

Teachers Oral Guide



Your Health, Oral Health and Dentistry



As guardians of oral healthcare in the nation we are truly concerned about overall health – more significantly in oral health and prevention of oral diseases among people.

Good oral health starts with early preventive care and good habits. It is important for children's and adolescents overall health and well being. As you interact with students and parents, you can now play an effective role in influencing their lives on oral healthcare.

We are pleased to offer you free of cost, this comprehensive and instructive Oral Health Guide that will help you teach and promote healthy choices related to oral and body health.

We trust you will find it useful.

Published for the benefit of a healthy society.

Indian Dental Association

About US

Established in 1946, the **Indian Dental Association (IDA)** is a premier organization of dental professionals in the country committed to dental excellence. Its main focus is on pioneering prevention and interception of dental diseases rather than cure. It is the common platform for interaction and exchange of information and skill, aimed at professional advancement of its members. By its dedicated approach to promoting dental education and research, IDA has been championing the cause of oral healthcare and hygiene in the country. The Oral Health Programs conducted at Schools for students, teachers and parents is an endeavor by the IDA to inculcate good oral hygiene habits at a young age to have healthy teeth that last a lifetime!

According to the Indian Dental Association, dental diseases, tooth decay (dental caries) and gum disease are the most common among children. However, the good news is that dental diseases are preventable! Studies and research confirm the importance of children practicing good oral hygiene and care right from their early years. It is said, a child is not truly healthy without good oral health.

Healthy Smiles Happy Smiles, one of our innovative School Oral Health programs launched in 1991, focuses on caries prevention. It was developed in response to the feedback and requests received from Teachers for in-depth information on children's oral health. It provides the basic need-to-know oral health information that is important for children. The simple format and informative sections will assist you in **teaching the topic** and **working with parents**. You'll find answers to common questions such as - when a child should first go to the dentist, why baby teeth are important, and what to do in a dental emergency. It helps teachers promote good oral health to students, building habits that will last a lifetime. It boosts self-esteem and enhances knowledge on oral health. It encourages children to care about themselves and take responsibility for their own oral health. As a teacher, you have the opportunity to promote the importance of good oral health habits to both your students *and* their parents.

Home is where a child learns first ... and where your classroom efforts can be reinforced as children learn and practice oral health behaviors to help their smiles last a lifetime. With the information contained in **Healthy Smiles Happy Smiles**, you and parents can **promote the same key messages** to children at school and at home. For easy access, the pages have been set up in categories – in a simple format. This format facilitates the sharing of information with families and other teachers.

With our Oral Health Guide you can now conduct an outreach to parents to improve their knowledge and understanding of the importance of oral health, oral hygiene, healthy eating practices, and regular dental visits.

Indian Dental Association School-based oral health program can help in prevention of dental diseases by educating teachers, children's and parents on oral health.

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Be a Guardian of Oral Health

Parents and Teachers are Oral Care Role Models

Children imitate the actions of the adults around them. Both teachers and parents can act as oral health role models. Encourage children to follow your lead in practicing good oral health that leads to a Healthy Smile Happy Smile!

How our school based programme helps students to achieve Good Oral Health.

Good Oral Health is important to children's and adolescents' overall health and well being.

As you interact with students and parents, you can influence their lives in important ways by teaching them about oral health.

Pain and suffering should not be an option

Although it is no longer unusual to see children smiling with a full set of unmarred teeth, millions of other children have little to smile about. For them, the daily reality is persistent dental pain, endurance of dental abscesses, inability to eat comfortably or chew well, embarrassment at discolored and damaged teeth and distraction from play and learning.

Children and adolescents with poor oral health may have many other problems:

- Developing infections from tooth decay and/or gum disease, which could lead to other serious health problems.
- Difficulty chewing food, which could result in poor nutrition and, in turn, impaired physical development.
- Speech problems.
- Difficulty concentrating and learning, and absence from school because they are in pain.
- Having psychological problems such as low self esteem, and being at high risk for social stigma because of decayed teeth and chronic bad breath.
- Having fewer opportunities in life, compared to their peers with good oral health.
- Conduct outreach to parents to improve their knowledge and understanding of the importance of oral health, oral hygiene, healthy eating practices, and regular dental visits.

Most oral health problems can be prevented. Here are some tips for promoting oral health with students and their parents:

- Conduct an oral health assessment on students by asking them about their personal oral hygiene practices (e.g., brushing and flossing their teeth).
- Add prompts to problem list (print or electronic records) that remind health professionals to ask students about their oral health and provide education.
- Offer preventive oral health care services (e.g., fluoride varnish) delivered by oral health professionals.
- Stress the importance of good oral hygiene, including brushing teeth with fluoridated toothpaste at least twice a day (in the morning and at night) and flossing at least once a day, preferably before brushing at night.
- Teach students what a healthy mouth looks like, how to recognize early signs of oral disease, and what can be done to reverse or treat oral disease.
- Encourage students to drink water throughout the day instead of sweetened beverages like sports drinks, fruit drinks, and soda.
- Encourage students to wear seatbelts when riding in motor vehicles and mouth guards and other protective gear when participating in physical activities or sports such as biking, or in-line skating or when playing baseball, basketball, football, hockey.
- Conduct outreach to parents to improve their knowledge and understanding of the importance of oral health, oral hygiene, healthy eating practices, and regular dental visits.

Lost School time and restricted activity days

Children due to acute dental problems and related illnesses lose school hours and miss their school. Children with low income groups lose ten times as compared to high income group.

Oral Health and Learning

- Early tooth loss caused by dental decay can result in failure to thrive, impaired speech development, absence from and inability to concentrate in school and reduced self-esteem.
- Children who take a test while they have a toothache are unlikely to score as well as children who are restricted by pain.
- Poor Oral health has been related to decreased school performance, poor social relationship, and less success rate in life. Children experiencing pain are distracted and unable to concentrate on schoolwork.

- Children are often unable to verbalize their dental pain. Teachers may notice a child who is having difficulty attending to task or who is demonstrating the effects of pain - anxiety, fatigue, irritability, depression and withdrawal from normal activities. However, teachers cannot understand these behaviors if they are not aware that a child has a dental problem.
- Children with chronic dental pain are unable to focus, are easily distracted and may have problems with schoolwork completion. They may also experience deterioration of school performance, which negatively impacts their self esteem.
- If a child is suffering pain from a dental problem, it may affect the child's school attendance, mental and social well-being while at school. If left untreated, the pain and infection caused by tooth decay can lead to problems in eating, speaking and learning.
- When children's acute dental problems are treated and they are not experiencing pain, their learning and school attendance records improve.

Nutrition and Learning

- Children who are missing teeth have to limit their food choices because of chewing problems, which may result in nutritionally inadequate their diets.
- The daily nourishment that children receive affects their readiness for school.
- Inadequate nutrition during childhood can have detrimental effects on children's cognitive development and on productivity in adulthood. Nutritional deficiencies also negatively affect children's school performance, their ability to concentrate and perform complex tasks and their behavior.
- Children's who frequently consume foods and beverages high in sugar may increase children's risk for caries and negatively impact their overall health.

Tips for incorporating oral health into the school setting and working with others in the community: for improving Oral Health

- Indian Dental Association School - based oral health program can help in prevention of dental diseases by educating teachers, children's and parents on oral health
- Oral health care is a critical component of health care and must be included in design of school program.
- These programs serves as models for improving access to oral health education, prevention and treatment services for school age children and adolescents who are at high risk for oral disease.
- School-based oral health services can help make preventive services such as application of fluoride and dental sealants accessible to children from families with low incomes. Services include screening, referral and case management to ensure the timely receipt of oral health care from professionals in the community.

- Programs exclusively preventive or screening in nature, without access to referrals through an anchor program, will not reach successful outcomes or achieve sustainability.
- Offer continuing education for school staff to improve their knowledge and understanding of oral health, disease prevention, and health promotion.
- Place educational materials, such as brochures and posters, in the school waiting area and in Library.
- Promote oral health during national observation months (e.g., World Oral Health day, National Oral health Month, Children's Day)
Collaborate with members of the local oral health community, and establish referral agreements.
- Work with school administrators and teachers to establish classroom policies that promote oral health and overall health (e.g., using nonfood rewards and holding healthy celebrations).
- Partner with school personnel (e.g., food service director; health, home economics, and physical education teachers) to teach students about making healthy eating choices.

By helping children and adolescents achieve good oral health, you can make a big difference in their lives—both now and in the future.

What's behind your Healthy Smile: Good Oral Health?

The Gateway to Our Body

The Mouth is the largest opening from external environment to the internal environment.

The mouth is key part of our survival. Everything we need to keep us alive and healthy -- food, air and water comes through the mouth first. Everything that is bad for us passes through the mouth as well, such as bacteria, viruses, parasites and fungi.

The two basic and most important functions of the mouth, besides communication, appearance, and expression are Digestion and Immunity

In **Digestion**, the mouth helps to break apart food into tiny food particles, mixing it with saliva, which contains enzymes and chemicals that assist the stomach and intestine in the digestion and absorption of food. Digestion can be affected by changes in the salivary secretions such as altered pH and enzymes.

For **Immunity**, the mouth provides a major barrier between the outside the world and the inner environment of the body. Saliva contains many natural anti-bacterial and germicidal agents.

In addition, the mucosal immune membrane barrier that lines the mouth and surrounds each tooth is probably the most important component of our immune defense system.

Oral Infections and Oral Immunity and their - Impact of Dental Diseases influences on your health

Many scientific studies and research have shown that oral health has a direct impact on body health. Infections in the teeth and gums can lower immunity, your body's first defense against many toxins and diseases that may enter the body and can lead to many serious conditions and life-threatening illnesses such as heart disease, stroke and diabetes etc.

What's behind your Healthy Smile: Good Oral health?

You use your mouth to speak, eat, kiss and smile, among other tasks. The key to keeping everything working well is good oral health.

Promote good oral health by understanding what's behind your smile — your teeth, gums, tongue and salivary glands.

Oral health: A window to your overall health

The Mouth represents the Body - and we represent the mouth

Your oral health is more important than you may realize. Did you know that your oral health can offer clues about your overall health? Understand the intimate connection between oral health and overall health and what you can do to protect yourself. Poor oral health can affect more than just your mouth; it can affect other areas of your body as well.

The importance of the "mouth-body connection," as it is known, is becoming more evident as dental problems are being linked to a growing list of other ailments. Oral disease itself can be painful, cause tooth loss and chronic bad breath and affect people of all ages.

You may think that the worst consequence of poor dental health would be lost teeth and painful times in the dentist's chair. But some studies have linked common oral problems to illnesses, including heart disease, stroke, diabetes, premature birth, osteoporosis, and even Alzheimer's disease. In most cases, the strength and exact nature of the link is unclear, but they suggest that dental health is important for preserving overall health.

There is mounting evidence of a connection between oral health and a person's overall health. It is well documented that a high percentage of health conditions have an oral component such as swollen or bleeding gums, ulcers, dry mouth, bad breath, metallic taste and various other changes in the oral cavity.

What's the connection between oral health and overall health?

The mouth is teeming with bacteria — most of them harmless. Normally the body's natural defenses and good oral health care, such as daily brushing and flossing, can keep these bacteria under control. However, harmful bacteria can sometimes grow out of control and cause oral infections, such as tooth decay and gum disease. In addition, dental procedures, medications, or treatments that reduce saliva flow, disrupt the normal balance of bacteria in your mouth or breach the mouth's normal protective barriers may make it easier for bacteria to enter your blood stream.

Scientists and Researchers have identified several links between poor oral health and other health problems that may place your overall health at great risk.

Dangers of Plaque and its effects on your Dental Health and General Health.

Dental Plaque is a thin layer of bacteria called a bio film that constantly forms and live on the gum tissue, teeth and crowns. When food or drinks containing sugars or starches are consumed, the bacteria release acids that attack your tooth enamel which leads to tooth decay.

Plaque build-up can also lead to gum disease, starting with gingivitis, the tender and swollen gums that sometimes bleed. If it progresses, severe periodontal (gum) disease can develop. Gum tissue pulls away from the teeth, allowing the bacteria to destroy the underlying bone that supports the teeth.

How Gum Disease Spreads

Periodontal disease is an infection caused by unhealthy bacteria that gets lodged between the teeth and gums. Simply brushing your teeth is enough to put some of those bacteria into your bloodstream and injure major organs says Robert J. Genco, DDS, PhD, an Oral Biologist at the University of Buffalo. The bacteria then travel to major organs where they can spur new infections.

Red and swollen gums signal the body's inflammatory response to periodontal bacteria. "If you have inflammation in your mouth, certain chemicals are produced in response that can spread [through the bloodstream] and wreak havoc elsewhere in the body," Cram says.

It's easy to ignore the effects of poor oral hygiene because they're hidden in your mouth. But gum disease produces a bleeding, infected wound that's the equivalent in size to the palms of both your hands, says Susan Karabin, DDS, a New York periodontist and president of the American Academy of Periodontology.

What conditions may be linked to oral health?

Gum disease and heart disease

Research and studies over the years have found a link between periodontal disease and heart disease, with patients who have gum disease more likely also to have poor heart health, including heart attacks.

In 2009, a consensus paper on the relationship between heart disease and gum disease was developed by the American Academy of Periodontology and The American Journal of Cardiology. It was published in the Journal of Periodontology and The American Journal of Cardiology.

Endocarditis.

Gum disease and dental procedures that cut your gums may allow bacteria to enter your bloodstream. If you have a weak immune system or a damaged heart valve, this can cause infection in other parts of the body — such as an infection of the inner lining of the heart (endocarditis).

Gum disease and diabetes

There is strong link between gum disease and diabetes. People with diabetes are not only more at risk of gum disease, but gum disease can also affect the severity of their diabetes. Diabetes reduces the body's resistance to infection — putting the gums at risk. In addition, people who have inadequate blood sugar control may develop more-frequent and severe infections of the gums and the bone that holds teeth in place, and they may lose more teeth than do people who have good blood sugar control. If you have diabetes, you are more likely than people who do not have diabetes to have gum disease. Again, inflammation may be partly to blame, and people with diabetes are more likely to develop infections,

and this includes gum disease. If your diabetes is not under control, you are at even higher risk of gum disease.

Diabetes and gum disease can interact in a vicious circle. Infections of any kind, including gum disease, cause the body to produce proteins called cytokines, which increase insulin resistance and make blood sugar more difficult to control. Conversely, uncontrolled diabetes impairs the body's healing mechanism, which makes it harder to control gum disease.

Research shows in most cases, gum disease isn't painful. So even if you're feeling fine, visit your dentist regularly for professional cleanings and oral exams. You may find out more than you ever expected. "Today, more dentists aren't just looking at teeth and gums," says Cram. "They're giving you a good medical exam."

Gum disease and respiratory illness

The same bacteria found in plaque can also be inhaled into the lungs where they may cause an infection or aggravate any existing lung condition especially the older adults.

Gum disease and Dementia / Alzheimer's disease.

Gum disease has also been found to increase the risk of dementia later in life. Researchers have found that periodontal problems may also be associated with milder cognitive impairment, such as memory problems that make the activities of daily life more difficult.

Gum disease and Rheumatoid arthritis (RA)

Rheumatoid arthritis (RA) is an autoimmune disease marked by inflammation and painful joints. People with RA are more likely to have periodontal disease.

Gum disease and premature birth

Studies on the link between periodontal disease and premature birth have produced conflicting results. Although some studies show that women with gum disease are more likely to deliver a baby before full term - it is associated with health risks for the baby. Despite these conflicting results, other research has found that treating periodontal disease in pregnant women helps them to carry their infants to full term.

Gum disease and Stroke

There is new research that points to a possible connection between gum disease and stroke.

HIV/AIDS.

Oral problems, such as painful mucosal lesions, are common in people who have HIV/AIDS.

Osteoporosis.

Osteoporosis — which causes bones to become weak and brittle — may be associated with periodontal bone loss and tooth loss.

Oral Cancer

As part of a routine dental exam, the dentist **screens patients for oral cancers** including cancer of the head and neck. Other cancers the dentist may recognize include skin cancer, cancer of the jaw bone and thyroid cancer.

Kidney disease

The by-products of incomplete protein breakdown are released when the kidneys do not function properly. As a result, a patient with kidney disease may have **bad breath** and may also notice an **unpleasant taste** in the mouth. Other signs are **dry mouth** and a **metallic taste**. With dry mouth, the amount of saliva is reduced and its normal cleansing effect is diminished. This allows bacteria to increase, potentially leading to the development of gingivitis and gum disease.

Anxiety

Emotional anxiety can also affect overall oral health. Stress affects the immune system, which fights against the bacteria that cause periodontal disease, making a person suffering from anxiety more prone to **gum infection**.

Other Medical Conditions.

There are more than **120 medical conditions** — many of them life-threatening — that may possibly be detected in the early stages by a dentist, including thyroid problems, high blood pressure, asthma, sleep and breathing disorders, skin rashes, bruxism (teeth grinding), HIV, tuberculosis, drug abuse, anorexia, digestive disorders and upper respiratory disorders.

How to protect oral health and prevent Dental Diseases-- To maintain Good Oral Health

- To protect your oral health, resolve to practice good oral hygiene every day.
- Brush twice a day with a toothbrush with soft or medium bristles. Clean between your teeth daily with dental floss.
- Replace your toothbrush every three to four months.
- Eat a healthy diet and limit between-meal snacks.
- Schedule regular dental checkups.
- If your gums bleed with flossing and don't stop after three to four days, contact your dentist.
- Also, watch for signs and symptoms of oral disease and contact your dentist as soon as a problem arises.

- Be sure to tell your dentist if you're taking any medications or have had any changes in your overall health — especially if you've had any recent illnesses or you have a chronic condition.

Structure of Mouth and beyond Teeth: What's Inside Your Mouth?

The human mouth (also called oral cavity) is a wonderfully designed machine with many different parts that operate all together to keep you alive, healthy and happy. In human anatomy, the mouth is the first portion of the alimentary canal and one of the key parts of the human digestive system that receives food and saliva. It is made up of more than just teeth. In addition to teeth, the mouth is made up of gums, oral mucosa, the upper and lower jaw, the tongue, salivary glands, the uvula, and the frenulum. The mouth and teeth are used not only for eating, but also for formatting the sounds while speaking and for the expression of our feelings and emotions. All parts of the mouth contribute to performing these actions.

In addition to its primary role as the start of the digestive system, in humans, the mouth also plays a significant role in communication. While primary aspects of the voice are produced in the throat, the tongue, lips, and jaw are also needed to produce the range of sounds included in human language.

All of these structures play an important role when it comes to good dental health and are routinely examined when you receive dental care.

The absence of one or more teeth can cause problems to digesting your food, right speech and good appearance, affecting your physical and mental health. Hence good oral health goes beyond simply brushing and flossing.

When you open your mouth and look in the mirror

Find out more about the inside of your mouth and the role its various structures play in speech and digestion.

Parts of Mouth

- The upper jaw, which is part of the skull
- The lower jaw, connected with the upper jaw and with ability to move up-down and from side to side
- The muscles which form the cheeks

Oral Mucosa

- The oral mucosa is the mucous membrane epithelium lining the inside of the mouth.
- The mouth, normally moist, is lined with a mucous membrane, and contains the teeth. The lips mark the transition from mucous membrane to skin, which covers most of the body.

Gums

Your gums (gingivae) surround your teeth to help hold them in place. To keep your gums healthy, practice good oral hygiene — brush your teeth at least twice a day, floss your teeth once a day and schedule regular dental visits.

If your gums become red and swollen or bleed easily, they could be infected. This is known as gingivitis. Prompt treatment can help restore good oral health. If left untreated, gingivitis can progress to severe gum disease (periodontitis) and possible tooth loss.

Tongue

Your tongue is a muscular organ that helps you speak and move food for chewing and swallowing. Small bumps called papillae cover your tongue's upper surface. Your taste buds are located in the papillae. Taste buds allow you to enjoy specific tastes, such as bitter, sour, salty and sweet.

Your tongue also plays a role in oral health. Food particles can stick to your tongue, causing bad breath and promoting tooth decay. To take good care of your tongue, simply brush your tongue whenever you brush your teeth.

Salivary glands: Salivary glands produce and secrete saliva into the mouth which aids in digestion and prevention of decay. In addition to helping you swallow and digest food, saliva promotes oral health by

- Flushing food away from your mouth
- Stopping acids that can attack tooth enamel
- Replenishing minerals in tooth enamel
- Killing or reducing disease-causing organisms

Basic Functions of the Mouth.

Healthy oral structures include firm gums and a set of strong teeth. They are important for:

Eating and swallowing

The parts of the human mouth operate like a super mincing machine. Food is broken down by chewing; teeth also assist the chemicals in saliva to further break down food prior to swallowing.

- Front teeth cut the food
- Side teeth tear and shred it
- Back teeth crush and grind it
- Saliva moistens the food

- Action of the tongue and the cheeks mix it all up so that it is easy to swallow
- Tiny pimples on the surface of the tongue - the 'taste buds', tell you what you are tasting.
- Reduced flow of saliva creates problems with chewing, swallowing and digesting food.

Speaking

Both primary (baby) and permanent (adult) teeth are important for speaking properly and forming sounds. From the first yell of a new born baby the human mouth mixes the sounds which come up from the vocal chords in the throat. The different sounds which people make when they talk and sing depend on the way they use their lips, tongue and teeth.

Expression

Whenever you show your feelings, you use parts of the mouth to smile, laugh, cry, kiss or whistle

Appearance

A bright and healthy smile helps to increase a child's confidence and self-esteem.

Aesthetics

Fresh breath makes the child feel good and makes a child nice to be around.

By learning about taking care of their teeth at a young age, children can continue to practice healthy oral care behaviors throughout their lives

Teeth and their functions

Types of Teeth

The adult human teeth show a morphology mainly differentiated by the shape of their upper surface (crown) and the number of the tooth roots. Individual tooth morphology is associated with the purpose of each tooth type (cutting, shredding or grinding the food).

Adults have 32 permanent teeth, including wisdom teeth. Each tooth has two main parts — the crown and the root.

The crown is the part of the tooth you can see, and the root is hidden below your gums.

The four different types of human teeth are :

Incisors or Cutting teeth

The 8 incisors are the very front human teeth with rather flat surfaces, a straight sharp horizontal edge for cutting and biting the food and one long, single, conical root.

Canine teeth

The 4 canine teeth are very strong, pointed corner teeth for tearing and shredding, placed laterally to each lateral incisor. They are larger and stronger than the incisors.

The canine tooth morphology is characterized by the large, conical crown which projects beyond the level of the other teeth and one single root, longer than all other human teeth types.

The upper canine teeth are sometimes called eyeteeth.

Premolars or Bicuspid teeth

The 8 premolars, used for the chewing of the food, are placed lateral to and behind the canine teeth, with a flat upper surface and 1-2 roots.

Their crown has two pyramidal eminences or cusps.

Molars or Molar teeth

The 12 molars are the back human teeth. Molar teeth have a much different tooth morphology with large and flat upper surface and 2-4 roots. Molars is the one of types of teeth with the largest of the permanent teeth, used for the final chewing and grinding of the food before swallowing.

The third molars are also known as **wisdom teeth**.

Structure of Tooth

The internal tooth structure is common in all types of teeth, but the external teeth parts morphology (shape of tooth crown, number and shape of roots) differs significantly between different teeth types.

Each tooth consists of three main parts - the crown, the neck and root.

- **Crown** is the visible part of the tooth. A protective layer called enamel covers the crown.
- **Neck** is the area of the tooth between the crown and the root.
- **Root** is the portion of the tooth that extends through the gum and into the bone of the jaw

Tooth Tissues

Tooth Enamel

- It is the hardest of the parts of the tooth and also the hardest of all the tissues of human body. Tooth enamel is a protective tooth structure that covers the exposed part of a tooth, the crown.

Dentine

- It is the tissue below the tooth enamel that forms the main mass of a tooth. It supports the tooth enamel and absorbs the pressure of eating. The dentine consists of a number of micro-fibers imbedded in a dense homogeneous matrix of collagenous proteins.

Pulp

- It is a soft connective tissue containing nerves and blood vessels, that nourish the tooth. It is the most internal structure of a tooth, surrounded by the dentine. Dental pulp is found in the soft center of the tooth, inside the pulp chamber and the root canal.

Cementum

- It is the part of tooth that covers the dentine outside of the root (under the gum line) and it is attached to the bone of the jaw with little elastic fibers. Cementum is hard as bone but not as hard as the tooth enamel.

Periodontal Tissues

- Periodontium is the supporting structure of a tooth. Periodontium is the complex of soft and hard tissues that surround the tooth, keep it in place, feed and protect it.

Gums

- Gums is the tough pink-colored tissue that covers the bone of the jaw and supports the tooth structure inside the alveolar bone.

Periodontal Ligament

- It is the tissue between the cementum and the alveolar bone. It consists of tough little elastic fibers that keep the tooth attached to the jaw.

Alveolar Bone

- It is the bone of the jaw that keeps the tooth in its place, it feeds and protects it.

Eruption of Teeth

Primary (Baby) and Permanent (Adult)

A child usually has 20 baby (primary) teeth by the age of two – ten teeth on the top and ten on the bottom. As the permanent teeth push their way up, the roots of the primary teeth dissolve, leading to the loss of the baby teeth.

A child's mouth contains 20 temporary teeth, called primary teeth, baby teeth, or deciduous teeth, consisting of the following teeth types:

- 4 central incisors
- 4 lateral incisors
- 4 cuspids (also called canine or eye teeth)
- 4 first molars
- 4 second molars

For each set of four teeth, two teeth are located in the upper arch (one on each side of the mouth) and two are located in the lower arch (one on each side of the mouth).

Importance of Primary (Baby Teeth)

Baby teeth play an important role in a child's overall oral and physical development. Even though children lose their baby teeth, they are as important as permanent teeth and require the same care and attention. Most children lose all of their baby teeth by the age of 12.

- Baby teeth **save space** for the permanent teeth, and serve as a guide for the permanent teeth as they “erupt,” or come in. By saving spaces in the jaw, baby teeth help ensure that the permanent teeth growing underneath can be guided into their proper positions. This, in turn, leads to better alignment and proper chewing and speaking.
- Baby teeth **round out the shape** of the face. They enhance a child’s physical appearance by giving shape to the face. This helps a child feel good about the way he or she looks and helps promote positive self-esteem.
- Baby teeth help children **form sounds and words**. Children need their upper front teeth to help place their tongue properly when they are learning to say words. If a child loses baby teeth prematurely due to dental disease, their speech could be affected.

Eruption: Primary Teeth To Permanent Teeth

The adult mouth contains 32 permanent teeth, consisting of the following teeth types:

- 4 central incisors
- 4 lateral incisors
- 4 cuspids (also called canine or eye teeth)
- 4 first bicuspid (also called first premolars)
- 4 second bicuspid (also called second premolars)
- 4 first molars (also called 6-year molars)
- 4 second molars (also called 12-year molars)
- 4 third molars (also called wisdom teeth)

The first six years of a child’s life are critical to the development of strong permanent teeth and healthy gums. These early years provide the foundation for a smile that can last a lifetime!

6 to 8 Months:

First Baby Teeth Appear

Baby teeth should be cleaned as soon as they appear. Wipe teeth and gums with clean damp gauze or a washcloth to prevent any buildup of plaque.

2 to 3 Years: Full set of baby teeth

Children have 20 baby, or “primary” teeth: 10 on the top and 10 on the bottom. Children should begin learning how to brush their teeth under an adult’s supervision at around age 2; supervision should continue up until the child reaches age 6 or 7.

6 Years: 6-year molars

The first permanent teeth to come in are the 6-year molars. They usually appear at around age 6, There are four 6-year molars in all – one upper and one lower on each side of the mouth, behind the baby teeth. They come in without replacing any baby teeth, so they are often mistaken for additional baby teeth. They are also often overlooked by parents or children since they are so far back; special effort must be made to brush them.

6 to 12 Years: 28 permanent teeth

From ages 6 to 12, baby teeth loosen and come out. They are replaced by new permanent teeth. The loss of primary teeth and eruption of permanent teeth usually begins with the lower two front teeth, followed by the upper front teeth. Four 12-year molars also appear, one behind each 6-year molar.

15 to 17 Years: 4 Wisdom teeth

Wisdom teeth usually come in at around age 18. They are the last permanent teeth to appear, and come in behind the 12-year molars.

Teeth Functions

Your teeth are used for:

Biting and tearing. The central incisors and lateral incisors are primarily used for biting and cutting and canine teeth are primarily used for tearing food.

Grinding and crushing. The premolars, molars, and wisdom teeth are primarily used for chewing and grinding food.

Dental Diseases

Plaque

What is Plaque?

Plaque is a sticky film of bacteria that live in the mouth constantly builds up, thickens and can harden in to tartar Plaque. This sticky film of bacteria coats the teeth and gums and sticks to outer surfaces of the tooth. Its most often found at the “neck” of the tooth, where the tooth meets the gums, and in the pits and grooves of the chewing surfaces of the back teeth.

Plaque can be removed with daily brushing and flossing. Plaque that is not removed contributes to infections in the gums.

What causes plaque and why is it harmful?

Plaque is the sticky, colour less film of bacteria that forms on teeth. It makes teeth feel fuzzy to the tongue and is most noticeable when teeth are not brushed.

Plaque develops when foods containing carbohydrates (sugars and starches) such as milk, fizzy drinks, raisins, cakes or sweets are frequently left on the teeth. Bacteria that live in the mouth thrive on these foods, producing acids as a result. Over a period of time, these acids destroy tooth enamel, resulting in tooth decay.

Two major dental diseases tooth decay and gum disease are caused by plaque

Plaque and Tooth Decay

Tooth decay is also called cavities. It’s caused by the breakdown, or “destruction,” of the tooth enamel. This process starts when food mixes with the plaque bacteria that are always present in the mouth. Early signs of decay can be seen as “white spots.” Parents should check regularly for these early warning signs on their child’s teeth, and visit the dentist for check up.

Plaque and Gum Disease

Certain bacteria in plaque can irritate gum tissue if it builds up. This can contribute to an early form of gum disease, also called “gingivitis.” Signs include:

- Redness
- Bad breath
- Bleeding gums
- Painful gums and swelling
- Generally, gums can stay healthy by following daily tooth brushing and flossing to get rid of plaque, so it doesn't build up.
- Spaces, or "pockets," between teeth and gums

Sugars, Snacks and Plaque attacks

It's important for children to limit the number of times they eat snacks each day. Every time they eat a snack, plaque produces acid that can lead to tooth decay.

All foods (and beverages other than water) cause plaque acid to form. Sugars are particularly harmful.

- Sugary foods cause the swiftest plaque reaction – including sweets like candy or cakes, and starchy foods like chips and pretzels. Starchy snacks break down into sugars once they're in the mouth.
- Sucking on foods like lollipops, hard candies, mints or cough drops, or drinking soft drinks, cola or juice, increases the length of time sugar is in contact with teeth, and increases the chances for cavities.
- Sticky foods – like raisins, dried fruits, potato chips, toffee, or fruit roll-ups – cling to and between the teeth longer, increasing the length of time the acid attacks the teeth.

Plaque attack

When plaque mixes with food, the bacteria in the plaque create acids. These acids are powerful enough to dissolve the hard enamel that covers teeth – and that's how cavities get started.

- **Plaque and food create a chemical reaction** - When food mixes with plaque bacteria, a chemical reaction takes place. This creates *acid*, which begins destruction of tooth.
- **Everything except water causes acid** - All food and beverages other than water cause this chemical reaction – often called a "plaque attack."
- **Saliva helps neutralize plaque** Saliva also breaks down food for digestion and helps rinse it away. At night, saliva is decreased, which is why tooth decay may be more likely to occur at night.

Each "plaque attack" lasts up to 20 minutes after the meal or snack has been finished. Children need to learn that it's important to *limit the number of times they eat snacks each day* to reduce the number of plaque attacks.

Plaque + Sugar Acid + Tooth Enamel = Possible Tooth decay

- Inside the Plaque Attack

- Eating five candies at *one time* means acid is produced for 20 to 30 minutes in total.
- Eating one candy at a time, *at five different times* during the day, means the acid reaction happens for 20 to 30 minutes...five separate times!

How can plaque formation be prevented?

To prevent plaque build-up, brush your teeth at least twice a day with a soft, rounded-tip bristled toothbrush. Pay particular attention to the space where the gums and teeth meet.

- Use a fluoride-containing toothpaste.
- Floss between teeth at least once a day to remove food particles and bacteria.
- Use an antimicrobial mouthwash to reduce the bacteria in your mouth if advised by your dentist to do so.
- Eat a balanced diet and limit the number of between-meal snacks. If you need a snack, choose nutritious foods such as plain yoghurt, cheese, fruit or raw vegetables. Vegetables, such as celery, help to remove food and help to saliva neutralise plaque-causing acids.

Visit your dentist for a check-up and teeth cleaning.

Your dentist will examine your mouth and advise you about cleaning and right method of brushing to maintain good health of gums and mouth

Ask your dentist if a dental sealant is appropriate for you. Dental sealants are a thin, plastic coating that are painted on the chewing surfaces of teeth to protect them from cavities and decay.

Tooth Decay

Tooth decay?

Tooth Decay is the destruction of tooth structure and can affect both the enamel (the outer coating of the tooth) and the dentin layer of the tooth. Cavities, also called tooth decay or caries, are caused by a combination of factors, including bacteria in your mouth, not cleaning your teeth well; frequent snacking and sipping sugary drinks.

Cavities are especially common in children, teenagers and older adults. But anyone who has teeth can get cavities, including infants.

If not treated, tooth decay can cause pain, infection, and tooth loss.

What causes tooth decay?

Tooth decay occurs when foods containing carbohydrates (sugars and starches), such as breads, cereals, milk, soda, fruits, cakes, or candy are left on the teeth. Bacteria that live in the mouth digest these foods, turning them into acids. The bacteria, acid, food debris, and saliva combine to form plaque, which clings

to the teeth. The acids in plaque dissolve the enamel surface of the teeth, creating holes in the teeth called Cavities / Decay.

What are the symptoms?

The signs and symptoms of cavities and tooth decay vary depending on their extent and location. When a cavity is just beginning, you may not have any symptoms at all. But your dentist may be able to see that decay is starting and recommend steps to keep it from getting worse.

As the decay gets larger, there may be following signs and symptoms as:

- White, gray, brown, or black spots on the teeth.
- Toothache, which is the most common symptom. An infection or irritation of the tooth pulp usually causes the pain.
- Tooth sensitivity
- Mild to sharp pain when eating or drinking something sweet, hot or cold
- Pain when you bite down
- Pus around a tooth, especially when you press on your gums
- Bad breath or a foul taste in the mouth.
- Loose fillings.
- A broken tooth or a tooth that is sensitive to pressure.

The pain may become worse when you:

- Eat sweets.
- Eat hot or cold foods or drink hot, cold, or acidic liquids, such as citrus drinks.
- Chew food or gum.
- Breathe in cold air.
- Brush your teeth.

Severe tooth decay may cause a pus-filled sac (abscess) to form in the bone at the base of a tooth. Symptoms of abscess include:

- Fever.
- Swollen glands.
- A swollen jaw.

How is tooth decay diagnosed?

Self examination: You can see in the mirror and look for any black spot in the mouth.

Your dentist diagnoses tooth decay by:

- Examining your teeth, using a pointed tool and a small mirror.
- Taking X-rays of your teeth and mouth.

When to see a dentist

You may not be aware that a cavity is forming, so visiting your dentist regularly is your best protection against cavities and tooth decay.

If a cavity is treated before it starts causing pain, you probably won't need extensive treatment. That's why it's important to have regular dental checkups and cleanings even when your mouth feels fine. By the time you notice symptoms, the damage would get worst and difficult to repair.

How it can be treated?

Treatment for tooth decay depends on how bad it is. You may be able to reverse slight tooth decay by using fluoride. To fix cavities caused by mild tooth decay, your dentist will fill the cavities. For more severe tooth decay, you may need a crown or root canal. In extreme cases, your dentist may have to remove the tooth.

How to Prevent Tooth Decay?

You can easily prevent tooth decay by brushing and flossing your teeth regularly. Avoid foods that are high in sugar. Regular dental visits and good brushing and flossing habits go a long way toward preventing cavities and tooth decay.

*Early Childhood Cavities: **Baby Bottle Tooth Decay***

When a child drinks from a bottle filled with any liquid other than water, it can lead to a disease called Early Childhood Cavities. Sometimes called Baby Bottle Tooth Decay, this condition is caused when sugary liquid surrounds the teeth, like when a child goes to bed with a bottle. It can result in severe cavities and pain.

- Infants should drink from a training or “sip pee” cup by 9 months of age. By 12 months, children should be drinking from a cup.
- Even with a sip pee cup, a child should not be permitted to carry around sugary liquids (including juice) and sip them for long periods of time.
- Never put a child to bed with a bottle, unless it contains only water.

Gum Disease

What is gum disease?

Gum disease is a **bacterial infection** caused by **plaque**. It is also called periodontal disease.

The two types of gum disease are called **gingivitis** and **periodontitis**.

I) Gingivitis

It is a very common and mild form of gum (periodontal) disease that affects only the gums, the tissue that surrounds the teeth.

It causes irritation, redness and swelling (inflammation) of your gums. Because gingivitis can be very mild, you may not be aware that you have the condition. But it's important to take gingivitis seriously and treat it promptly.

It causes red, swollen gums that bleed easily when the teeth are brushed and usually doesn't cause pain. Gingivitis can lead to much more serious gum disease (periodontitis) and eventual tooth loss.

Signs and symptoms of gingivitis may include:

- Swollen gums
- Soft, puffy gums
- Receding gums
- Occasionally, tender gums
- Gums that bleed easily when you brush or floss, sometimes seen as redness or pinkness on your brush or floss
- A change in the color of your gums from a healthy pink to dusky red
- Bad breath

II) Periodontitis

It is more severe gum disease that spreads below the gums and damage the tissues and bone that support the teeth.

It causes the gums to pull away from the teeth, where germs called bacteria can grow and damage the bone. This can make the teeth look longer. Teeth may also become loose or fall out.

It is also called periodontal disease.

The symptoms of periodontal disease are

- Gums that pull away or shrink from the teeth.
- Bad breath that won't go away.
- Pus coming from the gums.
- A change in how your teeth fit together when you bite.
- Loose teeth.

What causes gum disease?

It is caused by **plaque** — the sticky, colorless, bacteria-filled film that adheres to your teeth. The bacteria in plaque produce toxins that irritate the gums and cause **inflammation** and **gingivitis**. As plaque builds

up on teeth, it hardens and becomes **tartar**, which can be difficult to remove and that has to be removed by a dentist.

If bacteria are not removed and the inflammation continues, the gum tissues can be destroyed, causing them to pull away from the teeth, forming pockets that fill with more plaque.

As the disease advances, the pockets grow deeper, and plaque moves further down the tooth root, destroying supporting bone. The affected teeth may loosen and eventually fall out.

You are more likely to get gum disease if you:

- Do not clean your teeth well.
- Smoke or chew tobacco.
- Have someone in your family who has gum disease.
- Uncontrolled diabetes, AIDS or another systemic disease that maybe a Risk Factor.
- A high level of stress.
- A poor diet that's low in nutrients.

How is gum disease diagnosed?

To find out if you have gum disease, your dentist will do an exam to look for:

- Bleeding gums.
- Hard buildups of plaque and tartar above and below the gums.
- Areas where your gums are pulling away or shrinking from your teeth.
- Pockets that have grown between your teeth and gums.

If you have a mild case of gum disease, you will probably be able to take care of it by brushing and flossing your teeth every day and getting regular cleanings in the dental clinic.

If your gum disease has become worse and you have periodontitis, your dentist will clean your teeth using a method called root planing and scaling. This removes the plaque and tartar buildup both above and below the gum line. You may also need to take antibiotics to help get rid of the infection in your mouth. If your gum disease is severe, you may need to have surgery.

How can you prevent gum disease?

- Gum disease is most common in adults, but it can affect anyone, even children. So good dental habits are important throughout your life:
- Brush your teeth 2 times a day, in the morning and before bedtime, with a fluoride toothpaste.

- Floss your teeth once each day.
- Visit your dentist for regular checkups and teeth cleaning.
- Don't use tobacco products.

If you think you have a mild case of gum disease, make sure to take care of it before it gets worse. Keeping your teeth and gums healthy and getting regular checkups from your dentist can keep the disease from getting worse.

When to See the Dentist?

Most dentists recommend regular checkups to identify gingivitis, cavities (caries) and other dental conditions before they cause troubling symptoms and lead to more-serious problems.

Also schedule an appointment with your dentist if you notice any signs and symptoms of gingivitis.

The sooner you seek care, the better your chances of reversing damage from gingivitis and preventing its progression to more-serious conditions.

Home Care

Developing an Oral Health Plan

- To Prevent Dental Diseases and to keep your mouth healthy

The most important thing you can do to maintain good oral health, to reduce the risk of developing tooth decay periodontal disease and many of the other diseases.

Developing good dental health habits is the best way to prevent tooth decay and gum disease.

1) Brush after eating

Get into a routine of brushing and flossing. Remove plaque by brushing your teeth at least twice a day for about 3 **minutes** with a fluoride-containing toothpaste, in the morning and at night especially before going to bed and floss once a day.

2) Use a **toothbrush with soft**, rounded-end bristles and a head that is small enough to reach all parts of your teeth and mouth. Replace your toothbrush every 3 to 4 months.

3) Use fluoride **toothpaste**. Some fluoride toothpastes also offer tartar control, to promote healthy tooth development in children and to strengthen your teeth.

4) Brush your tongue from back to front. Some people put some toothpaste or mouthwash on their toothbrush when they do this. Brushing your tongue helps remove plaque, which can cause bad breath and help bacteria grow. Some toothbrushes now have a specific brush to use for your tongue.

5) Floss daily

Floss at least once a day. The type of floss you use is not important. Choose the type and flavor that you like best.

6) Eat healthy diet

Good nutrition is vital to maintaining healthy gums and avoiding tooth decay.

Eat a balanced diet that includes whole grains, vegetables, and fruits and is low in saturated fat and sodium, cheese, peanuts, yogurt, milk, and these make great after-meal snacks.

Avoid foods that contain a lot of sugar, especially sticky, sweet foods like. The longer sugar stays in contact with your teeth, the more damage the sugar will do.

Do not snack before bedtime, because food left on the teeth is more likely to cause cavities at night. Saliva production decreases while you sleep, so saliva does not clean the mouth well during sleeping hours.

7) sugar-free chewing gum (especially gum that contains Xylitol) are good for your teeth. They help clear your mouth of harmful sugars and protect against plaque.

8) A **mouth rinse** containing fluoride can help prevent tooth decay, according to the Indian Dental Association.

9) It is also important to stop using **tobacco products**. Using any tobacco product makes it more likely you will have mouth cancer or gum disease (periodontal disease). Using tobacco can also delay healing after you have a tooth pulled or other surgery on your teeth or mouth. Tobacco use also causes bad breath and stains your teeth and tongue.

Visit your dentist regularly for professional cleanings and oral exam.

Check your teeth, gums and mouth regularly. If you notice any problem with your mouth or teeth plan to see a dentist as soon as you can.

Your dentist may suggest about use of supplemental fluoride, which strengthens your teeth.

Your dentist may check whether your teeth require dental sealants (a plastic protective coating) applied to the chewing surfaces of your back teeth (molars) to protect them from decay.

By practicing basic dental care:

Prevents tooth decay and gum (periodontal) disease, which can damage gum tissue and the bones that support teeth, and in the long term can lead to the loss of teeth.

Shortens the treatment time with the dentist, and makes the trip more pleasant.

Saves money by preventing tooth decay and gum disease, you can reduce the need for fillings and other costly procedures.

Helps prevent bad breath. Brushing and flossing to get rid your mouth of the bacteria that cause bad breath.

Helps to keep teeth whiter by preventing staining from food, drinks, and tobacco.

Improves overall health and makes it possible for your teeth to last a lifetime.

Tooth Paste

Toothpaste is available in paste, gel, or powder form. Despite the many types of toothpaste that exist, there are some ingredients common to most varieties.

These include:

Abrasive agents. Scratchy materials, including calcium carbonate and silicates, help remove food, bacteria, and some stains from your teeth.

Flavoring. Artificial sweeteners, including saccharin, are often added to toothpaste to make them taste better. While many people equate the flavor of toothpaste with mint, toothpaste is available in a variety of flavors, including cinnamon, lemon-lime, and even bubblegum (for kids -- or kids at heart).

Humectants for moisture retention. Paste and gel formulations often contain substances like glycerol to prevent the toothpaste from drying out.

Thickeners. Agents that add thickness to the toothpaste, including gums and gooey molecules found in some seaweeds, help achieve and maintain proper toothpaste texture.

Detergents. Those suds you see when you brush your teeth are from detergents like sodium lauryl sulfate.

Fluoride Toothpaste The most important ingredient to look for when choosing toothpaste is fluoride.

Fluoride is a naturally occurring mineral. Its use has been instrumental in the dramatic drop in tooth decay and cavity occurrence that has taken place over the past 50 years. Bacteria in your mouth feed on sugars and starches that remain on your teeth after eating.

Fluoride helps protect your teeth from the acid that is released when this happens. It does this in two ways. First, fluoride makes your tooth enamel stronger and less likely to suffer acid damage. Second, it can reverse the early stages of acid damage by remineralizing areas that have started to decay.

Using fluoride toothpaste is an important way to ensure that your teeth are reaping the benefits of this tooth-friendly mineral. Don't think you can skip fluoride if you live in an area where the water is fluoridated. Studies have shown that using fluoride toothpaste helps increase the concentration of fluoride in the teeth, even in areas with water supplies containing high levels of the mineral.

Tartar control There are many tartar control toothpastes on the market, most of which contain fluoride.

Everyone has a layer of bacteria on their teeth called plaque. If plaque isn't removed promptly with proper oral hygiene, it hardens into tartar. This hard-to-remove deposit can build up on your teeth and under your gums, ultimately leading to gum disease.

There are a variety of ingredients used in toothpaste to help prevent the accumulation of tartar on the teeth. Chemical compounds, including pyrophosphates and zinc citrate, are often added and have been proven effective. Additionally, some tartar control toothpastes contain an antibiotic called triclosan, which kills some of the bacteria in the mouth.

Certain toothpastes containing multiple anti-plaque agents have been demonstrated to be even more effective at tartar control than varieties with only one plaque fighter.

Fluoride

One of the best ways to make teeth strong and help fight tooth decay is with the use of *fluoride*.

What is Fluoride?

Fluoride is a natural element. When it is applied to teeth, it combines with the tooth's enamel to strengthen it.

Using fluoride is one of the safest, most effective, and least expensive ways to help prevent tooth decay, and children and adults need fluoride throughout life. Fluoride can also repair early " – white spots on the teeth that are the beginning signs of decay. This is called "re-mineralization" – it builds up the enamel that plaque may have "demineralized," or "eaten away.

Ways to get Fluoride

Young children can get fluoride in several ways. Basically two types of fluoride available.

1) Topical Fluoride The first type of fluoride is "topical;" it reaches teeth from the outside. Some topical fluoride can be applied at home, and others are applied by the dental professional.

- **Fluoride toothpaste** – Check the toothpaste label to make sure it has fluoride.
- **Fluoride treatments** – Fluoride is applied to teeth at the dental clinic during the regular visits.
- **Fluoride mouth rinses** – Rinses may be used daily by those aged six and above.. Make sure children spit it out.

2) Ingested Fluoride

The other type of fluoride is "ingested" and reaches teeth from the inside.

- **Water in most communities** –

– – Bottled water is typically not fluoridated, unless the label says “fluoridated” or “contains fluoride.”

- **Prescription supplements** – These drops or tablets may be prescribed by a dentist if the community water is not fluoridated, or if a child drinks well, spring or bottled water instead of community tap water.

In School - Fluoride Programs

Depending on requirement, home-applied or professionally-applied fluorides can be provided (with parental permission) to students.

These in-school fluoride treatments are administered by visiting oral health professionals or by school staff who have been trained. They are an excellent way to ensure that children’s teeth receive fluoride protection.

Fluoride Toothpaste Is Important

Studies show that tooth decay can be reduced from 15 to 30% by using fluoride toothpaste. Fluoride in toothpaste actually strengthens the tooth enamel, helping prevent cavities and remineralize early lesions.

Everyone should brush thoroughly at least twice a day with fluoride toothpaste.

Home Care method

Brushing Your Teeth

Your toothbrush is your most powerful weapon in the fight against plaque but it’s very important to brush your teeth properly to ensure you are getting the benefits from brushing.

Brushing teeth with fluoride toothpaste removes plaque and food from teeth, and reduces the chance of tooth decay. Bacteria called “plaque” are in everyone’s mouth. If not removed, plaque can lead to tooth decay, also called “cavities” and Gum disease.

Don’t Rush - *Brush your teeth for about 3 minutes.*

Simply brushing your teeth at least twice a day and flossing to remove plaque between your teeth daily can make a real difference.

When to Brush

It’s important to brush at least twice a day, especially after eating breakfast and before bedtime.

- Children should also brush after eating whenever possible. Brushing after snacks and/or meals not only removes plaque, but it helps establish regular tooth brushing habits.
- Brushing with fluoride toothpaste promotes “remineralization” (the rebuilding of enamel).

- Getting rid of plaque before bedtime is especially critical, because there is n't as much saliva to neutralize the acids produced by the plaque when sleeping. This can make teeth more susceptible to tooth decay.

Tooth Brushes and when to change

A child should use a child-size toothbrush with soft bristles, and be reminded never to share toothbrush or use it for anything other than brushing teeth. Child should rinse the toothbrush after each use, and place it to air dry.

- When the bristles on the toothbrush become worn, or “splayed,” the toothbrush should be replaced.
- Typically, toothbrushes should be changed after every three to four months.,

Brushing fosters positive **self-esteem!** Children feel independent and proud when they learn how to brush their teeth, and when they smile and see clean, white teeth.

How to Brush properly?

Brushing teeth with fluoride toothpaste is one of the first things a child can learn to do to keep teeth healthy. Even though young children do not yet have the good skills to brush as effectively as adults, brushing is a life-long habit that should be established as early as possible. As children get older, they can learn the proper wrist movement and angle of the toothbrush.

Begin by placing a **pea-sized amount of fluoride toothpaste** on the toothbrush. If a child learns to brush teeth in a sequence, it helps ensure that all surfaces are brushed.

Follow this routine:

- Use tip of brush to brush behind each front tooth, both top and bottom.
- Don't forget to brush the tongue! This removes bacteria and helps freshen breath.
- Brush chewing surface of each tooth.
- Brush inside surface of each tooth, using wiggling technique in Step 1.
- Place brush at an angle along outer gum line. Wiggle gently back and forth. Repeat for each tooth.
- Place the brush at a 45-degree angle where the teeth meet the gums. Press firmly, and gently rock the brush back and forth using small circular movements. Do not scrub. Vigorous brushing can make the gums pull away from the teeth and can scratch your tooth enamel.
- Brush all surfaces of the teeth, tongue-side and cheek-side. Pay special attention to the front teeth and all surfaces of the back teeth.
- Brush chewing surfaces vigorously with short back-and-forth strokes.

Flossing

Plaque can cause tooth decay and gum disease – but its potential damage can be greatly reduced by following daily oral health routines. In addition to brushing at least twice a day with fluoride toothpaste,

it is important to **floss every day**. Flossing removes plaque and food particles from between teeth and around the gum line. These are areas where a toothbrush can't reach, and where tooth decay and gum disease often start

Flossing for Young children

Flossing is the best way to get to sticky food and bacteria that may be caught between teeth. However, young children don't have the motor skills to maneuver dental floss. In fact, a child does not really have the dexterity to floss until at least the age of eight.

- If a child's baby teeth are touching each other, it's possible for food and plaque to get stuck between them. So, once baby teeth are touching, they should be flossed.
- Parents should floss the child's teeth daily, and continue to floss the child's teeth every day until the child is capable of handling the floss him/herself.
- Flossing for a child takes a bit of practice. The dentist can help by answering questions and demonstrating the best way to floss a child's teeth.

By flossing their child's teeth, parents are promoting an oral health habit that will one day become an important element of the child's own dental routine plan. Child will view flossing as a regular part of each day's routine ... making it more likely that the child will **continue the habit** throughout life!

Why Flossing is Important

Flossing removes plaque and food particles from between teeth and around the gum line. These are areas where a toothbrush can't reach, and where tooth decay and gum diseases often start.

How to Floss for a Child

To floss a child's teeth, the child should be placed on the adult's lap so that the child and adult are facing each other.

Follow this routine:

- 1 Pull out 40 - 50 cm of dental floss from the container – that's about the length of your arm.
- 2 Wrap the ends of the floss around each of your middle fingers, leaving about 2 - 3 cm of floss between your two fingers.
- 3 Use your thumb and index fingers to hold the floss in place.
- 4 Wrap the floss around the tooth into a "C" shape.
- 5 Gently slide the floss up and down between your tooth and your gums.
- 6 Use a new section of floss each time you move to a new space between teeth.

Repeat this for all of the teeth that touch. Be sure to floss both sides of the teeth that are farthest back in the mouth.

Learning to floss properly might take some time and patience. But once you' have mastered it takes just minutes a day.

Mouthwash

An anti microbial mouth rinse will reduce the bacteria in your mouth. See your dentist

Visit your Dentist - Regular Check up

Good dental care is vital throughout life, and your oral health concerns can change as you age. Regular dentist visits can do more than keep your smile attractive — he can tell you a lot about your overall health, including whether you may be developing a general health problem.

Visiting a dentist regularly is a habit to last a lifetime ... and one that should start early. A child's first visit should take place once the first baby tooth has "erupted," or come in – usually by six months of age, but *no later than* first birthday.

Dental APPOINTMENT Checklist

The dentist is a child's partners in helping to maintain healthy teeth and gums. At a regular office visit, the dentist may:

- Clean and polish the teeth.
- Floss the teeth.
- Apply fluoride treatments (put gel on teeth).
- Apply dental sealants (to protect permanent molars).
- Take x-rays of teeth once teeth are touching.
- Provide educational guidance for proper oral care.
- Answer questions about baby teeth, permanent teeth, gums and importance of oral health.

Keeping a Positive Attitude

It's important to prevent children from being frightened of the dentist. So, parents should always maintain a positive approach, even if they have their own fears and anxieties about going to the dentist.

- Parents can encourage children to talk about their experiences and let them ask questions about what happens at the dentist's office. This way, a parent or teacher can correct any misinformation they have, and give them facts to help them feel secure.
- Be careful with words. No child should ever hear statements like: "If you don't brush your teeth, you'll have to go to the dentist to have your teeth drilled!" Going to the dentist should *never* be used as a threat or a punishment.

Self Examination

Examine your mouth!

Listed below are some points of reference for you to consider when conducting mouth checks. Please look at these each time you complete a mouth check.

A healthy mouth

Some of the major structures that are visible when looking inside the mouth include:

- lining of the lips
- cheeks
- gums
- teeth
- tongue
- palate
- uvula
- tonsils.

Signs of a healthy mouth

The mucous membranes that line the lips, cheeks, palate and underside of the tongue should be pink, smooth, glistening, uniform and moist. If teeth are present they should be whitish in colour, smooth and free of plaque (a sticky soft film which forms on teeth which contains bacteria). The number of teeth present is also important. The gums should be pink and stippled. In dark skinned children the gums are more deeply coloured and a brownish area is often observed along the gum line. The tongue should have papillae (small projections that contain several taste buds), which give the tongue its rough appearance. The roof of the mouth consists of the hard palate near the front of the cavity, and the soft

palate towards the back of the pharynx, which has a small midline protrusion called the uvula. The arch of the palate should be dome shaped.

What to look for during a mouth check:

- Does the mouth look healthy?
- Present and erupting teeth
- Number of teeth — is the number within the average range for age?
- Look at the teeth, the neck of the upper front teeth and the gum lines for any discolouration or stains, specifically chalky white spots or patches, or yellowish or brownish discolouration. Are there any clearly visible holes?

Oral hygiene status — check for visible plaque buildup (usually visible on the top front teeth) and odour.

- Any unusual lumps, sores or abscesses (see Section Seven — Oral Medicine).
- Is the child suffering from any oral pain?

Ten Tips to maintain Good Oral Hygiene

1. Start children early. Despite great strides in decay prevention, one in four young children develops signs of tooth decay before they start school. Half of all children between the ages of 12 and 15 have cavities. “Dental care should begin as soon as a child’s first tooth appears, usually around six months,” Caryn Solie, RDH, president of the American Dental Hygienists’ Association. “Teeth can be wiped with a clean, damp cloth or a very soft brush. At about age 2, you can let kids try brushing for themselves -- although it’s important to supervise.”

2. Seal off trouble. Permanent molars come in around age 6. Thin protective coatings applied to the chewing surfaces of the back teeth can prevent decay in the pits and fissures. According to the Centers for Disease Control and Prevention, sealants can significantly reduce caries.

3. Use enough -- but not too much -- fluoride. The single biggest advance in oral health has been fluoride, which strengthens enamel, making it less likely to decay. Many toothpastes and mouth rinses also contain fluoride.

4. Brush twice a day and floss daily. Gum disease and tooth decay remain big problems -- and not just for older people. Three-fourths of teenagers have gums that bleed.

5. Rinse after meals. In addition to brushing and flossing, rinsing your mouth with an antibacterial rinse can help prevent decay and gum problems. Chewing sugar-free gum after a meal can also protect by increasing saliva flow, which naturally washes bacteria away and neutralizes acid.

6. Block blows to teeth. Sports and recreational activities build healthy bodies, but they can pose a threat to teeth. Most school teams now require children to wear mouth guards. Your dentist can make a

custom-fitted mouth guard. Another option: buy a mouth guard at a sporting goods store that can be softened using hot water to form fit your mouth.

7. Don't smoke or use smokeless tobacco. Tobacco stains teeth and significantly increases the risk of gum disease and oral cancer. If you smoke or use chewing tobacco, consider quitting. Counsel your kids not to start.

8. Eat smart. At every age, a healthy diet is essential to healthy teeth and gums. A well-balanced diet of whole foods -- including grains, nuts, fruits and vegetables, and dairy products -- will provide all the nutrients you need.

9. Avoid sugary foods. When bacteria in the mouth break down simple sugars, they produce acids that can erode tooth enamel, opening the door to decay.

10. Make an appointment. Most experts recommend a dental check-up every 6 months -- more often if you have problems like gum disease. During a routine exam, your dentist or dental hygienist removes plaque build-up that you can't brush or floss away and look for signs of decay.

Sealants

Added Protection: Dental SEALANTS

Dental sealants are thin plastic coatings that are applied to the chewing surfaces of the permanent back teeth (molars). They fill in the pits and grooves in these teeth, where food and plaque can get stuck and where it is harder to reach with a toothbrush. Sealants and fluoride work together to prevent tooth decay.

- Sealants offer an extra level of protection against cavities. Having sealants put on the teeth doesn't hurt, and sealants can last between 5 and 10 years.
- Sealants should first be applied after a child gets his or her first permanent (6-year) molars between the age of five and seven, before cavities begin to form. So, parents should keep a close watch on their child's teeth to see when the 6-year-molars come in. In some cases, the dentist may recommend sealants for baby teeth.

The dentist – or dental hygienist – applies dental sealants. By forming an actual physical barrier between molars and plaque, sealants help prevent tooth decay.

Trauma

Dental injuries can occur easily due to carelessness – in fact, nearly 50% of children have a tooth injury during childhood. There are many ways in which a child’s teeth or mouth can become injured, but by taking care and following simple safety guidelines, they can often be prevented.

Promoting Safe Behaviors

Accidents that affect teeth and mouths can happen in a number of ways and places, varying by setting, situation, type of after school activities, and even a child’s physical coordination. In each case, children can learn to use simple good judgment in how they go about their daily activities with safety in mind. In this way, unnecessary tooth and mouth injuries may be avoided.

At School:

Teachers can monitor children to ensure that they:

- Hold handrails when using stairs
- Never push another child, especially near stairways or at the wash basin and drinking water fountain
- Stay alert on the playground
- Do not stand on chairs or desks

In All Daily Activities:

Parents should ensure that their children know to:

- Always use a booster seat or seat belt.
- Wear protective sports gear such as a mouth guard and/or helmet, and never throw equipment (like a bat, after hitting a ball).
- Never chew on hard objects (ice, nutshells, pencils, removing bottle caps) or put foreign objects in their mouths.
- Be cautious in the park or when playing outside, and never walk in front of swings, sliding boards or other equipment when someone is using it. In addition, children should never stand on swings.
- Sit while eating and drinking, especially if using a straw or eating food on a stick.
- Never dive into shallow water.

Common Tooth Injuries

- Different situations can lead to different types of injuries. Being alert to rules of safety is important.
- Upper front teeth are the teeth most affected by accidents. Teeth and gums in the back of the mouth are usually injured by chewing on pencils, ice, or cracking nuts.

Injuries can happen in everyday places.

For example:

- At school
- On the playground
- In the car
- When playing sports
- Anytime a child falls or trips – especially if the child has a foreign object, like a pencil, in the mouth

Making Safety a Priority

Children can learn to practice safe behaviors at home and at school. In this way, they are taking responsibility for safeguarding their teeth and mouths, and helping ensure the safety of those around them, too. Parents and teachers can serve as role models for safe behaviors. Simple actions like holding onto stairway handrails and always wearing protective sports gear can get children in the habit of playing it safe.

Responsibility of Teacher and Parents

Teachers and parents are responsible for ensuring that children have safe play settings.

For example,

- Review safety rules for equipment, bicycles and the playground
- Make sure equipment is age appropriate and in good repair
- Set rules about not running with objects
- Talk about safe behaviors with children at school and at home

Dental Emergencies

With any injury to a child's mouth, contact a dentist immediately. The dentist will examine the affected area and determine appropriate treatment. Parents, teachers and school nurses should keep the emergency number for a dentist handy.

Toothache

- Rinse mouth vigorously with warm water.
- Use dental floss to remove any food trapped between teeth.
- If there is swelling, place cold compresses on the outside of the cheek. Do not use heat or place aspirin on aching tooth or gums.
- See a dentist as soon as possible.

Object Wedged Between Teeth

Try to remove object with dental floss. Guide the floss carefully to prevent cutting gums.

- Do not try to remove the object with a sharp or pointed instrument.
- If you can't remove the object, see a dentist.

Knocked-out Tooth

Handle the tooth as little as possible — do not wipe or otherwise clean the tooth. Store it in water or milk until you get to a dentist.

- Do *not* try to put a tooth back in the socket.
- Go to the dentist immediately. Remember to take the tooth with you!

– If it's a **permanent** tooth, it may be possible for the dentist to place it back into the child's mouth, using a procedure called "reimplantation."

– In the case of a **baby** tooth, the dentist might insert a spacer to be worn until the permanent tooth grows in. The baby tooth will *not* be reimplanted, as this could damage the permanent tooth growing underneath.

Broken Tooth

- Gently clean dirt or debris from injured area with warm water.
- Place cold compresses on the face, in the area of the injured tooth, to minimize swelling.
- Apply direct pressure to the bleeding area with a clean cloth.
- If possible, keep any part of the tooth that has broken off.
- Go to the dentist immediately! A chipped or cracked tooth can lead to infection.

Bitten Lip or Tongue

- Apply direct pressure to the bleeding area with a clean cloth.
- If swelling is present, apply cold compresses.
- If bleeding continues, go to a hospital emergency room.

Loose Permanent Tooth

- Take the child to the dentist immediately.
- In most cases, the tooth can be returned to its correct position. The dentist will continue to observe the tooth

Oral Health and General Health

A lifetime of healthy smiles. Good dental care is vital throughout life, and your oral health concerns can change as you age. You can find more information about the special oral health needs of each life stage in the Oral Health section of our web site.

Healthy smile, Healthy you. Regular dentist visits can do more than keep your smile attractive — they can tell a dentist a lot about your overall health, including whether you may be developing a disease like diabetes. New research suggests that when your mouth is healthy, chances are your overall health is good, too.

There is mounting evidence of a connection between oral health and a person's overall health. It is well documented that a high percentage of health conditions have an oral component such as swollen or bleeding gums, ulcers, dry mouth, bad breath, metallic taste and various other changes in the oral cavity. These conditions include:

- **Diabetes.** According to the American Academy of Periodontology, people with diabetes are more likely to have **gum disease** than people without diabetes. Researchers think this is because diabetes reduces the body's resistance to infection, and the gums are among the tissues likely to be affected.
- **Cancer.** As part of a routine dental exam, the dentist **screens patients for oral cancers** including cancer of the head and neck. Other cancers the dentist may recognize include skin cancer, cancer of the jaw bone and thyroid cancer.

- **Heart disease.** Studies have shown that people with moderate or advanced **gum disease** are more likely to have cardiovascular disease (CVD), including heart disease and stroke, than patients with no gum disease, gingivitis or early periodontitis. However, studies have not established that one causes the other — a difficult task because many of the risk factors for gum disease and CVD (smoking, poor diet and nutrition, diabetes, being male and having a low socioeconomic status) are the same.

- **Kidney disease.** When the kidneys do not function properly, the by-products of incomplete protein breakdown are released. As a result, a patient with kidney disease may have **bad breath** and may also notice an **unpleasant taste** in the mouth. Other signs are **dry mouth** and a **metallic taste**. With dry mouth, the amount of saliva is reduced and its normal cleansing effect is diminished. This allows bacteria to increase, potentially leading to the development of gingivitis and gum disease.

- **Anxiety.** Did you know that emotional anxiety can affect your oral health? Stress affects the immune system, which fights against the bacteria that cause periodontal disease, making a person suffering from anxiety more prone to **gum infection**.

- **Other medical conditions.** There are more than **120 medical conditions** — many of them life-threatening — that may possibly be detected in the early stages by a dentist, including thyroid problems, high blood pressure, asthma, sleep and breathing disorders, skin rashes, bruxism (teeth grinding), HIV, tuberculosis, drug abuse, anorexia, digestive disorders and upper respiratory disorders.

Healthy Smiles Happy Smiles, provides the basic need-to-know oral health information that is important for children. The simple format and informative sections will assist you in **teaching the topic** and **working with parents**. It helps teachers promote good oral health to students, building habits that will last a lifetime. It encourages children to care about themselves and take responsibility for their own oral health. As a teacher, you have the opportunity to promote the importance of good oral health habits to both your students *and* their parents.