Introduction

Pedodontics or Pediatric Dentistry is a dental specialty that provides complete preventive and curative oral health care for infants and children till the age of 13 including those with special health care needs. Pediatric dentists and the doctors working under their supervision have special training, which allows them to provide the most up-to-date and thorough treatment for a wide variety of children's dental problems including special needs patients. However, to accomplish successful treatment of child patients' parent cooperation and follow up knowledge is very essential. This is reflected in the 'Pedodontic Treatment Triangle' concept where the child, dentist, and the parent have special roles and communicate with each other before, during and after the treatment.

Dental services provided by the Division of Pedodontics

- Regular oral health checks up
- Advice on proper cleaning and brushing of teeth and diet/nutrition
- Provide or recommend special preventive care for problems during teething
- Fluoride treatments and tooth sealants to prevent cavities
- Use of anesthetics to ensure pain free dentistry for the child.
- Repair tooth cavities and/or defects
- Provide Pulp treatment in children
- Provide crowns for front and back teeth if needed
- Extraction of teeth which are beyond repair
- Offer treatment for Oral habits (thumb sucking, lip biting and pacifier use)
- Provide management of gum diseases, ulcers and tongue-tie
- Care for dental injuries (e.g. fractured or knocked-out teeth)
- Treat children with special needs.

Patient information

The department of pedodontics offers the specialized dental treatment for your child that general dentists cannot offer. We ensure that your child is getting the latest and best treatment to prevent, detect and treat all of your child’s dental/oral health needs from birth to 13 years of age.

When and how often to visit our Division of Pedodontics

The first dental visit should occur approximately 6 months after...
your child’s first tooth erupts and no later than age 1.

Children should visit their dentist at least every 6 months.

What to expect during the first visit

At the initial visit and after examining your child’s mouth and discussing any dental issues with you we can present information about

- Preventive home care, including information on brushing, diet and fluoride use;
- Caries risk assessment;
- Early childhood caries;
- Information about preventing mouth and teeth injuries;
- Information on growth and development.

Role of diet in dental caries

What your children eat directly affects their teeth

General health and wellbeing of your child is directly related to his/her dental health.

In the 1960s the caries theory was depicted as 3 circles representing the 3 prerequisites for dental caries: The tooth, the diet, and dental plaque [Figure 1]. Sugars (found in cake, cookies, candy, sweetened milk and juice) and starches (found in biscuits and potato chips) can cause tooth decay. In the absence of proper cleaning and brushing of teeth debris tends to remain in children’s teeth, resulting in bacteria growth production of excess acid and, ultimately, tooth decay. Although baby teeth (deciduous or primary teeth) are eventually replaced with permanent teeth, healthy baby teeth are fundamental to a child’s overall health and development and ensure a proper set of permanent dentition.

Age-based dental checklist for your children from birth to 13 years

- Some babies are born with neonatal teeth (teeth that develop in the first month) that require removal
- At least one baby tooth erupts by 6 months of age and requires cleaning
- From 6 months to 24 months, children begin teething indicated by irritability, biting on objects, drooling and ear pulling
- As a parent, you can help teething progress by using strategies such as massaging your child’s gums, offering a chilled teething ring or cold, wet washcloth, and asking your dentist for a teething ointment recommendation
- By 2 to 3 years of age, most if not all baby teeth have erupted
- Soon after 4 years, spaces for permanent teeth begin to appear as the jaw, supporting bone structure, and facial bones begin to grow
- From 6 to 12, it is typical for your child to have both baby teeth and permanent teeth in their mouth
- By the 13th year a child should have a full permanent set of teeth.

Dental care requirements for children

Here’s a list of dental care necessities from birth on up

- Baby teeth cleaning: Baby teeth should be cleaned as soon as they erupt. Clean your baby’s teeth with a soft washcloth or gauze after every bottle or meal. When more than one tooth erupts, you can soak a small-bristled child-sized (age-appropriate) toothbrush in warm water before using it on your baby’s teeth, as instructed by your dentist
- Brushing: Baby teeth should be brushed using a pea-sized amount of toothpaste preferably fluoridated. Encourage your children to brush their own teeth once they have the ability to do so
- Replace toothbrush: Replace toothbrushes every two to three months
- Children’s teeth should be brushed after they are given medicine or sweetened liquids before sleeping. Acids contained in medicines and juices may damage tooth enamel causing decay
- Dental sealant application: Dental sealants are used to protect teeth from decay and are appropriate as soon as a tooth erupts. These are applied by dentists and take approximately 5 min for each tooth
- Fluoride treatments: Check with your dentist about the need for fluoride treatments. Fluoride is a major component in the prevention of childhood dental caries. A child can get fluoride in tooth pastes or by application by the dentist. However, children require the right balance of fluoride treatment
- Dental flossing: Parent-assisted dental flossing should commence when two teeth erupt next to each other. Independent flossing should occur when children have the ability to do it on their own (often by 6 years of age)
- Mouth washing: Mouth washing is usually recommended by age seven, provided your child can perform the activity.

Instructions on preventing tooth decay in your child

You can help us in preventing dental decay in your child.
Emphasis today is placed on preventive measures, which are considered key to the control of tooth decay. These preventive measures include:

- Checkups with a pediatric dentist starting at 6 months of age as soon as the first tooth erupts.
- Good nutrition ensures your child has a balanced diet of fruits and vegetables, breads and cereals, milk and dairy products, and meat, fish, and eggs. Sugar-rich foods and beverages need not be completely avoided. But in order to cut off the build-up of decay-inducing bacteria, their frequency should be limited.
- Supervised tooth brushing until approximate age of 6, when children are likely to demonstrate that they can capably brush on their own. Parents are advised to clean babies’ and toddlers’ teeth with a brush or washcloth and a pea-sized dose of toothpaste, starting the day the first tooth erupts.
- Check the teeth monthly for horizontal white or brown spots or lines close to the gums. These markings are signs of demineralization, the first indications of tooth decay. When babies are nursing – breast or bottle fed – they tend to appear on the inside surface of the upper teeth. In children with permanent teeth, they are often found on biting surfaces or in between teeth. If you see these spots or lines, make an appointment with your dentist immediately. It may be possible to re-mineralize the area and prevent a cavity with fluoride treatment.
- Get adequate amounts of fluoride after discussion with your dentist.
- Ask your dentist about dental sealants. These plastic coatings placed on the chewing surfaces of the permanent molars (which appear between the age of 6 and 12) protect the teeth by shutting out cavity-causing food particles.
- Ask your dentist about use Xylitol and other sugar substitutes.

**Instructions on teething symptoms**

If your child is showing discomfort during teething, the symptoms he/she may experience include:

- Excessive drooling, which may lead to a rash on the face or chest;
- Gum swelling and sensitivity;
- Irritability or fussiness;
- Low-grade fever (rare);
- Refusing food;
- Rubbing of ears and cheeks;
- Sleep problems;
- Urge to bite on hard objects.

As a tooth erupts, a watery sac (eruption cyst) may develop. Eruption cysts are usually harmless and should be left alone. As a tooth pushes through the gum, it will eventually rupture the sac. If symptoms develop during teething, they usually occur approximately 4 days before and up to 3 days after the tooth erupts. Mild teething symptoms that gradually improve should not cause concern. However, contact your pediatrician if your baby’s symptoms are severe or persist. Fever, diarrhea, frequent ear pulling, coughs and severe diaper rashes are not normal teething symptoms. You should be especially concerned if your child has a rectal temperature of 101°F or higher (100.4°F or higher for babies younger than 3 months). When in doubt, consult with your pediatrician to determine whether your baby is showing signs of a problem that requires medical attention.

**Reducing teething symptoms**

There are several ways you can bring your child relief from teething symptoms, including:

- Use a cold, wet cloth for your baby to suck as a way to soothe gums. Clean the cloth after each use.
- Consider a pacifier, teething ring, or other teething accessories and toys your child can chew. Make sure the object is big enough so it cannot be swallowed or break into small pieces. Stay away from liquid-filled rubber teething rings, which can break or leak, and do not freeze them to the point that they are frozen solid, as this may only aggravate sensitive gums.
- Gently rub your child’s gums with a clean finger, a small, cool spoon, or a wet gauze pad.
- If drool causes a rash on your child’s face or chest, wipe the drool away often with a soft cotton cloth, or gently dab petroleum jelly on the affected area.
- If your child is eating solids, offer cold foods and liquids, like applesauce, pureed peaches, or yogur.
- Give your baby a mild pain reliever that is labeled for his/her specific age, but never without first consulting your pediatrician to see if it is all right to do so, and if so, what the right dosage should be.

**Instructions for children undergoing local anesthesia procedure**

- Local anesthetics are administered to children to temporarily reduce or totally eliminate pain during dental procedures like extractions or pulp treatment procedures.
- Please notify our office of any change in your child’s health and/or medical condition.
- Tell us about any prescribed, over-the-counter, or herbal medications your child is taking. Check with us to see if routine medications should be taken the day of the anesthesia.
- Also, report any allergies or reactions to medications that your child has experienced.
- Local anesthetics are administered either by an injection or by topical application.
- We intend to use the safest and the most effective anesthetic for your child.
- The child can experience temporary loss of sensation in the anaesthetized area well beyond the treatment time.
- Some mild pain may be present at the point of injection.
- Parents should be careful and monitor the child for lip or tongue biting in the anaesthetized area.
- Some children may experience heaviness in the area for a couple of days.
- Complications due to local anesthesia administration are very rare and in case of any signs of allergy or toxicity...
after you leave the clinic the doctor should be consulted immediately.

Instructions for children after extraction of teeth

This will require special care and attention over the next few days. Please follow the instructions checked in the following:

- **Numbness:** The mouth will be numb approximately 2-4 h. Watch to see that your child does not bite, scratch, or injure the cheek, lips, or tongue during this time
- **Bleeding:** Bleeding was controlled before we discharged your child, but some occasional oozing (pink or blood-tinged saliva) may occur. Hold gauze with firm pressure against the surgical site until oozing has stopped. You may need to change the gauze or repeat this step. If bleeding continues for more than 2 h, contact our department
- **Surgical site care:** Today, do not disturb the surgical site. Do not stretch the lips or cheeks to look at the area. Do not rinse vigorously, use mouthwash, or probe the area with fingers or other objects. Beginning tomorrow, you may rinse with warm salt water (½ teaspoon salt with 1 cup water) after meals
- **Sutures:** Sutures (stitches) may be placed to help control bleeding and promote healing. These sutures will dissolve and do not need to be removed OR will be removed at your follow-up visit. If the stitches come out during the first 48 h, contact our department
- **Daily activities:** Today, avoid physical exercise and exertion. Return to normal activities as tolerated. Smoking is never good for one’s health and may delay healing following oral surgery
- **Diet:** After all bleeding has stopped; the patient may drink cool noncarbonated liquids but should not use a straw. Encourage fluids to help avoid dehydration. Cold soft foods (e.g. ice cream, jelly, pudding, and yogurt) are ideal the first day. By the second day, consistency of foods can progress as tolerated. Until healing is more established, avoid foods such as nuts, sunflower seeds, and popcorn that may get lodged in the surgical areas
- **Oral hygiene:** Keeping the mouth clean is essential. Today, teeth may be brushed and flossed gently, but avoid stimulating the surgical site. Soreness and swelling may not permit vigorous brushing of all areas, but please make every effort to clean the teeth within the bounds of comfort
- **Pain:** Because some discomfort is expected, you may give your child mild an analgesic before the numbness wears off. Follow the prescription of your dentist.

Watch for

- Swelling: Slight swelling and inflammation may occur for the next 2 days. If swelling occurs, ice packs may be used for the first 24 h (10 min on then 10 min off) to decrease swelling and/or bruising. If swelling persists after 24 h, warm/moist compresses (10 min on then 10 min off) may help. If swelling occurs after 48 h, contact us
- **Fever:** A slight fever (temperature to 100.5°F) is not uncommon the first 48 h after surgery. If a higher fever develops or the fever persists, contact us
- **Dry socket:** Premature dissolving or loss of a blood clot following removal of a permanent tooth may result in a ‘dry socket’. This typically occurs on the third to fifth day after the extraction, with a persistent throbbing pain in the jaw. Contact us if this occurs
- **Follow-up:** Schedule your child’s next visit.

Instructions for patients with dental trauma

- The greatest incidence of trauma to the milk teeth occurs at 2 to 3 years of age, children are learning to walk
- The most common injuries to permanent teeth occur secondary to falls, followed by traffic accidents, violence, and sports
- To prevent dental injuries use mouth guards during contact sports and safety belts during driving
- Trauma to milk teeth may damage permanent teeth buds and should be given due importance
- Ensure infants are safely secured while driving
- In case of any accident involving teeth please consult your dentist immediately
- In case of any head injuries or signs of incoherence or dizziness and vomiting contact medical specialists first
- Contact your dentist even if the tooth does not show any apparent fracture or bleeding
- Please inform the dentist about the time and nature of the accident
- Please provide any relevant medical history
- Please preserve any tooth fragments that may have broken
- In case of avulsed tooth secure the tooth in the patient’s mouth or in saline or milk and contact dentist immediately
- Never allow the tooth to become dry, avoid scrubbing the tooth and avoid washing under running tap water
- Treatment of dental trauma depends upon nature of the injury and may involve extraction, pulp treatment and use of splints
- Post-treatment follow the doctor’s instructions regarding diet and oral hygiene.

Instructions to patients using orthodontic appliances and space maintainers

Your child may use any of the following appliances:
- **Space maintainers** to prevent uneven spacing between baby teeth that are lost too early
- **Habit breaking appliances** that help children stop thumb or finger sucking habits before developmental damage occurs
- **Introral removable appliances** that correct maligned teeth before the condition becomes permanent
  - Kids wearing orthodontic appliances can generally do everything they would do normally
  - Appliances would not hinder a child’s ability to
run, swim, jump, speak, and eat, and most children become used to their orthodontic appliances within a day or two.

- Children should brush and floss teeth and appliances often and carefully.
- Removable appliances should be brushed separately each time teeth are brushed.
- Regular check-ups at the dentist’s office will ensure appliances are secure and teeth are developing properly.
- If an appliance breaks or loosens, see the pediatric dentist as soon as possible.
- Avoid sticky foods such as gum and caramels. Also avoid hard foods like peanuts and popcorn.
- Stop the child from removing any intra oral fixed appliances.
- Our department provides parents of each patient with detailed instructions for how to manage their child’s orthopedic appliance.

**Instructions to patients undergoing pulp treatment**[10]

- The aim of pulp treatment is to retain the natural milk or permanent tooth in the oral cavity.
- The procedure requires your child to be administered a local anesthetic.
- The procedure can be completed in one or more sittings depending upon the type of infection.
- The child may feel mild pain after the procedure for some time.
- In all cases of teeth with pulp treatment a crown is required as a final restoration.
- The crown can be a tooth colored for front teeth or metallic for back teeth.
- It is important to follow the instructions of the dentist to ensure the success of the treatment.

**Conclusion**

The Division of Pedodontics at King Khalid University College of Dentistry welcomes all suggestions and criticism for improvement of the manual.

**References**


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