

- **Linking Orthodontics with Periodontal Health**
Linking Orthodontics with Periodontal Health Coordinating with Oral Surgeons for Jaw Corrections Integrating Pediatric Dentistry for Early Intervention Combining Endodontic Care in Complex Cases Collaborative Planning with Prosthodontists Sharing Diagnostic Data Across Multiple Specialists Addressing Aesthetic and Functional Goals Together Communication Strategies Among Dental Teams Balancing Orthodontic Solutions and Restorative Needs Encouraging Holistic Treatment Approaches Managing Patients with Special Medical Conditions Efficient Referrals That Improve Patient Outcomes
- **AI Driven Aligners That Predict Movement**
AI Driven Aligners That Predict Movement Cloud Based Case Tracking for Efficient Management Digital Impressions That Replace Traditional Molds Virtual Consultations for Remote Care 3D Printing Applications in Orthodontic Appliances Teledentistry and Its Impact on Patient Convenience Software Innovations for Treatment Simulations Aligning Treatment Goals with Technological Advances Advantages of Using Digital Models in Planning Modern Approaches to Virtual Monitoring Reducing Errors Through Computerized Analysis The Future of Orthodontics in a Digital Era
- **About Us**



Alright, let's talk about 3D-printed aligners for kids – specifically, how they're changing the game in early orthodontics. We're not just talking about straightening teeth later in life anymore; we're talking about nipping problems in the bud while children are still growing. And 3D printing is making that so much more accessible and effective.

Think about it: traditionally, early orthodontic intervention involved bulky appliances, headgear, and a whole lot of discomfort. Compliance was a nightmare! Early treatment can prevent more serious dental problems later Youth orthodontic correction health care. Now, with 3D printing, we can create clear aligners custom-fitted to a child's mouth. These aligners are much more discreet and comfortable, which automatically boosts compliance. A happy kid is way more likely to wear their aligners, right?

But it's not just about comfort. 3D printing allows orthodontists to design incredibly precise appliances. We can target specific tooth movements, guiding the alignment and growth of the jaws in a way that was difficult to achieve with traditional methods. This early intervention can prevent more serious problems from developing later on, potentially reducing the need for extensive treatments like extractions or surgery down the line.

The process itself is pretty cool too. We take digital scans of the child's mouth, use sophisticated software to plan the treatment, and then 3D print a series of aligners that gradually guide the teeth into the desired position. It's all very personalized and tailored to the individual child's needs.

Of course, it's still a relatively new field, and there's ongoing research to determine the long-term effectiveness and ideal applications of 3D-printed aligners in early orthodontics. But the initial results are really promising. They offer a less invasive, more comfortable, and potentially more effective way to address orthodontic issues early on, setting kids up for a lifetime of healthy and confident smiles. So yeah, 3D printing is definitely changing the landscape of orthodontic appliances, especially when it comes to our youngest patients. It's an exciting time to be in orthodontics!

3D Printing Applications in Orthodontic Appliances: 3D-Printed Retainers for Post-Treatment Retention in Young Patients

Okay, so your braces are off! Cue the happy dance, right? But hold on a sec. All that hard work shifting teeth can go to waste if you don't wear your retainers. And for young patients, compliance can be...well, let's just say challenging. That's where 3D-printed retainers are stepping up the game in orthodontic retention.

Think about it. Traditionally, retainers are made using impressions, plaster models, and a whole lot of manual labor. It's a process, and sometimes, the fit isn't perfect. 3D printing offers a more streamlined, precise approach. A digital scan of the patient's mouth is taken, a retainer design is created on a computer, and then *bam*, a custom-fit retainer is printed.

The benefits for young patients are pretty significant. For starters, the accuracy often translates to better comfort, which makes them more likely to actually *wear* the darn thing. Plus, the digital record means replacements are easy to get if one gets lost (and let's be honest, they often do when you're a kid). No more messy impressions, just a quick reprint from the digital file.

Beyond convenience, there's the potential for customization. While primarily used for clear aligner-type retainers, there's ongoing research into incorporating features that might help address specific needs, like guiding erupting teeth or even incorporating sensors to monitor wear time.

Of course, it's not all sunshine and rainbows. The initial investment in the technology can be a barrier for some practices, and the long-term durability of 3D-printed retainers compared to traditional ones is still being studied. But as the technology matures and becomes more accessible, 3D-printed retainers are poised to become a standard option for post-treatment retention, especially when dealing with the unique challenges of keeping young smiles straight. It's about making retention easier, more comfortable, and ultimately, more successful for the next generation.

*** Preventive measures to maintain periodontal health during orthodontic treatment.**

Okay, let's talk about how 3D printing is changing the game in orthodontics, specifically when it comes to making models. Forget those messy alginate impressions! We're moving into an era where we can digitally scan a patient's mouth and then, boom, 3D print a super-accurate replica. These aren't just pretty desk ornaments, though. These custom 3D-printed orthodontic models are becoming essential for treatment planning. Think about it: orthodontists can meticulously study the patient's unique bite, plan out tooth movements, and even simulate different treatment scenarios all on a tangible, physical

model.

But the benefits don't stop there. These models are a fantastic tool for parent education too. Imagine being able to show a parent exactly what the orthodontist is planning to do, what the issues are, and how the braces or aligners will work to correct them. It's so much easier to understand a complex treatment plan when you can actually see and touch a model of your child's teeth. This visual aid can really help build trust and confidence, leading to better compliance and ultimately, better outcomes for the patient. It's all about improved communication and a more personalized approach to orthodontic care.

*** The role of oral hygiene instructions for children and parental involvement.**

Okay, so, 3D printing in orthodontics is pretty darn cool, especially when you think about kids. Imagine trying to wrangle a wiggly 8-year-old while carefully gluing on all those tiny brackets for braces. Nightmare fuel, right? That's where 3D-printed indirect bonding trays swoop in like a superhero.

Basically, instead of sticking each bracket on individually in the kid's mouth, the orthodontist uses a digital scan of their teeth to design a perfect bracket placement. Then, a 3D printer creates a custom-fit tray – think of it like a super-precise mouthguard. All the brackets are pre-positioned INSIDE this tray. The orthodontist then just fills the tray with adhesive, pops it onto the child's teeth, and *bam*, all the brackets are perfectly placed at once.

What's so great about this? Well, first, it's way faster. Shorter appointment times are a huge win when you're dealing with a child's attention span. Second, it's more accurate. The digital planning and 3D printing ensure the brackets are exactly where they need to be for optimal tooth movement. This can lead to shorter overall treatment times and better results. And third, it's often more comfortable for the kid. Less time with instruments poking around in their mouth is always a good thing.

So, yeah, 3D-printed indirect bonding trays are a game-changer for efficient bracket placement, making getting braces a little less scary and a whole lot easier for our younger patients. They're a prime example of how 3D printing is revolutionizing orthodontic appliances.

*** Early detection and management of periodontal problems during orthodontic care.**

Okay, let's talk about how 3D printing is changing the game when it comes to orthodontic appliances, specifically focusing on space maintainers and other appliances that actually *do* something, not just hold things in place.

Think about it: traditionally, making these appliances was a pretty hands-on, sometimes messy process involving impressions, molds, wires, and acrylic. It worked, sure, but it wasn't exactly known for its speed, precision, or patient comfort. Now, 3D printing is stepping in and offering a new way.

With 3D-printed space maintainers, for instance, you can get a super accurate fit based on a digital scan of the patient's mouth. That means potentially less irritation and better retention. And because the design is digital, it's easier to tweak and customize for each kid's unique situation. No more one-size-fits-all!

But it's not just about space maintainers. We're seeing 3D printing used for other functional appliances too – appliances designed to guide jaw growth, correct bites, and address specific orthodontic issues. Again, the precision and customization are huge advantages. Imagine an appliance perfectly tailored to exert the exact right amount of force in the right direction. That's the potential we're talking about.

Of course, there are still challenges. Materials need to be biocompatible, durable, and affordable. The technology is still relatively new, and there's a learning curve for orthodontists and lab technicians. But the benefits – improved accuracy, faster turnaround times, and the ability to create highly customized appliances – are making 3D printing an increasingly important tool in the orthodontic toolbox. It's changing how we approach treatment and ultimately, helping patients achieve better outcomes.

*** Collaboration between orthodontists and periodontists for optimal outcomes.**

3D printing is revolutionizing orthodontics, especially when it comes to treating kids! Think about it: no more messy alginate impressions. Instead, a quick scan of your child's mouth and BAM, a perfectly customized appliance is on its way. But here's the key: what stuff *are* these things made of? That's where biocompatible materials come into play.

Biocompatible basically means the material is friendly with the body. In this case, it needs to hang out in a kid's mouth for a while without causing any nasty reactions. We're talking about things like allergic responses, irritation, or even worse. So, what materials are orthodontists using?

You'll often find resins, special types of plastics, that are designed specifically to be safe for oral use. These aren't your average toys; they've been tested and approved to be non-toxic and to not break down easily in saliva. There are also biocompatible metals, like titanium alloys, sometimes used for more complex appliances. The beauty here is that these materials can be precisely shaped by a 3D printer to create appliances that fit perfectly and do their job without causing harm.

For kids, this is a huge win. Less discomfort, appliances that fit better, and peace of mind knowing that the materials are safe. It's all part of making orthodontic treatment a little less scary and a lot more effective.

Okay, so 3D printing in orthodontics is already pretty cool, right? We're making aligners and models faster and sometimes even cheaper than traditional methods. But what's next, especially when we're talking about kids? That's where things get really interesting. Think about it: kids' mouths are constantly changing. They're growing, teeth are erupting, and their treatment plans need to be super adaptable.

One big trend is definitely personalized appliances. We're moving beyond just printing standard aligners. Imagine printing appliances that are specifically designed to guide the eruption of teeth in a growing child, or creating space maintainers that perfectly fit and minimize discomfort. With better scanning technologies and AI-powered design software, we're getting closer to creating truly bespoke solutions.

Another area ripe for research is biocompatible materials. While the plastics we use now are generally safe, could we use materials that encourage bone growth or even release medication directly into the mouth? That could revolutionize how we treat certain conditions, like cleft palate or severe crowding. Imagine a bio-printed appliance that not only aligns teeth but also stimulates bone regeneration to correct underlying skeletal issues.

And then there's the digital workflow itself. Right now, it can still be a bit clunky. We need better integration between intraoral scanners, design software, and the 3D printers. A seamless, user-friendly workflow would mean orthodontists can spend more time focusing on the patient and less time wrestling with technology. Research into AI-driven automation of design and printing parameters could make orthodontics more efficient and accessible.

Finally, we need more long-term studies on the efficacy and safety of 3D-printed appliances, especially in pediatric patients. How do they hold up over years of use? Are there any unforeseen effects on tooth enamel or gum tissue? Robust clinical trials are essential to ensure that these advancements are truly benefiting our young patients in the long run. So, the future of 3D printing in

pediatric orthodontics is bright, full of possibilities, and definitely worth exploring. It's all about making treatment more precise, comfortable, and effective for our little patients.

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]

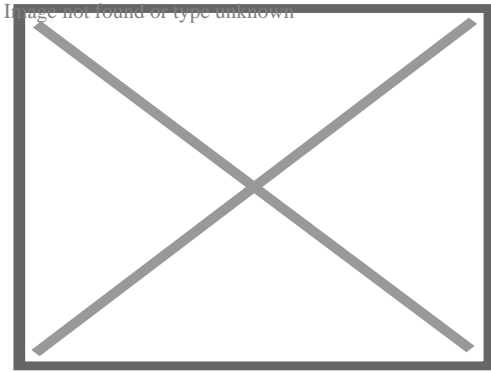
The word patient originally meant 'one who suffers'. This English noun comes from the Latin word *patiens*, the present participle of the deponent verb, *patior*, meaning 'I am suffering', and akin to the Greek verb

πάσχειν ('to suffer') and its cognate noun *πάθος* (*pathos*).

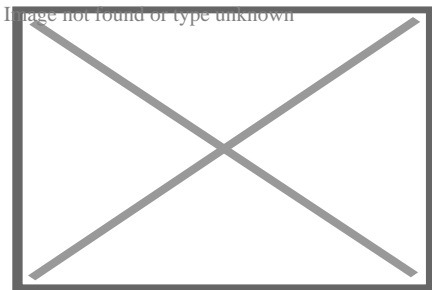
This language has been construed as meaning that the role of patients is to passively accept and tolerate the suffering and treatments prescribed by the healthcare providers, without engaging in shared decision-making about their care.^[1]

Outpatients and inpatients

[edit]

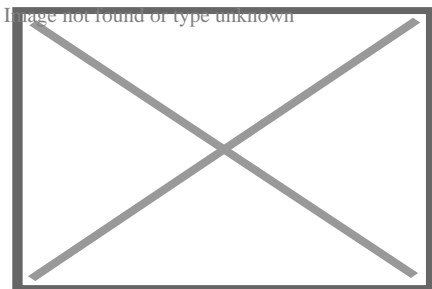


Patients at the Red Cross Hospital in Tampere, Finland during the 1918 Finnish Civil War



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 inpatient 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

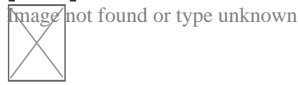
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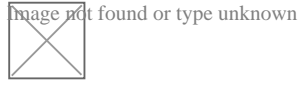
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External links

[[edit](#)]



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



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

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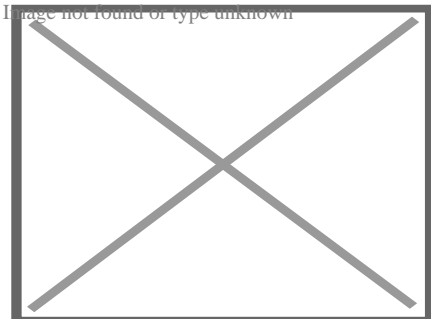
Lists of hospitals in: Africa, Asia, Europe, North America, Oceania, South America

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- United States
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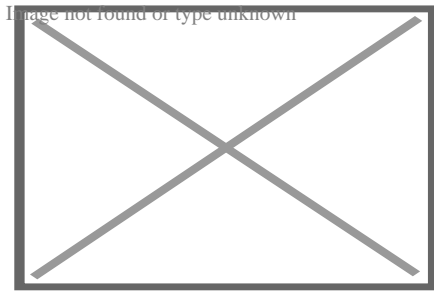
About thumb sucking

For other uses, see Thumbsucker (disambiguation).



Infants may use pacifiers or their thumb or fingers to soothe themselves

Newborn baby thumb sucking



A bonnet macaque thumb sucking

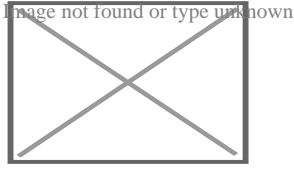
Thumb sucking is a behavior found in humans, chimpanzees, captive ring-tailed lemurs,^[1] and other primates.^[2] It usually involves placing the thumb into the mouth and rhythmically repeating sucking contact for a prolonged duration. It can also be accomplished with any organ within reach (such as other fingers and toes) and is considered to be soothing and therapeutic for the person. As a child develops the habit, it will usually develop a "favourite" finger to suck on.

At birth, a baby will reflexively suck any object placed in its mouth; this is the sucking reflex responsible for breastfeeding. From the first time they engage in nutritive feeding, infants learn that the habit can not only provide valuable nourishment, but also a great deal of pleasure, comfort, and warmth. Whether from a mother, bottle, or pacifier, this behavior, over time, begins to become associated with a very strong, self-soothing, and pleasurable oral sensation. As the child grows older, and is eventually weaned off the nutritional sucking, they can either develop alternative means for receiving those same feelings of physical and emotional fulfillment, or they can continue experiencing those pleasantly soothing experiences by beginning to suck their thumbs or fingers.^[3] This reflex disappears at about 4 months of age; thumb sucking is not purely an instinctive behavior and therefore can last much longer.^[4] Moreover, ultrasound scans have revealed that thumb sucking can start before birth, as early as 15 weeks from conception; whether this behavior is voluntary or due to random movements of the fetus in the womb is not conclusively known.

Thumb sucking generally stops by the age of 4 years. Some older children will retain the habit, which can cause severe dental problems.^[5] While most dentists would recommend breaking the habit as early as possible, it has been shown that as long as the habit is broken before the onset of permanent teeth, at around 5 years old, the damage is reversible.^[6] Thumb sucking is sometimes retained into adulthood and may be due to simply habit continuation. Using anatomical and neurophysiological data a study has found that sucking the thumb is said to stimulate receptors within the brain which cause the release of mental and physical tension.^[7]

Dental problems and prevention

[edit]



Alveolar prognathism, caused by thumb sucking and tongue thrusting in a 7-year-old girl.

Percentage of children who suck their thumbs (data from two researchers)

Age	Kantorowicz ^[4]	Brückl ^[8]
0–1	92%	66%
1–2	93%	
2–3	87%	–
3–4	86%	
4–5	85%	25%
5–6	76%	
Over 6	—	9%

Most children stop sucking on thumbs, pacifiers or other objects on their own between 2 and 4 years of age. No harm is done to their teeth or jaws until permanent teeth start to erupt. The only time it might cause concern is if it goes on beyond 6 to 8 years of age. At this time, it may affect the shape of the oral cavity or dentition.^[9] During thumbsucking the tongue sits in a lowered position and so no longer balances the forces from the buccal group of musculature. This results in narrowing of the upper arch and a posterior crossbite. Thumbsucking can also cause the maxillary central incisors to tip labially and the mandibular incisors to tip lingually, resulting in an increased overjet and anterior open bite malocclusion, as the thumb rests on them during the course of sucking. In addition to proclination of the maxillary incisors, mandibular incisors retrusion will also happen. Transverse maxillary deficiency gives rise to posterior crossbite, ultimately leading to a Class II malocclusion.^[10]

Children may experience difficulty in swallowing and speech patterns due to the adverse changes. Aside from the damaging physical aspects of thumb sucking, there are also additional risks, which unfortunately, are present at all ages. These include increased risk of infection from communicable diseases, due to the simple fact that non-sterile thumbs are covered with infectious agents, as well as many social implications. Some children experience social difficulties, as often children are taunted by their peers for engaging in what they can consider to be an “immature” habit. This taunting often results the child being rejected by the group or being subjected to ridicule by their peers, which can cause understandable psychological stress.^[11]

Methods to stop sucking habits are divided into 2 categories: Preventive Therapy and Appliance Therapy.^[10]

Examples to prevent their children from sucking their thumbs include the use of bitterants or piquant substances on their child's hands—although this is not a procedure encouraged by the American Dental Association^[9] or the Association of Pediatric Dentists. Some suggest that positive reinforcements or calendar rewards be given to encourage the child to stop sucking their thumb.

The American Dental Association recommends:

- Praise children for not sucking, instead of scolding them when they do.
- If a child is sucking their thumb when feeling insecure or needing comfort, focus instead on correcting the cause of the anxiety and provide comfort to your child.
- If a child is sucking on their thumb because of boredom, try getting the child's attention with a fun activity.
- Involve older children in the selection of a means to cease thumb sucking.
- The pediatric dentist can offer encouragement to the child and explain what could happen to the child's teeth if he/she does not stop sucking.
- Only if these tips are ineffective, remind the child of the habit by bandaging the thumb or putting a sock/glove on the hand at night.
- Other orthodontics^[12] for appliances are available.

The British Orthodontic Society recommends the same advice as ADA.^[13]

A Cochrane review was conducted to review the effectiveness of a variety of clinical interventions for stopping thumb-sucking. The study showed that orthodontic appliances and psychological interventions (positive and negative reinforcement) were successful at preventing thumb sucking in both the short and long term, compared to no treatment.^[14] Psychological interventions such as habit reversal training and decoupling have also proven useful in body focused repetitive behaviors.^[15]

Clinical studies have shown that appliances such as TGuards can be 90% effective in breaking the thumb or finger sucking habit. Rather than use bitterants or piquants, which are not endorsed by the ADA due to their causing of discomfort or pain, TGuards break the habit simply by removing the suction responsible for generating the feelings of comfort and nurture.^[16] Other appliances are available, such as fabric thumb guards, each having their own benefits and features depending on the child's age, willpower and motivation. Fixed intraoral appliances have been known to create problems during eating as children when removing their appliances may have a risk of breaking them. Children with mental illness may have reduced compliance.^[10]

Some studies mention the use of extra-oral habit reminder appliance to treat thumb sucking. An alarm is triggered when the child tries to suck the thumb to stop the child from this habit.^{[10][17]} However, more studies are required to prove the effectiveness of external devices on thumb sucking.

Children's books

[edit]

- In Heinrich Hoffmann's *Struwwelpeter*, the "thumb-sucker" Konrad is punished by having both of his thumbs cut off.
- There are several children's books on the market with the intention to help the child break the habit of thumb sucking. Most of them provide a story the child can relate to and some coping strategies.^[18] Experts recommend to use only books in which the topic of thumb sucking is shown in a positive and respectful way.^[19]

See also

[edit]

- Stereotypic movement disorder
- Prognathism

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[edit]

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Further reading

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External links

[edit]

- "Oral Health Topics: Thumbsucking". *American Dental Association*. Archived from the original on 2010-06-19.
- "Pacifiers & Thumb Sucking". *Canadian Dental Association*.

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