher John Locke argued that it is the responsibility of parents to raise their children and that God gave them this authority. In modern society, Jeffrey Blustein, modern philosopher and author of the book *Parents and Children: The Ethics of Family*, argues that parental authority is granted because the child requires parents to satisfy their needs. He believes that parental autonomy is more about parents providing good care for their children and treating them with respect than parents having rights.[36] The researcher Kyriakos Martakis, MD, MSc, explains that research shows parental influence negatively affects children's ability to form autonomy. However, involving children in the decision-making process allows children to develop their cognitive skills and create their own opinions and, thus, decisions about their health. Parental authority affects the degree of autonomy the child patient has. As a result, in Argentina, the new National Civil and Commercial Code has enacted various changes to the healthcare system to encourage children and adolescents to develop autonomy. It has become more crucial to let children take accountability for their own health decisions.[37]

In most cases, the pediatrician, parent, and child work as a team to make the best possible medical decision. The pediatrician has the right to intervene for the child's welfare and seek advice from an ethics committee. However, in recent studies,

authors have denied that complete autonomy is present in pediatric healthcare. The same moral standards should apply to children as they do to adults. In support of this idea is the concept of paternalism, which negates autonomy when it is in the patient's interests. This concept aims to keep the child's best interests in mind regarding autonomy. Pediatricians can interact with patients and help them make decisions that will benefit them, thus enhancing their autonomy. However, radical theories that question a child's moral worth continue to be debated today.[37] Authors often question whether the treatment and equality of a child and an adult should be the same. Author Tamar Schapiro notes that children need nurturing and cannot exercise the same level of authority as adults.[38] Hence, continuing the discussion on whether children are capable of making important health decisions until this day.

Modern advancements

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According to the Subcommittee of Clinical Ethics of the Argentinean Pediatric Society (SAP), children can understand moral feelings at all ages and can make reasonable decisions based on those feelings. Therefore, children and teens are deemed capable of making their own health decisions when they reach the age of 13. Recently, studies made on the decision-making of children have challenged that age to be 12.[37]

Technology has made several modern advancements that contribute to the future development of child autonomy, for example, unsolicited findings (U.F.s) of pediatric exome sequencing. They are findings based on pediatric exome sequencing that explain in greater detail the intellectual disability of a child and predict to what extent it will affect the child in the future. Genetic and intellectual disorders in children make them incapable of making moral decisions, so people look down upon this kind of testing because the child's future autonomy is at risk. It is still in question whether parents should request these types of testing for their children. Medical experts argue that it could endanger the autonomous rights the child will possess in the future. However, the parents contend that genetic testing would benefit the welfare of their children since it would allow them to make better health care decisions.[39] Exome

sequencing for children and the decision to grant parents the right to request them is a medically ethical issue that many still debate today.

Education requirements

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> The examples and perspective in this section **deal primarily with United States and do not represent a worldwide view of the subject**. You may improve this section, discuss the issue on the talk page, or create a new section, as appropriate. *(September 2019) (Learn how and when to remove this message)*

Aspiring medical students will need 4 years of undergraduate courses at a college or university, which will get them a BS, BA or other bachelor's degree. After completing college, future pediatricians will need to attend 4 years of medical school (MD/DO/MBBS) and later do 3 more years of residency training, the first year of which is called "internship." After completing the 3 years of residency, physicians are eligible to become certified in pediatrics by passing a rigorous test that deals with medical conditions related to young children.[*citation needed*]

In high school, future pediatricians are required to take basic science classes such as biology, chemistry, physics, algebra, geometry, and calculus. It is also advisable to learn a foreign language (preferably Spanish in the United States) and be involved in high school organizations and extracurricular activities. After high school, college students simply need to fulfill the basic science course requirements that most medical schools recommend and will need to prepare to take the MCAT (Medical College Admission Test) in their junior or early senior year in college. Once attending medical school, student courses will focus on basic medical sciences like human anatomy, physiology, chemistry, etc., for the first three years, the second year of which is when medical students start to get hands-on experience with actual patients.[40]

Training of pediatricians

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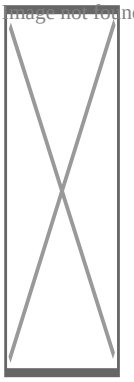
Pediatrics



Occupation	
Names	○ Pediatrician ○ Paediatrician
Occupation type	Specialty
Activity sectors	Medicine
Description	
Education required	○ Doctor of Medicine ○ Doctor of Osteopathic Medicine ○ Bachelor of Medicine, Bachelor of Surgery (MBBS/MBChB)
Fields of employment	Hospitals, Clinics

The training of pediatricians varies considerably across the world. Depending on jurisdiction and university, a medical degree course may be either undergraduate-entry or graduate-entry. The former commonly takes five or six years and has been usual in the Commonwealth. Entrants to graduate-entry courses (as in the US), usually lasting four or five years, have previously completed a three- or four-year university degree, commonly but by no means always in sciences. Medical graduates hold a degree specific to the country and university in and from which they graduated. This degree qualifies that medical practitioner to become licensed or registered under the laws of that particular country, and sometimes of several countries, subject to requirements for "internship" or "conditional registration".

Pediatricians must undertake further training in their chosen field. This may take from four to eleven or more years depending on jurisdiction and the degree of specialization.

In the United States, a medical school graduate wishing to specialize in pediatrics must undergo a three-year residency composed of outpatient, inpatient, and critical care rotations. Subspecialties within pediatrics require further training in the form of 3-year fellowships. Subspecialties include critical care, gastroenterology, neurology, infectious disease, hematology/oncology, rheumatology, pulmonology, child abuse, emergency medicine, endocrinology, neonatology, and others.[41]

In most jurisdictions, entry-level degrees are common to all branches of the medical profession, but in some jurisdictions, specialization in pediatrics may begin before completion of this degree. In some jurisdictions, pediatric training is begun immediately following the completion of entry-level training. In other jurisdictions, junior medical doctors must undertake generalist (unstreamed) training for a number of years before commencing pediatric (or any other) specialization. Specialist training is often largely under the control of '*pediatric organizations* (see below) rather than universities and depends on the jurisdiction.

Subspecialties

[edit]

Subspecialties of pediatrics include:

(*not an exhaustive list*)

- Addiction medicine (multidisciplinary)
- Adolescent medicine
- Child abuse pediatrics
- Clinical genetics
- Clinical informatics
- Developmental-behavioral pediatrics
- Headache medicine
- Hospital medicine

- Medical toxicology
- Metabolic medicine
- Neonatology/Perinatology
- Pain medicine (multidisciplinary)
- Palliative care (multidisciplinary)
- Pediatric allergy and immunology
- Pediatric cardiology
    - Pediatric cardiac critical care
- Pediatric critical care
    - Neurocritical care
    - Pediatric cardiac critical care
- Pediatric emergency medicine
- Pediatric endocrinology
- Pediatric gastroenterology
    - Transplant hepatology
- Pediatric hematology
- Pediatric infectious disease
- Pediatric nephrology
- Pediatric oncology
    - Pediatric neuro-oncology
- Pediatric pulmonology
- Primary care
- Pediatric rheumatology
- Sleep medicine (multidisciplinary)
- Social pediatrics
- Sports medicine

Other specialties that care for children

[edit]

(*not an exhaustive list*)

- Child neurology
    - Addiction medicine (multidisciplinary)

        - Brain injury medicine
        - Clinical neurophysiology
        - Epilepsy
        - Headache medicine
        - Neurocritical care
        - Neuroimmunology
        - Neuromuscular medicine
        - Pain medicine (multidisciplinary)
        - Palliative care (multidisciplinary)
        - Pediatric neuro-oncology
        - Sleep medicine (multidisciplinary)
    - Child and adolescent psychiatry, subspecialty of psychiatry
    - Neurodevelopmental disabilities
    - Pediatric anesthesiology, subspecialty of anesthesiology
    - Pediatric dentistry, subspecialty of dentistry
    - Pediatric dermatology, subspecialty of dermatology
    - Pediatric gynecology
    - Pediatric neurosurgery, subspecialty of neurosurgery
    - Pediatric ophthalmology, subspecialty of ophthalmology
    - Pediatric orthopedic surgery, subspecialty of orthopedic surgery
    - Pediatric otolaryngology, subspecialty of otolaryngology
    - Pediatric plastic surgery, subspecialty of plastic surgery
    - Pediatric radiology, subspecialty of radiology
    - Pediatric rehabilitation medicine, subspecialty of physical medicine and rehabilitation
    - Pediatric surgery, subspecialty of general surgery
    - Pediatric urology, subspecialty of urology

See also

[edit]

- American Academy of Pediatrics
- American Osteopathic Board of Pediatrics
- Center on Media and Child Health (CMCH)

- Children's hospital
- List of pediatric organizations
- List of pediatrics journals
- Medical specialty
- Pediatric Oncall
- Pain in babies
- Royal College of Paediatrics and Child Health
- Pediatric environmental health

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Further reading

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- *BMC Pediatrics* – open access
- *Clinical Pediatrics*
- *Developmental Review* – partial open access
- *JAMA Pediatrics*
- *The Journal of Pediatrics* – partial open access

External links

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- Pediatrics Directory at Curlie
- Pediatric Health Directory at OpenMD
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Medicine

Surgery	◦ Cardiac surgery ◦ Cardiothoracic surgery ◦ Endocrine surgery ◦ Eye surgery ◦ General surgery ◦◦ Colorectal surgery ◦◦ Digestive system surgery ◦ Neurosurgery ◦ Oral and maxillofacial surgery ◦ Orthopedic surgery ◦ Hand surgery ◦ Otolaryngology ◦◦ ENT ◦ Pediatric surgery ◦ Plastic surgery ◦ Reproductive surgery ◦ Surgical oncology ◦ Transplant surgery ◦ Trauma surgery ◦ Urology ◦◦ Andrology ◦ Vascular surgery
Internal medicine	◦ Allergy / Immunology ◦ Angiology ◦ Cardiology ◦ Endocrinology ◦ Gastroenterology ◦◦ Hepatology ◦ Geriatrics ◦ Hematology ◦ Hospital medicine ◦ Infectious diseases ◦ Nephrology ◦ Oncology ◦ Pulmonology ◦ Rheumatology

Medical education	○ Medical school ○ Bachelor of Medicine, Bachelor of Surgery ○ Bachelor of Medical Sciences ○ Master of Medicine ○ Master of Surgery ○ Doctor of Medicine ○ Doctor of Osteopathic Medicine ○ MD–PhD ○ Medical Scientist Training Program
Related topics	○ Alternative medicine ○ Allied health ○ Molecular oncology ○ Nanomedicine ○ Personalized medicine ○ Public health ○ Rural health ○ Therapy ○ Traditional medicine ○ Veterinary medicine ○ Physician ○ Chief physician ○ History of medicine

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Infants and their care

Health (Pediatrics)	○ Baby food ○ Birth weight ○ Breast pump ○ Breastfeeding ○ Breastfeeding and medications ○ Breastfeeding and mental health ○ Bottle feeding ○ Colic ○ Cradle cap ○ Esotropia ○ Failure to thrive ○ Immunization ○ Infant and toddler safety ○ Infant bathing ○ Infant feeding ○ Infant food safety ○ Infant formula ○ Infant massage ○ Infant respiratory distress syndrome ○ Infant sleep training ○ Neonatal intensive care unit ○ Newborn care and safety ○ Oral rehydration therapy ○ Pedialyte ○ Preterm birth ○ Shaken baby syndrome ○ Soy formula ○ SIDS

Development

- Attachment parenting
- Baby-led weaning
- Baby talk
- Babbling
- Birth defect
- Childbirth
- Crawling
- Gestational age
- Infant visual development
- Irritant diaper dermatitis
- Infant cognitive development
- Infant crying
- Kangaroo care
- Mother
- Nursery rhyme
- Object permanence
- Parent
- Parenting
- Peekaboo
- Play
- Prenatal development
- Prenatal development table
- Teething
- Walking
- Weaning

Socialization and Culture

- Attachment
- Babysitting
- Child abuse
- Child care
- Child custody
- Children's rights
    - UN Child rights
- Circumcision
- Foster care
- Grandparent visitation
- Infant swimming
- Milk bank
- Nanny
- Wet nurse

Infant care and equipment

- Baby bouncer
- Baby gate
- Baby monitor/Hidden camera
- Baby powder
- Baby shampoo
- Baby toy
- Baby walker
- Bib
- Baby swing
- Baby transport
- Bassinet
- Car seat safety
- Cloth diaper
- Cradle board
- Diaper
- Diaper bag
- Baby wipes
- Haberman Feeder
- High chair
- Infant bed *(American 'crib' and 'cradle', British 'cot')*
- Infant carrier
- Infant clothing
- Pacifier
- Playpen
- Stroller
- Supplemental nursing system
- Swaddling
- Swim diaper
- Teether
- Travel cot

Other topics	○ Baby shower ○ Babywearing ○ Child neglect ○ Closed adoption ○ Cry room ○ Infant ear piercing ○ Open adoption ○ Prenatal cocaine exposure ○ Neonatal withdrawal syndrome ○ Parental child abduction ○ Parental responsibility ○ Parenting plan ○ Paternity ○ Paternity fraud
Authority control databases	Image not found or type unknown **Edit this at Wikidata**
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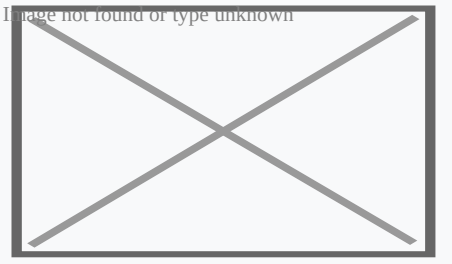
Other	○ NARA

About crossbite

Crossbite



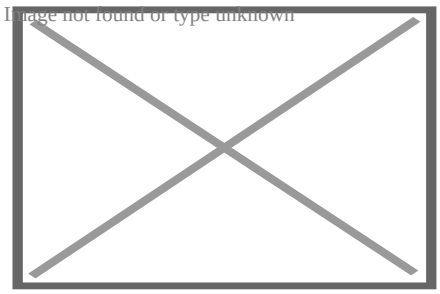
Unilateral posterior crossbite

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 D ○ **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 ○ Temperomandibular 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

Notable contributors	○ Edward Angle ○ Spencer Atkinson ○ Clifford Ballard ○ Raymond Begg ○ Hans Peter Bimler ○ Samir Bishara ○ Arne Björk ○ Charles B. Bolton ○ Holly Broadbent Sr. ○ Allan G. Brodie ○ Charles J. Burstone ○ Peter Buschang ○ Calvin Case ○ Harold Chapman (Orthodontist) ○ David Di Biase ○ Jean Delaire ○ Terry Dischinger ○ William B. Downs ○ John Nutting Farrar ○ Rolf Frankel ○ Sheldon Friel ○ Thomas M. Graber ○ Charles A. Hawley ○ Reed Holdaway ○ John Hooper (Orthodontist) ○ Joseph Jarabak ○ Harold Kesling ○ Albert Ketcham ○ Juri Kurol ○ Craven Kurz ○ Benno Lischer ○ James A. McNamara ○ Birte Melsen ○ Robert Moyers ○ Hayes Nance ○ Ravindra Nanda ○ George Northcroft

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
Size	○ Gnathitis ○ Micrognathism ○ Maxillary hypoplasia
Maxilla and Mandible	○ Cherubism ○ Congenital epulis ○ Torus mandibularis ○ Torus palatinus

	○ Jaw and base of cranium ○ Prognathism ○ Retrognathism
Other	○ 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]

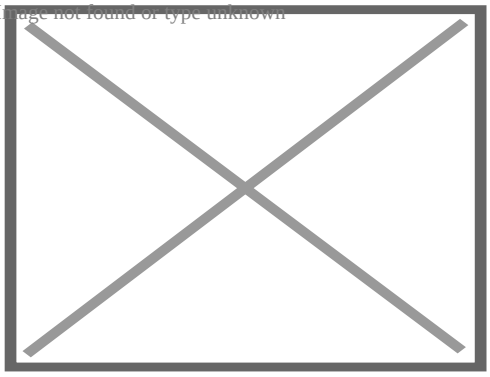
The word patient originally meant 'one who suffers'. This English noun comes from the Latin word *patiens*, the present participle of the deponent verb, *patior*, meaning 'I am

suffering', and akin to the Greek verb ÃÆ'Ã€™Ã€¦Â½ÃÆ'Ã¢â‚¬Å¡Ã€Â¬ (*paskhein* 'to suffer') and its cognate noun ÃÆ'Ã€™Ã€¦Â½ÃÆ'Ã¢â‚¬Å¡Ã€Â¬ (*pathos*).

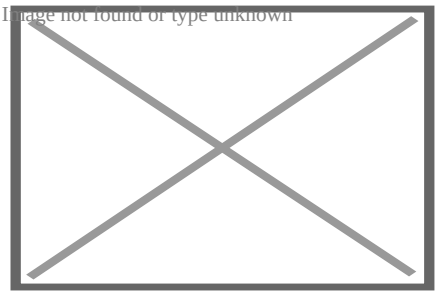
This language has been construed as meaning that the role of patients is to passively accept and tolerate the suffering and treatments prescribed by the healthcare providers, without engaging in shared decision-making about their care.[1]

Outpatients and inpatients

[edit]



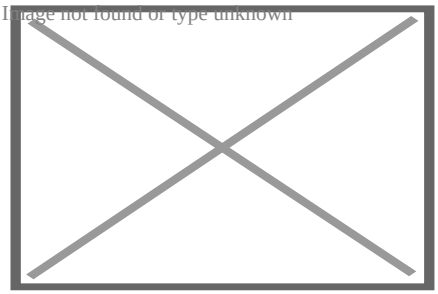
Patients at the Red Cross Hospital in Tampere, Finland during the 1918 Finnish Civil War



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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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

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