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Tiny Teeth Fairy Tale

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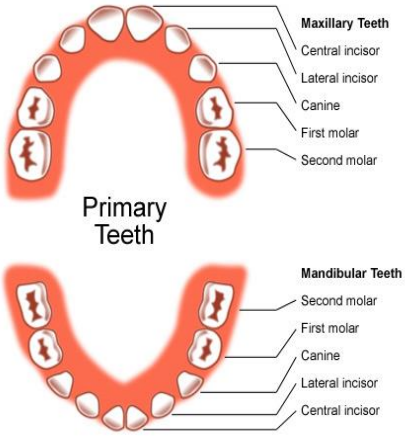
ABSTRACT:

Background: ***"Obsessed by a fairy tale, we spend our lives searching for a magic door and a lost kingdom of peace."- Eugene O'Neill***
I believe we love fairy tales because they are surprisingly relevant to real life. And in our deepest core, we know it. Fairy tales are extremely important stories with lessons that we remember all our lives. They are loved by absolutely everyone, because of the hidden deep meaning and lesson that each new story gives us. My article "Tiny Teeth Fairy Tale" is not an exception, but an addition to this statement. A review article emphasising the importance of teeth in a fairy tale format is presented to your attention. I believe that you will like it.

KEYWORDS: Pediatric dentistry, Fairy tale, Non pharmacological behaviour management, First dental visit.

"If you want your children to be intelligent, read them fairy tales. If you want them to be more intelligent, read them more fairy tales."- Albert Einstein
THE STORY BEGINS HERE.... Baby Kiara had a loose tooth. She was worried about what would happen when it came out. She called out to her mom, "Mom my tooth is wiggling. Will it come out? Kiara's mom replied, "Yes, Kiara. Your wiggly tooth is a baby tooth. Baby teeth/ Primary teeth all fall out as you grow up."

ONLY MILK TEETH/ BABY TEETH ARE PRESENT IN MOUTH FROM AROUND 12 months OF AGE - PRIMARY DENTITION



Upper Right					Upper Left				
55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75
Lower Right					Lower Left				

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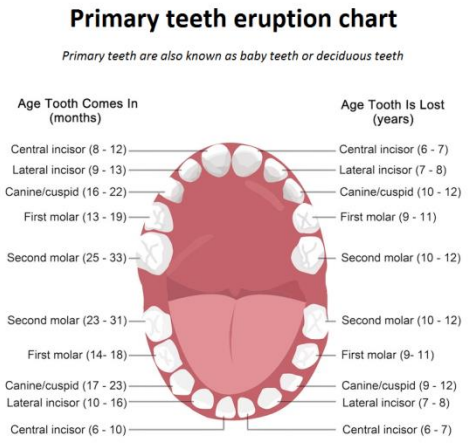
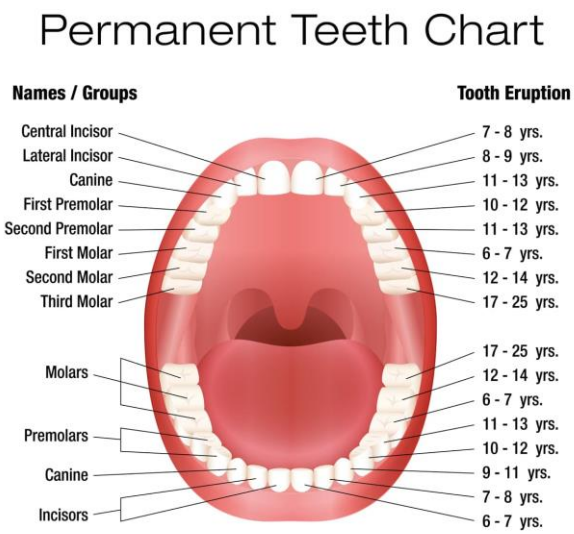
MILK TEETH + PERMANENT TEETH= MIXED DENTITION
PERMANENT TEETH ONLY- PERMANENT DENTITION

Upper Right								Upper Left							
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
Lower Right								Lower Left							

CHRONOLOGY OF PRIMARY & PERMANENT TOOTH ERUPTION

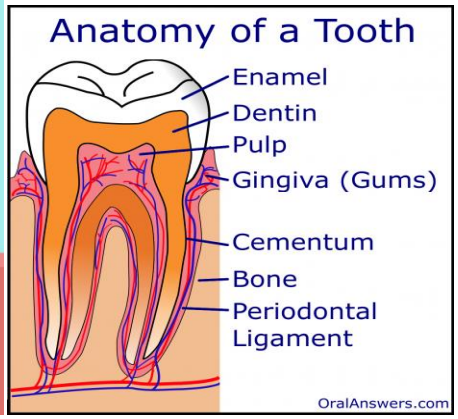


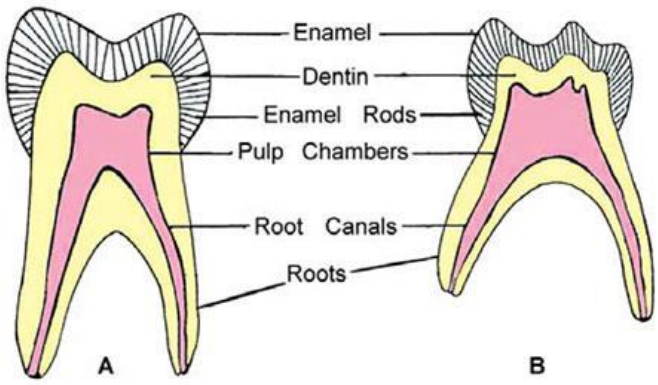


Kiara asked her mom, " Mom what should I do with my baby tooth when it comes out?". Mom replied, "Kiara, you can leave it for the tooth fairy. She will take it and give you a gift in exchange."

Kiara asked her mom, "Mom, what will the tooth fairy do with my tooth?". Mom replied, "She will take it to the sky and turn it into a star. Your tooth will twinkle and shine and make the night bright." Kiara kept thinking about the tooth fairy and she stopped worrying about her loose baby tooth (primary tooth with pre-shedding mobility).

Later that evening as Kiara was doing her homework, she bit into a crunchy apple and her loose baby tooth came out. Kiara took the tooth to her mother. They both washed the baby tooth and put it under Kiara's pillow when she went to sleep that night. Kiara's mom told her that, in no time a new tooth will come back in mouth (eruption of permanent tooth). It will be stronger, bigger and last for the rest of her life.





CROWN:

- Lighter in colour , bluish white in primary teeth
- Permanent teeth are Darker , greyish or yellowish white
- Cuspids are slender, more conical in case of primary teeth
- Permanent teeth Cuspids are less conical.
- The cervical ridges are more pronounced in primary
- The cervical ridges are flatter in permanent teeth
- The occlusal plane is relatively flat, narrow buccolingually in primary dentition
- The enamel is thinner in primary teeth and thicker in permanent.
- Contact areas are broader, flatter and situated gingivally in primary dentition
- Contact point is situated occlusally in permanent dentition
- The enamel rods at the cervical slopes occlusally from the DEJ in primary teeth
- Mammellons absent in primary teeth and are present on incisal edges of newly erupted incisor teeth
- First molar is smaller in dimension than second molar in primary teeth.

- First molar is larger in dimension than second molar in permanent teeth.
- The enamel rods are oriented gingivally in permanent teeth

ROOT:

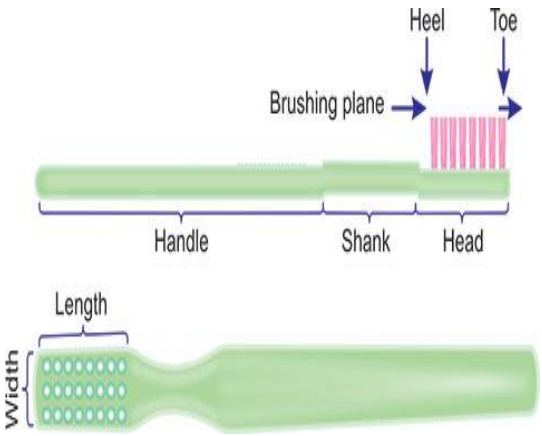
- Primary Roots are shorter and thinner. Roots are longer and larger in permanent teeth.
- Primary Roots are narrower mesio-distally. Roots are broader mesio-distally in permanent teeth.
- Primary Roots flare out beyond the crown boundary. Permanent Roots are well within the confines of the crown boundary.
- Primary Roots of the deciduous anterior teeth show a labial inclination.
- Permanent Roots do not show labial inclination
- Furcation is closer to the cervix in primary teeth and is placed apically in permanent teeth.
- Larger apical foramen is present in primary teeth and it is constricted in permanent teeth.

PULP:

- Pulp chamber is larger in primary teeth and smaller in permanent teeth.
- Pulp horns are closer to the outer surface in case of primary teeth.
- Pulp canal is wider relative to the size of the root in primary dentition.
- Pulp canal is narrower relative to the size of the root in permanent dentition
- Pulpal canal is less curved in primary teeth and more tortuous in permanent teeth.

When Kiara woke up the next morning, she noticed a gift box lying next to her pillow. She was sure it was from the tooth fairy. When she took off the gift wrapping, she found an exquisite new toothbrush. There was also a note for Kiara.

TOOTHBRUSHING FOR KIDS



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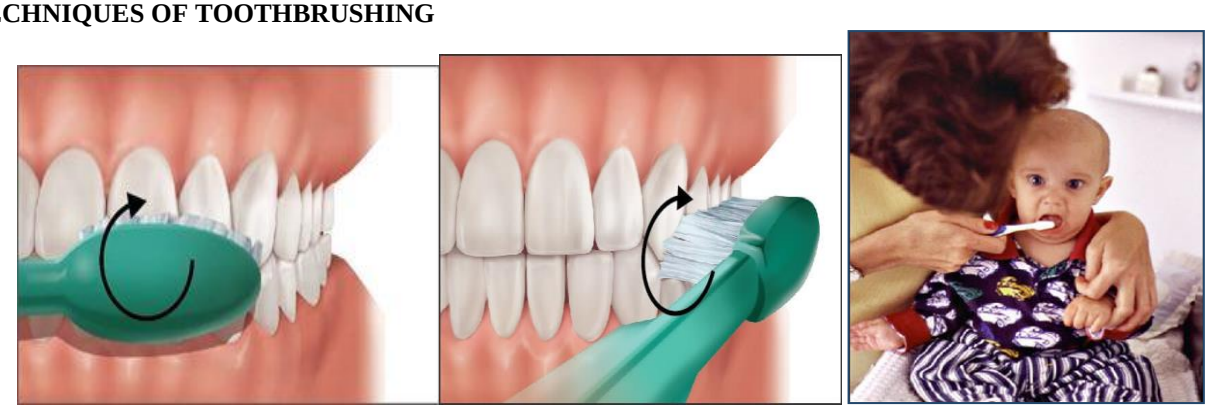
TECHNIQUES OF TOOTHBRUSHING



DENTRIFICES/TOOTHPASTES

Child age	Recommendations for use of fluoride toothpaste
Below 4 yr	Not recommended
4-6 yr	Brushing once daily with fluoridated tooth paste & once with non-fluoridated tooth paste
6-12 yr	Brushing Twice daily with fluoridated & once with non-fluoridated tooth paste
Above 12 yr	Brushing 3 times with fluoridated tooth paste

Kiara then read the note from the tooth fairy...Dearest Kiara, Your tooth is now a shining star. You must brush all your teeth nicely. You must drink milk and eat plenty of fruits and vegetables. You must visit a dentist once in 6 months for a dental check up. You will get a new tooth very soon.

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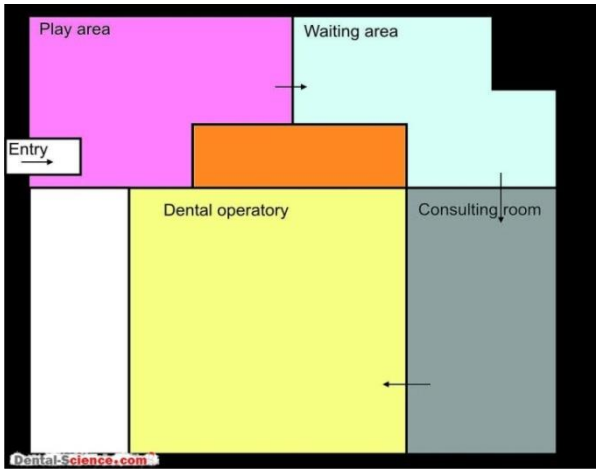
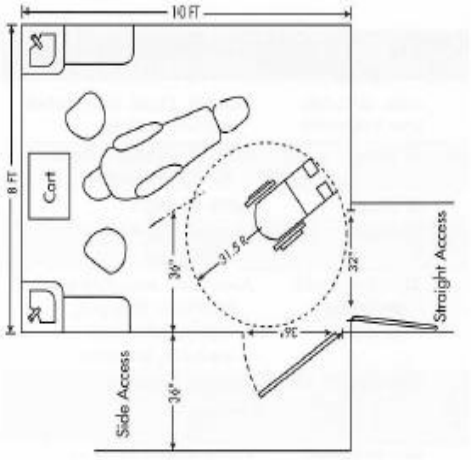
FIRST DENTAL VISIT





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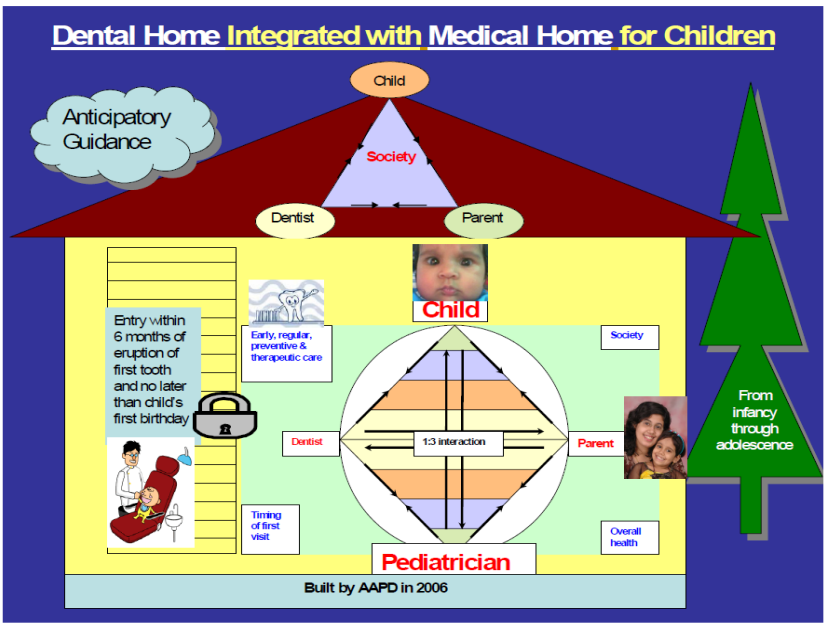
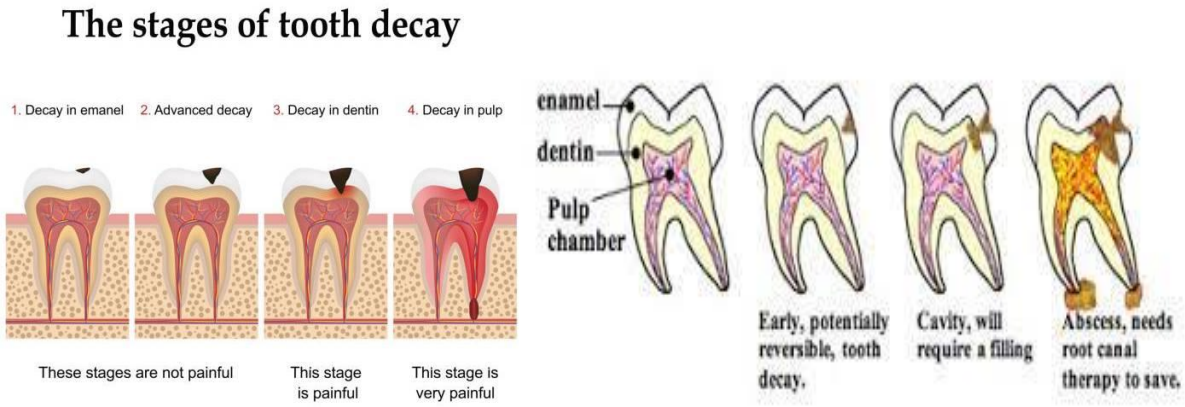
DENTAL HOME



Kiara was always terrified of visiting a dentist. She would always fuss when she had to visit one. One day, Kiara had a terrible tooth ache. Her mom suggested that she visit a dentist to remove the tooth bugs (Dental caries) that was causing her pain. Kiara also noticed that there a mild swelling on the affected side of her face.

DENTAL CARIES

Dental caries may be defined as a bacterial disease of calcified tissues of teeth and is characterized by demineralization of the inorganic portion and destruction of the organic substance of the tooth.



Kiara's mother wanted her to visit the pediatric dentist. But she knew that Kiara would fuss a lot. So she went to talk to Mrs.Sharmila. She was Kiara's favourite teacher. She assured that she will help Kiara get over her fear of visiting a dentist.

FEAR

It is a reaction to a known danger (augmenting the fight or flight response). It may be defined as an unpleasant emotion or effect consisting of psycho physiological changes in response to realistic threat or danger to one's own experience.

ANXIETY

It is a reaction to unknown danger. It is defined as a state of unpleasant feeling combined with an associated feeling of impending doom or danger from within rather than from without.

Mrs. Sharmila then explained Kiara about the importance of visiting a dentist. She spoke to Kiara and explained about the dental procedures using euphemisms.

EUPHEMISMS

Euphemisms are substitute understandable words to use around kids in the dental office:

Air water syringe - wind, air, squirt gun
Alginate - pudding, dough, cake mix
Alloy - silver star
Anaesthetic agent- sleepy juice
Blood - red, pink
Caries/decay - tooth bugs, sugar bugs, germs, sick tooth, spot
Explorer - tooth counter, tooth feeler
Etch - blue shampoo
Evacuator - Vacuum cleaner, big straw
Extraction - wiggle the tooth
Fluoride - tooth vitamins
High speed - tooth cleaner, water whistle
Hurt/pain - bother, discomfort, uncomfortable
Matrix - fence for star
Mouth prop - tooth pillow
Needle – straw
Nitrous oxide - silly gas, space gas
Prophylactic paste - special toothpaste
Rubber dam - rain coat
Rubber dam clamp - tooth ring
Rubber dam frame - coat rack
Sealant - plastic covering, white paint, nail polish for your tooth
Slow speed - tooth cleaner
Stainless steel crown - silver hat
Study models/casts - tooth statues
Topical anaesthetic - cherry/strawberry jelly
Radiographic equipment - tooth camera
Radiographic sensor - tooth pictures

Kiara slowly overcame her fear of visiting the dentist. She visited the dentist with her mom in the evening. The dentist examined her oral cavity and suggested that she should undergo a pulpectomy procedure as the tooth bugs had dug deep in the tooth structure causing pain and swelling due to pus collection leading to a dentoalveolar abscess. Kiara asked the dentist to explain more about the procedure. The dentist formulated a treatment plan for Kiara.

Treatment plan in general comprises of the following.,

- EMERGENCY PHASE: Incision and drainage
- SYSTEMIC PHASE: Premedication (antibiotic and analgesic)
- PREVENTIVE PHASE: Caries risk assessment, Oral hygiene instruction, Fluoride application, Diet counseling, Pit and fissure sealant
- PREPARATORY PHASE: Behavior management, Oral prophylaxis, caries control- TR, Orthodontic consultation – preventive and interceptive orthodontics, minor oral surgical procedures- extraction, frenectomy, Endodontic therapy
- CORRECTIVE PHASE: Restorative dentistry –PRR, prosthetic rehabilitation, Early orthodontic intervention-minor tooth movement, serial extraction, space management
- MAINTENANCE PHASE: Review of oral health – indices, Caries activity test, Reinforcement of oral health care measures, Motivation and re- counseling for diet, Follow up of treatment procedures

INDIRECT PULP CAPPING

“Indirect pulp capping is a procedure where in a small amount of carious dentin is retained in deep areas of cavity preparation to avoid exposure of the pulp and placement of a medicament to seal the dentin and encourage pulp recovery.”

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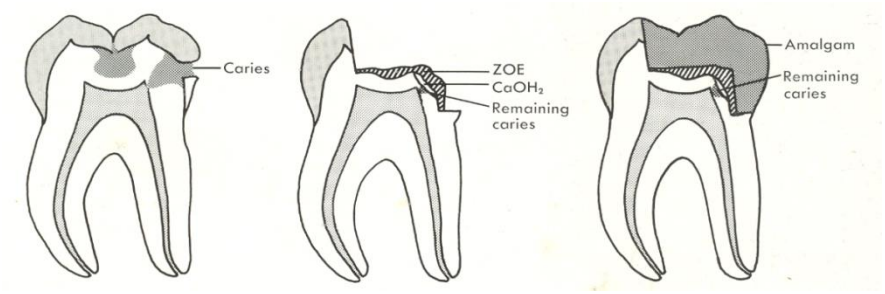
INDICATIONS:

1. History: Mild discomfort from chemical and thermal stimuli, Absence of spontaneous pain

2. **Clinical examination**: Large carious lesion, Absence of lymphadenopathy, Normal appearance of adjacent gingival, Normal color of tooth

3**. Radiographic examination**: Large carious lesion in close proximity to the pulp, Normal lamina dura , Normal periodontal ligament space, No interradicular or periapical radiolucency

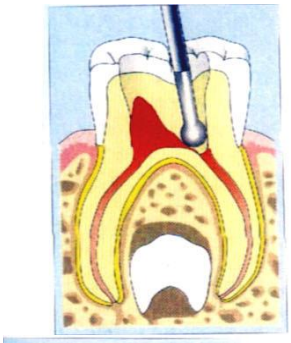


PULP CAPPING

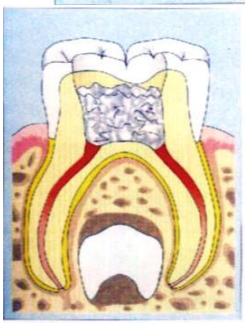
Direct pulp capping involves the placement of a biocompatible agent on healthy pulp tissue that has been inadvertently exposed from caries excavation or traumatic injury. The classic indication for direct pulp capping for primary teeth has been for “pinpoint” mechanical exposures that are surrounded with sound dentin.

PULPOTOMY

Pulpotomy can be defined as the complete removal of the coronal portion of the dental pulp, followed by placement of suitable dressing or medicament that will promote healing and preserve the vitality of tooth .



The coronal pulp tissue is removed with a diamond bur turning at high speed and the pulp chamber is cleaned of all tissue, remnants and irrigated with isotonic saline solution.



A cotton pellet moistened with formocresol is applied against the exposed pulp tissue for 5 minutes

PULPECTOMY

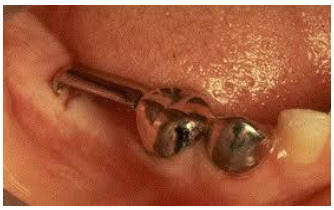
Pulpectomy involves the complete removal of necrotic pulpal tissue from the root canals and coronal portion of non-vital primary teeth to maintain a tooth in the dental arch. *(Mathewson,1995)*

STAINLESS STEEL CROWN

The dentist also advised Kiara to visit him the following week for the extraction of a root stump followed by a space maintainer.

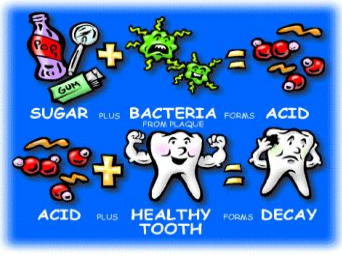
SPACE MAINTAINER

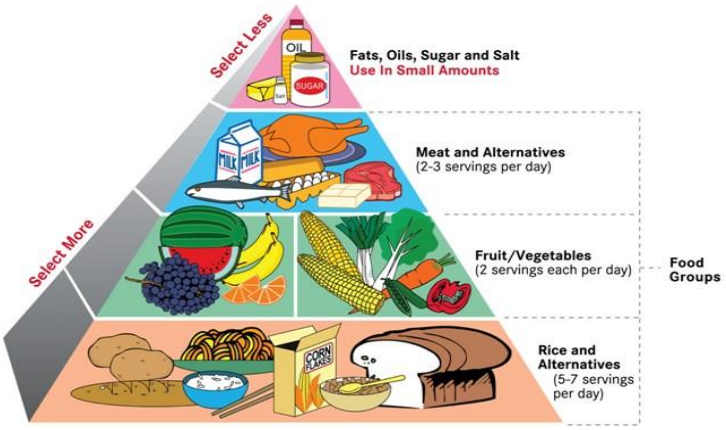
Appliance designed to retain a given area or space, generally in the primary and mixed dentitions.



Kiara loved all sweets. Cookies and candies were her favourite. She would have so many handfuls at a time. Though her mother warned her often, Kiara never listened to her. After her visit to the pediatric dentist, Kiara understood the reason for her tooth decay. The dentist counselled Kiara regarding her diet.

DIET COUNSELLING





One day while playing at school, Kiara fell down and hurt herself. She could not join her friends in playing her favourite games. Kiara realised that her front tooth was broken because of the trauma. She knew she had to visit her dentist to get it treated. The dentist examined her mouth and explained to Kiara about the various dental traumatic injuries and their management.

TRAUMATIC DENTAL INJURIES

Class 1 - Simple fracture of the crown-involving little or no dentin
Class 2 - Extensive fracture of the crown – involving considerable dentin, but not the pulp
Class 3 - Extensive fracture of the crown – involving considerable dentin, and exposing the dental pulp
Class 4 - The traumatized tooth which becomes nonvital-with or without loss of crown structure
Class 5 - Teeth lost as a trauma
Class 6 - Fracture of the root - with or without loss of crown structure
Class 7 - Displacement of the tooth-without fracture of crown or root
Class 8 - Fracture of the crown en masse and its replacement.
Class 9- Fracture of primary teeth

Kiara had a little baby brother Ken. One day Kiara and baby Ken were playing in the lawn, when their mom called out to them. Baby Ken had turned one the previous day. So Kiara knew that it was time for Baby Ken's first dental visit.

FIRST DENTAL VISIT

The AAPD and the American Dental Association have recommended that "A child should visit the dentist **within 6 months of eruption of the first primary tooth and no later than 12 months of age**."

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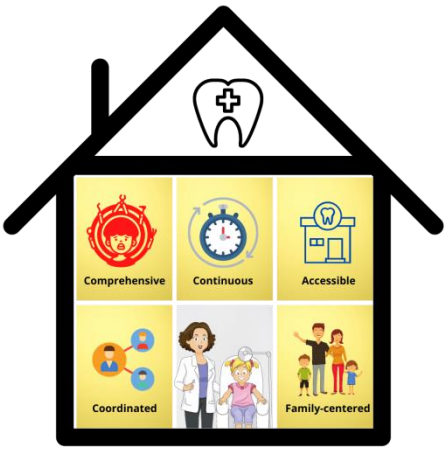
DENTAL HOME



"The dental home is the ongoing relationship between the dentist and the patient, inclusive of all aspects of oral health care delivered in a comprehensive, continuously accessible, coordinated, and family- centered way".
Baby Ken was a lot scared in visiting the pediatric dentist. The dentist patiently explained to Baby Ken's mother Mrs.Chris about the nursing bottle caries and the various fillings to be done in Baby Ken's mouth. The dentist even practised certain non pharmacological behaviour management strategies so that the little one was able to accept the dental treatment.

NON PHARMACOLOGICAL BEHAVIOR MANAGEMENT

Behaviour management is a cornerstone of treatment planning in pediatric dentistry. A child's level of cooperation and ability to follow instructions from the dental team directly influence how well a restorative or surgical procedure can be performed and even what materials can be used.
Graeme Wright (1975) defined behavioural management as "the means by which the dental health team effectively and efficiently performs treatment for a child". He suggests that a "positive dental attitude" is the aim of behavioural management. More recently he has refined the definition so as not to imply just behaviour necessary to complete a given task, but to include creating a long-term interest on the patient's part for ongoing prevention and for future improved dental health.
To do this, the dentist must establish relationships based on trust with the child and accompanying adult to ensure compliance with preventive regimes and allow treatment to occur (the "treatment alliance") Tell Show Do technique, modelling are the most widely used methods.

(a)  (b)  (c)  

EARLY CHILDHOOD CARIES

The disease of early childhood caries (ECC) is the presence of 1 or more decayed (non cavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces in any primary tooth in a child 71 months of age or younger. In children younger than 3 years of age, any sign of smooth-surface caries is indicative of severe early childhood caries (S-ECC). From ages 3 through 5, 1 or more cavitated, missing (due to caries), or filled smooth surfaces in primary maxillary anterior teeth or a decayed, missing, or filled score of ≥4 (age 3), ≥5 (age 4), or ≥6 (age 5) surfaces constitutes S-ECC.

Finally Kiara and her little baby brother Ken understood the importance of visiting a pediatric dentist. They lived happily ever after.
This Pedo fairy tale was exclusively written for the undergraduate students to understand the basics of pediatric dentistry just like flipping along a fairy tale. I have put forth pediatric dentistry basics in a whimsical and imaginative way. It is dedicated to my 5 year old baby girl Kiara.

FINANCIAL SUPPORT AND SPONSORSHIP
Nil.

CONFLICTS OF INTEREST
There are no conflicts of interest.