School Health Education

THE REPUBLIC OF UGANDA

SCHOOL HEALTH SERVICES

ORAL HEALTH

A GUIDE FOR TEACHERS IN

PRE-PRIMARY AND PRIMARY SCHOOLS

Second Edition, 2008

Produced by:
School Health Section, MoH
In collaboration with Oral Health Department, MoH and
Ministry of Education and Sports

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CHAPTER ONE

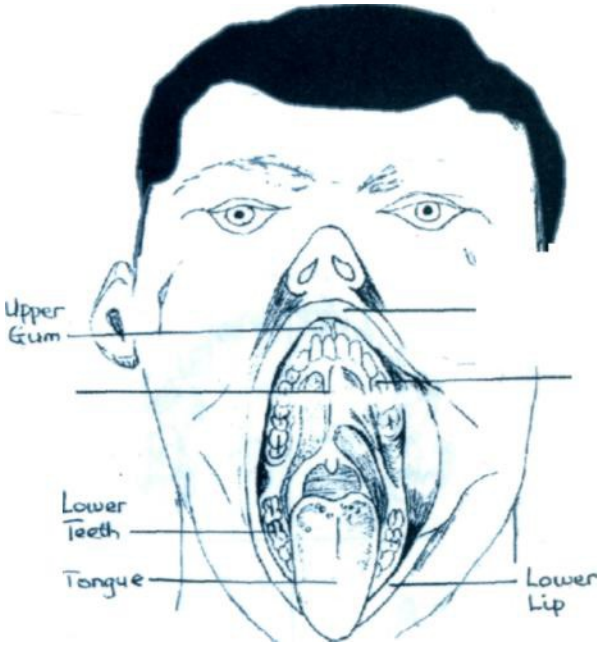
PARTS OF THE MOUTH AND THEIR FUNCTIONS

1.0 Introduction

Oral health among school children is very important. Poor oral health affects school children, adults including teachers and care givers. It is one of the leading causes of absenteeism and poor performance in schools. Therefore teachers, care givers, parents and school children should know how oral diseases can be prevented.

Teachers and parents should play a leading role towards promotion of good oral health.

1.1 Components of the mouth (oral cavity) Picture of a child



1.2.4 The Palate

This forms the root of the mouth. It consists of the hard and soft palate. The hard palate is at the front and the soft palate is at the back of the mouth.

Functions of **the palate**

1. It closes the entrance to the nose.
2. It helps in taste detection.
3. It helps in swallowing.
4. It helps in speech

1.3 Hard tissues of the mouth

1.3.1 The teeth

Human beings grow two sets of teeth during their life time. These are primary or milk teeth and permanent or secondary teeth.

1.3.2 The primary teeth (milk teeth)

This is the first set of teeth which grows during childhood; they are commonly referred to as milk teeth.

These sets consist of a total of 20 teeth by the time a child is two and a half years old. At about the age of 6 years these teeth begin to be replaced by permanent teeth. By about the age of 12 years they are completely replaced.

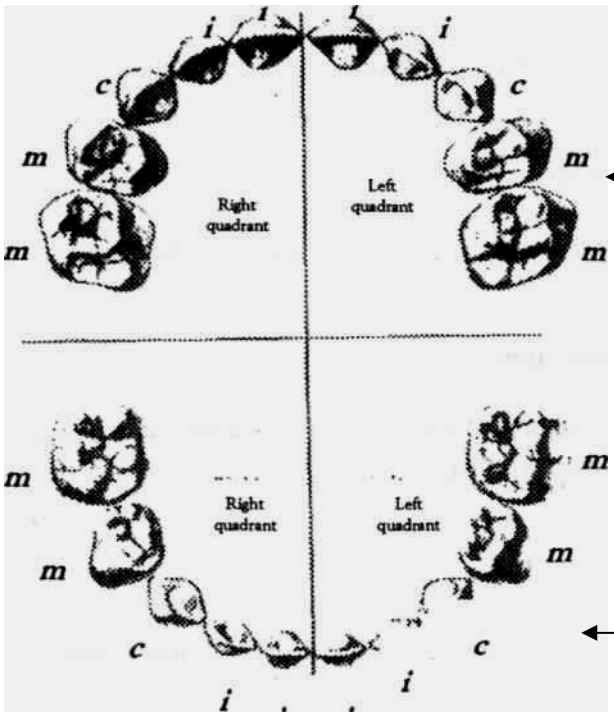
1.3.3 Types of primary teeth

1. The Incisors (/)
These are 8 in number, 4 in upper and 4 in lower jaws.

2. The Canines (c)
These are 4 in number, 2 in upper and 2 in lower jaws.

3. The Molars (m)
These are 8 in number, 4 in upper and 4 in lower jaws.

Figure 2: MAXILLALY



MAXILLA

MANDIBLE

1.2.4. Permanent teeth (secondary teeth).

This is the second set of teeth, they start appearing in the mouth at the age of 6 years replacing the primary teeth. By the age of 21 years most adults have a total of 32 teeth. These serve for a life time.

1.2.5 Types of permanent or secondary teeth.

1. The Incisors *(i)*

These are 8 in number, 4 in upper and 4 in lower jaws.

2. The Canines *(c)*

These are 4 in number, 2 in upper and 2 in lower jaws.

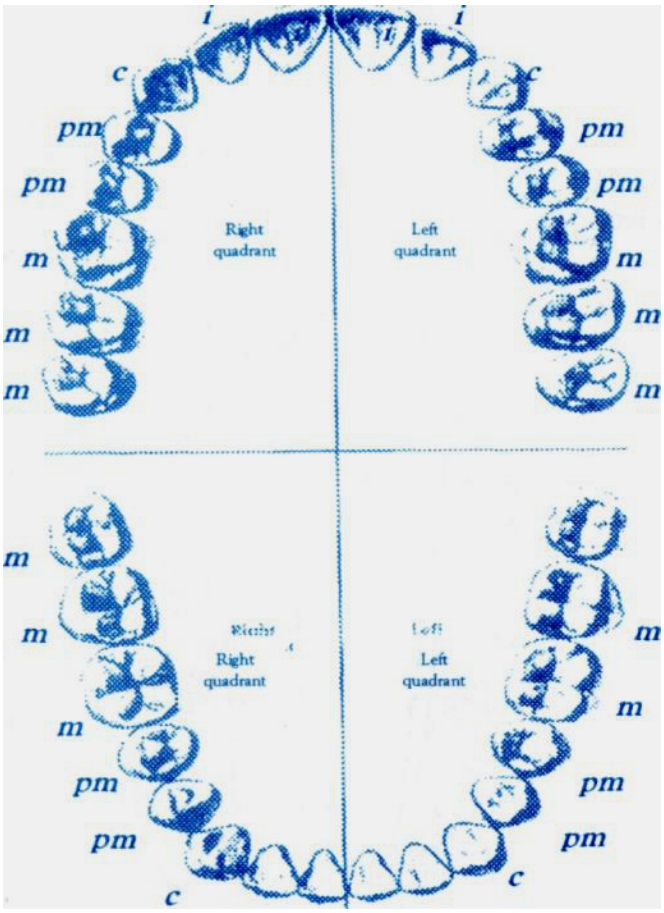
3. **The Premolars *(pm)***

These are 8 in number, 4 in upper and 4 in lower jaws. There are no premolars in the primary teeth.

4. The Molars *(m)*

These are 12 in number, 6 in upper and 6 in lower jaws.

Figure 3: MANDIBULAR



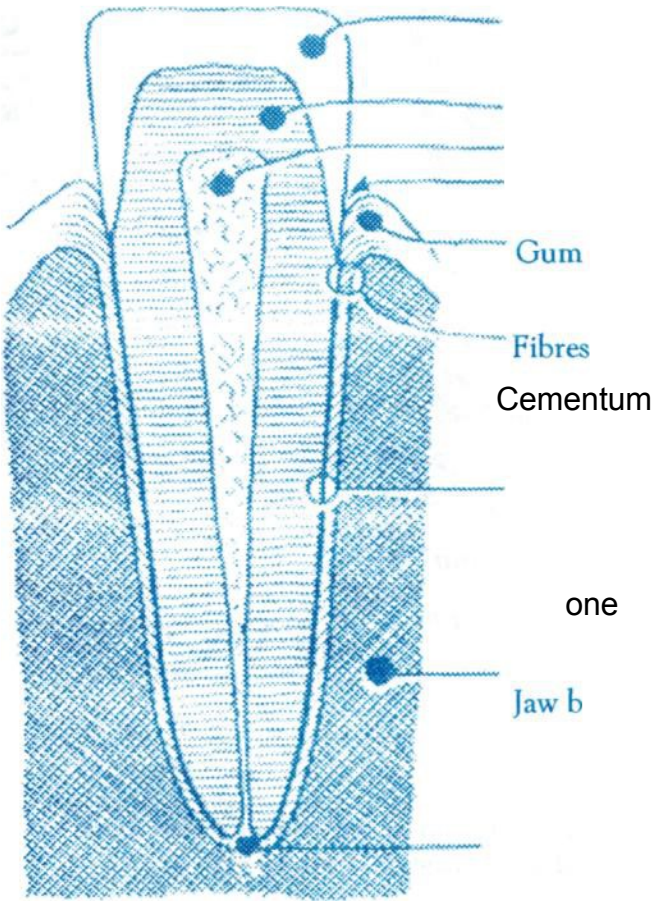
MANDIBUIAR

Source: *Anatomy of orofaccial structures by Richard W. Brand and Ronald W. Isselhard, 2nd Edition 1990*

1.2.6 Structure of a tooth

A tooth has a crown and a root, the crown is that part which is seen in the mouth appearing white, its covered by the enamel which is the hardest tissue in the body. The root of the tooth is that part which is situated in the jawbone and it is covered by the gum.

Figure 4: Cross section of a tooth and it surrounding structures



1.2.7 Functions of the teeth

The teeth have different shapes depending on their functions. The incisors or front teeth are chisel shaped and are used for cutting food.

The canines are pointed and are used for tearing food like meat. The premolars are the narrow teeth behind the canines and are used for chewing. The molars are larger than the premolars, and are used for grinding while chewing. Apart from these functions, teeth are necessary for speech, pronouncing words, (e.g. one cannot say "teeth" without have teeth in the mouth). The teeth help to support and maintain the shape of the chicks, improving facial appearance and gives confidence while smiling and laughing.

1.2.8 The jaw bone

There are two jaw bones, the upper and lower jaws. The upper is called the maxilla and it is fixed to the rest of the skull. The lower jaw is called the mandible and it is the only bone, which moves during chewing and talking. The maxilla carries the upper teeth and the mandible caries the lower teeth.

During accidents and fights the mandible is often fractured or broken or dislocated due to its mobility. Sometimes some people have unstable jaw joints. In such people the jaws may also get dislocated due to yawning.

CHAPTER TWO

COMMON DISEASES THAT AFFECT THE MOUTH

2.1 Dental Caries

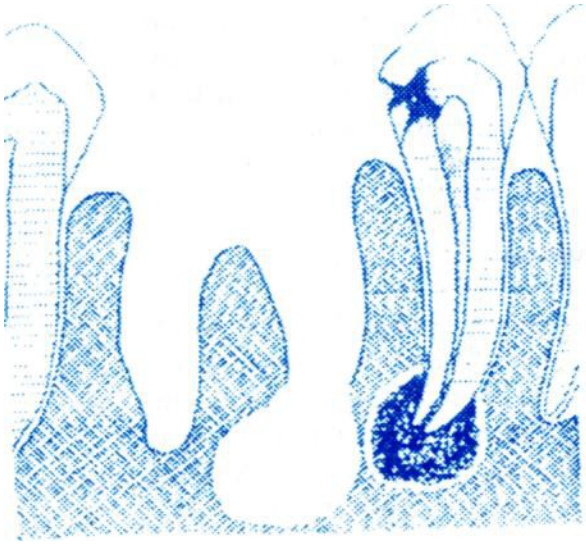
This is also called tooth decay. It is the most common disease affecting the teeth.

2.1.1 The cause of tooth decay

It is caused by action of bacteria on sugar to form acid in the mouth. The process whereby bacteria form acid from sugar is called fermentation. Bacteria are always present in large numbers in the mouth where they multiply constantly. The coat *of* dirt that forms on the teeth is mainly made up of bacteria. If sugar is present in the mouth it is consumed by these bacteria and one by-product is acid. On contact with the tooth surfaces the acid dissolves the tooth material. If this process is repeated several times, cavities (holes) are formed on the tooth surface. These can grow into larger holes and may become painful, eventually leading to tooth loss. Caries can also attack the roots of the teeth should these become exposed by gum loss especially in old age.

It has been shown that acid production in the mouth begins almost immediately after sugar is consumed. This process may go on for minutes up to 1 hour. The number of times that sugar is consumed is the most important factor in determining the rate of tooth decay.

Figure 5: A tooth with a cavity (hole)



2.2. Gum diseases

There are a number of diseases which affect the gums and the fibres which help to attach the teeth to the surrounding jaw bones.

Gum diseases often begin as redness, swelling and bleeding of the gums on normal brushing or touching. This stage is known as gingivitis or inflammation of the gums. Gingivitis if not treated can lead to complications in which the bone and fibres which support the tooth are progressively destroyed. This may lead to looseness of teeth in their sockets and eventually to their loss. Gum diseases are usually accompanied by bad breath.

2.3. The cause of gum diseases

Gum diseases are also caused by dental plaque which collects at or under the gum margins. If this dental plaque is not regularly cleaned away by brushing *it* hardens to form tartar (dental calculus). Tartar is difficult to clean away using an ordinary toothbrush or chewing stick. A dental health worker can remove it professionally at a health unit.

2.4 How to detect tooth decay and gum diseases

2.4.1. Detection of tooth decay

1. Feeling pain in the tooth while taking hot or cold food or drinks.
2. There may be a visible hole in the tooth, which usually shows as black or dark spot.
3. In the late stages of tooth decay, the pain can start on its own usually at night.

3. In extreme cases the whole tooth is completely destroyed living behind roots or small fragments sticking out of the gum.

4. Usually the roots that remain in the gums may become black or brown.

If tooth decay is not treated it can lead to swelling of the jaws, called dental abscess. This is a very painful and dangerous condition, which requires immediate attention of a dental health care worker.

2.4.2. Detection of gum diseases

1. Redness of the gums due to inflammation

2. The gums bleed easily when touched or while brushing the teeth.

3. There may be swelling of the gums

4. There may be foul smell in the mouth.

5. There may be a hard coating on the gum margins called tartar

6. In extreme cases pus may form on the gum margins.
7. Teeth are detached from the gums.
8. The teeth may be too sensitive to heat, coldness or touch .

2.5. Common diseases and abnormal conditions of the tongue

1. Wounds (Ulcerations) of the tongue.
2. Tongue tie
3. Smooth tongue
4. White coatings on the tongue.

2.6 Common diseases and abnormal conditions affecting the Lips

1. Cleft Lips
2. Fever blisters
3. Drying and cracked Lips
4. Ulcers caused by Syphilis and HIV/AIDS

2.7 Common diseases and abnormal conditions of the palate

1. Ulcers
2. Cleft Palate

CHAPTER THREE

PREVENTION OF DENTAL CARIES AND GUM DISEASES

One can prevent gum disease and tooth decay by adopting the following practices.

1. Brush your teeth well at least twice a day, especially before living home in the morning and before going to sleep at night.

2. Use a tooth brush or chewing stick or dental floss for brushing and cleaning your teeth.

3. Use a tooth paste which contains a protective mineral called fluoride for brushing. Fluoride combines with enamel and makes it strong and resistant to decay or formation of cavities. Fluoride also helps to prevent dental plaque from forming on your teeth.

4. Reduce the consumption of sugar, especially the frequency of daily intake of foods and drinks which contain sugar.

5. Reduce the consumption of sweet foods or limit them to meal times. If possible rinse immediately after eating any food.

6. Avoid sharing tooth brushes.

Figure 6: EXAMPLE OF FOODS THAT ARE BAD FOR TEETH

These include sodas, cakes, biscuits, chocolates, sweet bread, and sweets. You should therefore restrict the consumption of these foods to meal time.

Figure 7: EXAMPLE OF FOODS WHICH ARE GOOD FOR ORAL HEALTH

These include, ground nuts, fresh maize, carrots, vegetables, fruits e.t.c.

3.4. Dental check ups

During health parades teachers should check the oral hygiene of school children to detect any oral health problems and take appropriate action.

When you notice or suspect a problem with your teeth or gums go for a dental treatment immediately

CHAPTER FOUR

HABITS AND PRACTICES THAT HARM TEETH

For centuries teeth have been the subject of a variety of customs and beliefs, most of them associated with specific tribes or regions world wide. Originally several reasons were given for these customs and practices. For instance, marking tribal membership, distinguishing warriors, special perceptions of beauty, ornamental mutilations especially of women, and superstitious local treatment of imaginary or real ailments.

Most of these practices are destructive to the mouth. In Uganda most of these cultures are practiced due to ignorance. We should endeavor to stop or at least limit these negative cultural practices.

Examples of some bad cultural practices/habits are given below

1. The false beliefs about "Ebinyo" (false teeth) that they are the cause of fever and diarrhea among children are not true. These beliefs are common in most parts of Uganda especially in the northern, eastern and southern parts of the country. The false beliefs are spread by traditionalists who mislead parents into believing that babies can have abnormal teeth "Ebinyo" which cause diarrhea, fever, vomiting and eventually death, if they are not removed. Consequently, the traditional practitioners dig out these "teeth" under unsafe conditions in the guise of treating fever and diarrhea exposing them to more danger

Ebinyo teeth are true young developing primary teeth, which are growing under the gums. These are not abnormal in any way. Tooth buds are whitish and soft and not as hard and formed as fully developed teeth, hence they may look jelly like resembling worms but they are normal.

Eventually they will erupt into the child's mouth as fully formed teeth, unless the tooth buds have been removed by traditional practitioners. Often the buds of permanent teeth are also destroyed in the process.

The dangers of these practices are loss of blood, tetanus, secondary infection and death. Children who have had their tooth buds removed usually have some missing teeth especially canines.

It is normal that a child can have a bout of fever or diarrhea while teeth are erupting, and a small swelling appears on the gums. A tooth should never be removed because of fever or diarrhea. The child should be sent to a health unit for management.

i) The following conditions can be mistaken for "Ebinyo". Children having them should be referred to a health unit for care.

a) Dental cysts seen in the oral cavity of some infants. These cysts resemble fluid filled blisters and are located in the gums where primary teeth will later erupt.

b) Eruption cysts in young children. These appear as slightly raised bluish areas in the gums covering erupting teeth. Fluid for the cysts is harmless even if it is swallowed by a baby.

c) Infants born with teeth in their mouth (upper or lower). These are normal milk teeth. If such children have difficulties in feeding or bite their mothers while breast feeding, the teeth can be removed by a dental health care worker.

2. Trimming or sharpening teeth practiced by some tribes removes the enamel and can cause pain during eating and drinking as well as making tooth decay more likely. Often this practice of trimming teeth removes the whole enamel layer and exposes the dentine. This leads to pain and allows bacteria to enter into the tooth and destroy it.

3. Removing normal front teeth has in some tribes results in big gaps in between teeth which encourages gum and jaw bone diseases.

4. Using teeth to remove bottle caps, cutting ropes and carrying heavy weights, may destroy the teeth and their supporting tissues.

ORAL HEALTH AND HIV/AIDS

There are 2 main areas of concern of oral health and HIV/AIDS. These are:

- HIV my be transmitted through the mouth by sharing contaminated tooth brushes, tooth picks, medical equipments and kissing.
- AIDS may show in the mouth in one of the following ways:
    - Creamy whitish or yellow patches/plaque (Thrush);
        - Viscose / Ulcerations on the lips
        - Soft and hard plates;
        - Redness and bleeding of the gums

PREVENTION OF HIV/AIDS TRANSMISSION THRUOGH THE MOUTH

- Avoid sharing tooth brushes, tooth picks and
- Health workers should use sterilized instruments while managing conditions of the mouth
- Any abnormal conditions occurring in the mouth of a child should be refer for advise
- It is important that in boarding schools children should not mix-up their tooth brushes
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