School Health Check-Up Programme

Guideline for Teachers

NATIONAL RURAL HEALTH MISSION

School Health Unit, Health Education Bureau, Commissioner, Health, Medical Services, And Medical Education, Gandhinagar.
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સ્વર્જીમ ગુજરાત
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Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

To ensure good health for our school children the Department of Health & Family Welfare conducts School Health Programme every year.

This is the single, largest, health programme operating in the state of Gujarat. School Health Programme is a commendable effort of the Health Department in the direction of cultivating healthy habits among children and thereby makes the future generation of the state healthy. The programme includes all the possible steps required to make children healthy - right from Primary health check-up to providing super specialty treatment if necessary. It is an ambitious socially oriented programme under which approximately 15 million children are covered every year.

**Aims:**
Comprehensive Care' for the Health & Well being of all children of Gujarat

**Objectives:**
- To improve the health status of primary, secondary and higher secondary school going children and children in Anganwadies
- To make available specialist services to needy children.
- Free super specialty services for cardiac, cancer and kidney disease to children
- To provide eye checkup and free spectacles to all needy children
- To improve the nutritional status of children
- Awakening Health consciousness in children.

**Beneficiaries:**
- All Children going to Anganwadi Centre.
- Primary School going Children.
- Secondary & Higher Secondary School going Children.
- New born to 14 years of Non School going

**Services provided:**
- Health check up
- Spot treatment
- Referral services
- Free spectacles
- Free super specialty treatment for Heart, Kidney and Cancer disease including renal transplant
- Free cardiac treatment outside Gujarat for BPL
- IEC activities

**Procedure**
Health teams examine all school going and I.C.D.S. beneficiaries in the primary schools and anganwadies. Children with minor ailments are treated on the spot in the school. Children requiring examination by specialists are sent to the related referral centers where different medical experts like ophthalmic surgeon, physician, pediatrician, dentist, skin specialist and E.N.T. surgeons examine and treat them. Those children who require spectacles are provided the same free of cost.
Children suffering from Heart, Kidney and Cancer diseases are examined by super-specialty hospitals. Operative treatments including renal transplant are given free of cost. Transportation is also provided by the state Govt.

BPL children suffering from complex heart problems and if treatment is not possible in Gujarat will send to reputed hospitals outside the state for treatment.

Planning for prompt treatment

In order to provide prompt treatment under school Health programme, children suffering from serious diseases, powers have been given to grant permission at district level.

School Health Week

Environment plays vital role for the health of children. Children get easily infected through mosquitoes and bees which breed at water logged and dirty places. It is necessary to keep the village clean to protect our children. Spreading message like "Health is Wealth" "Clean Gujarat, Healthy Gujarat" will go a long way in bringing awareness in society about sanitation and hygiene. This will help in developing an insight among people to keep not only their own houses or hamlets but the entire village clean. Towards this end School Health Week will be celebrated. This is an innovative approach to inculcate among students good habits, awareness about nutritious food, clean environment and clean drinking water.

School Health Week shall create a healthy climate in villages and with active participation by all the agencies of the Government e.g. Health, Education, Women and child Development, Panchayat, Water Supply etc. at the village level, the Health Week shall become nothing less than a celebration of a festival. Awareness generated through the celebration of School Health Week shall bring about a vision to keep the village clean for the entire year with participation of awakened communities.

Meetings with grand parents and parents will prove useful for inculcating values, steeped in our culture, to children. The new generation will thus imbibe the determination of “Dhruva”, devotion of “Prahalad” and the strong resolve of an Indian. They will evoke patriotism and a spirit of nation building with mental and physical health forming its core.

The cooking competition will help the children to understand the importance of nutrition and the nutrients available from vegetables and fruits which can be grown in kitchen gardens locally.

Every village will celebrate 'School Health week" which will last for five days. Each day two departments will identify as theme departments and relevant activities will be carried out.

The first day Panchayat and Water Supply Department; the second day Health and Education Department; the third day ICDS and Health Departments; the fourth day Health Department and the fifth day Panchayat and Education Department will be declared as theme departments.
# School Health Week

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<th>Activity</th>
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| One      | • Cleaning of Water Sources  
• Cleaning of Liquid Waste Disposables  
• General cleaning of School and Village  
• Plantation (Herbal Plant in School Compound) | • Panchayat Dept.  
• Water Supply  
• Forest | Water works, Wells, Gram Panchayat School Compound |
| Two      | **Basic Health Check Up**  
• Basic Health Examination of students By School Teachers, ASHA Workers, & Health Workers  
I.E.C. Activities (In Village)  
• Rally, Folk play, | • Teacher  
• ANW  
• ASHA | School Anganwadi |
| Three    | **Nutrition Day**  
• Healthy ANC competition  
• Healthy Baby Competition  
• Immunization related activities  
• Cooking Competition,  
• Exhibition on Nutritional food and nutritive items  
• Dada Dadi Meeting, | • AWW  
• HW  
• ASHA Worker | Sub center Anganwadi |
| Four     | **Health Check up**  
• Health check up by Medical Officers  
• Parents Meeting | • MO  
• HW  
• Teacher | School Anganwadi |
| Five     | • Health Related play, songs , Poems, Skits, Debate  
• Health related Games  
• Prize Distribution | • School children  
• Head Master Chairman of VHSC | School / Gram Panchayat |
| Entire week | Health Exhibition in School | • Health worker | School Building |

**Day One (Sanitation Activities)**

Activities such as cleaning the school, water sources, and drainage system shall be carried out with the help of Panchayat and Water Supply Department. Medical shrubs shall be planted in the school as well as the village.
Day Two: (Basic Health Check Up)

Teachers, ASHA worker and Health workers shall conduct primary health check up including height and weight and also carry out IEC activities like rally, Folk play etc with the help of the Education Department.

Day Three: (Nutrition Day)

The third day shall be celebrated as the Nutrition Day and activities like cooking competition, Exhibition on Nutritional food and nutritive items, healthy Pregnant Woman competition, Healthy Child competition, grand parents meeting shall be conducted with the help of AWW under ICDS.

Day Four: (Health Check Up)

The forth day shall be celebrated as Health Check-up Day with the Medical Officer conducting health check-up for the children with his team. A parents’ meeting shall also be organized on this day.

Day Five: (Cultural Day)

On the fifth and the last day, the programme shall be concluded with cultural activities like Health Related plays, songs, poems, games promoting the concept of health, with the help of Panchayat and Education Department. Prize Distribution shall take place in the presence of the Sarapanch of the village or Chairman of the Village Health Sanitation Committee or any other dignitary.

A Health Exhibition will be organized at the relevant school to create awareness among people about health and cultivate healthy habits to lead a healthy lifestyle.

The pro people Health Week programme organized with emphasis on health check up, treatment and health education at the door step shall also cover issues related to clean environment and giving up harmful habits like consumption of tobacco. After its conclusion, the programme shall be evaluated from the people's perspective by convening a Gram Sabha in order to invite people's opinions so that meaningful and convenient health services can be provided with community monitoring.

Health Monitor

A "Health Monitor" in the primary and secondary school shall be identified and given health related training. The "Health Monitor" shall in turn provide guidance to his / her colleagues in the school on health education, healthy habits and prevailing health problems. He / She himself shall keep away from unhealthy habits and motivate others to adopt good habits. This will create awareness among the student community and have an overall positive effect with regard to health.
Anemia

Problem
Anemia is a disease characterized by deficiency of hemoglobin in the red blood cells. Hemoglobin carries oxygen to each part of the body. Anaemia is a condition wherein the vital organs of the body receive very little oxygen and this causes a very dangerous situation for the child. An anemic child gets tired quickly and starts panting such children fall ill frequently. Serious anaemia condition increases the possibility of heart attack, often leading to the death of the child.

Anaemia is caused mainly by following reasons.
- Low iron content Diet
  The required level of hemoglobin in blood is not maintained if the child is not fed iron rich food like leafy vegetables, eggs, roasted peanuts, roasted gram and Jaggery.
- Worm infestation
  Like Hook Worm, Round Worm and Thread Worm
- Acute conditions
  Like malaria and bleeding dysentery

Signs and Symptoms
Clearly visible symptoms are:
* Paleness in nails, tongue and lower eyelid
* In the severe condition, the child gets tired quickly and feels exhaustion after normal physical work, swelling on soles, legs and entire body.

School Health Check-up and Identification

Objective
All the children should be screened for anaemia. This will help in providing treatment to children with clearly visible symptoms along with necessary tips on diet and Children suffering from worms and having other symptoms may also be treated on the spot.

Place:
Children should be examined in a place with sufficient sun light. Normally an open space with adequate sun light is considered ideal for health check-up of children.

Steps for Health check-up
Look for clearly visible symptoms of anaemia

Examining Nails
Ask the child to put his hand (palm facing the surface) on the table with fingers spread out. Examine the nails as follows.
- If the nails are pale, the child has anaemia
- Match the palm of the child with your own palm. If the child's palm is pale compared to yours, the child is possibly anaemia.

* Examination of tongue:
  1. If the tongue is pale, you may conclude that the child has anaemia
  2. If you find clearly visible symptoms of anaemia in the child, ask him / her following questions.
     - Does the child feel exhaustion quickly?
     - Does he / she develop swelling on his / her soles, legs and the body?
     - Does the child have history of fever?
     - Did the child suffer from dysentery?

* Treatment
  If you find clearly visible symptoms of anaemia in the child, give him tablets of iron and folic acid (small pills) or iron syrup in required does.

Dosage:
- Give iron and folic acid tablet (small) after lunch and meal every day for twelve (12) weeks.
- Children who have clearly visible symptoms of anaemia should be immediately referred to the Medical Officer of the PHC/ CHS for physical check-up after filling up the reference card.

* Treatment - at Health Center
- If worms are detected in the stool or hook worm is suspected, treat the child with Deworming medicines.
- Give Mebendazole 100 mg. twice a day for three days. Mebendazole tablets are also available in "one pill one day" doze.
- Give one tablet of Albendazole 200 mg. once only
- Give small pills of iron folic acid

Dosage
- Two pills daily after meal for 12 weeks.
- Give proper advice on diet.

Excess of iron can cause serious side effects. Therefore, keep iron and folic acid tablet at a place where a child can not lay his / her hand on it.

Role of a teacher
A teacher should give following advice to the parents of all the children suffering from Anemia

Diet:
Children should be given roti, pulses, green leafy vegetables, bananas, eggs, roasted peanuts, roasted gram Jaggery etc. in substantial proportion in diet as they are rich iron content.

Observe food hygiene:
worms, which can cause anaemia, enter the body through contaminated / unclean food. Therefore, vegetables and fruits should be thoroughly washed and cleaned before they are cooked or eaten raw. Advice should also be given to ensure that children wash their hands before consuming food and observe personal hygiene.
**Prevention:**

Infection of hook worm is one of the main causes for serious anemic condition.

People expose themselves to these worms when they walk bear footed on mud contaminated with the excreta of worm infected people who defecate in open spaces. Eggs of hook worm released through the excreta of an infected person contaminate the soil and enter the body of a person who walks bear footed on such soil. Therefore, children should be given the simple advice never to walk bear footed in the open muddy space. If one gets the child to follow this advice, it will go a long way in preventing this infection.

An affected child should be referred and regularly monitored for treatment and necessary advice.

Teacher should ensure that the children referred to doctors for medical check-up take medicines as advised by the doctors. Teacher should also observe whether there is any improvement in the dearly visible symptoms in the child who was referred for anaemia.

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**Vitamin “A” deficiency Syndrome (Night Blindness)**

Nyctalopia (Night Blindness) - A condition caused by deficiency of Vitamin- A

Problem: Vitamin - A is necessary for healthy eyes. Vitamin- A stimulates the growth of human body and protects the child against infection. Deficiency of vitamin- A is one of the causes of Night Blindness. It this condition is not treated, if may render the child blind permanently.

**Main Symptoms:**
- The child complains about being unable to see in dim light.
- Treatment: The child should be treated with Vitamin “A” solution

**Dose age**
- 2 ml vitamin “A” solution (2 lakh International units), Give another does of 2 ml. after one month.

**The Treatment available**
- Vitamin -A solution is available at sub centers

**Referral services**
- Children suffering from night blindness should be referred to the doctor at the PHC / CHC for physical check-up

**Other measures**
- Parents should be asked to give their children green leafy vegetables, dark yellow fruits (carrot) as they are rich with vitamin - A. Such vegetables and fruits should be included in the diet of the children.

**Role of a teacher**
1. Advise the students to include green leafy vegetables and yellow fruits in their diet
2. Get vitamin - A solution from the health worker for deficient children and advise the child to approach the sub center.
3. If there are other younger children in the household of the students ask their parents to take them to the sub center twice a year to administer them with the dose of vitamin - A. Parents should also be advised to get their children vaccinated comprehensively.
Iodine Deficiency Disorders

**Diseases caused by deficiency of iodine.**
One of the most essential micro nutrients required for normal growth and development of the child is iodine. Iodine is instrumental in the production of the hormone called thyroxin which is essential for normal physical and mental growth. Deficiency of this hormone stiﬂes the normal growth of the child and as a result, the child often becomes mentally retarded or remains a dwarf.

* Main symptoms
1. the most common manifestation of deficiency of iodine is Goiter - an unusual swelling or a tumor on the neck. Goiter is caused due to extra ordinary growth of thyroid gland.
2. Children who suffer from severe deﬁciency of iodine develop following symptoms.
   - Slow physical growth and development
   - Mental retardation
   - The child has very low intelligent quotient and often gets isolated as a dull student

Check up in school
Identify students with low I.Q. and dull in studies and having goiter as potentially iodine deficient students.

Treatment
Early detection of students who suffer from iodine deﬁciency, their timely treatment and frequent consultation by visiting them from time to time help in rehabilitating them. All the students who are suspected to be iodine deﬁcient should be referred to the PHC / CHC.

Prevention
Iodine deﬁciency can be easily prevented by the use of iodized salt in our food.

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<td>1. The teacher should educate the children and the community about the benefits of using iodized salt. Iodized salt is available in all consumer stores.</td>
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<td>2. If the child appears to be mentally retarded or weak in studies, deﬁciency of iodine maybe suspected. Parents of such child should be contacted immediately and advised to use iodized salt. Parents of such child should be advised to go to a doctor.</td>
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**Goiter**
- Caused by deﬁciency of iodine
- Iodine is essential for synthesis of hormone from thyroid gland. Deﬁciency of iodine leads to enlargement of thyroid gland which is called goiter

**Symptoms**
- Unusual growth of thyroid gland
- Iodine deﬁciency in childhood leads to inadequate secretion of hormone from thyroid gland
- Stiﬂes physical and mental growth
- Pulse rate drops
- Fatigue

**Steps for prevention and control of the disease**
- Use iodized salt in food
- Consume leafy vegetables
- Marine foods
Scabies

- **Problem**
  Scabies is a skin disease caused by germs. Normally small children fall victim to this disease. It is a contagious disease the infection of which spreads by way of contact and sharing things (like bed sheet, towel etc) with the infected person.

**Main symptoms**
Germs of scabies penetrate the skin and thrive beneath the skin and causes following symptoms

1. Redness of the skin
2. Itching is so acute during night that the person cannot sleep.
3. Other infections develop on the red skin and as a result, watery substance oozes from the sore.

* **Check-up at the school**
Ask each child whether he / she have developed itching particularly during the night time. Children who complain about itching should be examined in adequate light. Examine the skin of following parts of their body.

1. Webbing of the fingers
2. Wrist
3. Armpit
4. Skin surrounding the naval on the stomach.
5. Waist and reproductive organs

Following symptoms shall be visible in a child is suffering from scabies
- Scores on skin
- Redness around the sores
- The sore first appears on the webbing of the fingers indicating the infection.
  Ask following question to the child

1. Does any other member in his / her family have such complaint? Normally, other members of the family have such complaint.

**Treatment**
1. Scabies gets completely cured if solution of Benzoic Benzoate and other medicines are applied on it.
2. Children suffering from scabies should be referred to PHC/ CHS for detailed physical check up and treatment. Treatment is necessary for all others members of the family. The teacher should counsel the parents in this regard.

**Other steps**
During the course of the treatment, bed sheets, towels, inner wares and other clothes should be washed in warm water and thoroughly dried in sun. If such precaution is not taken and other members of the family are not treated, the infection may recur.

* **Treatment at the Health Center**

1. **Benzyl Benzoate Lotion**
   - Apply 12.5 percent Benzyl Benzoate lotion (Prepared with water base) to all the parts of the body below the
neck of the affected child with a brush. It is necessary to apply such lotion thrice.

- First time: In the evening on the first day.
- Second time: In the morning on the second day
- Third time: In the evening on the second day.

- Advice the child not to bathe during these two days. Allow the child to bathe on the third day. Advise the parents to wash bed sheet, towel and inner ware of the child in warm water and dry them in the sun.
- Give similar treatment to other affected members of your family.

2. Other medicines

- Compared to Benzyl Benzoate, these medicines are applied in smaller amount, but they are expensive.
- Apply Gama Benzyl Hexachloride Lotion / Ointment only once
- Apply 5 percent permethrine ointment only once

Role of a teacher

1. This is a very contagious disease and its infection can spread to other children who come into close contact of the affected child. Skin examination should also be carried out on other student in the class and they should be advised and explained how to keep personal hygiene.

2. Teachers can also counsel the community members on how to treat such condition and where the treatment can be availed. Benzyl Benzoate is poisonous if consumed orally and therefore it should be kept at a safe place away from children.
Skin Infection

Ailment:
Normally this infection is seen in children. Rashes and boils resembling watery substance develop on the skin. This is a contagious disease and spread to other persons when they come in close contact with the affected person. If left untreated, the disease spreads to the inner organs and causes serious disorder.

Main Symptoms
- Children who develop pyoderma (boils) on the skin have following symptoms
  - Swelling
  - Redness
  - Oozing of watery substance
  - Pain, fever and in some cases itching.

School Health Check-up
- Children suffering from pyoderma can be cured completely with proper treatment. Apply 1% gessen Violate Lotion on all the infected parts of the body of all the children in the school.
- Children suffering from pyoderma are required to be treated with antibiotic. They should be referred to the PHC/CHC for detailed physical check up and treatment.

* Treatment at Health centers
- Take antibiotics as per the advice of the doctor.
- Apply 1 percent Jenson violet lotion/antibiotic cream on affected parts (pyoderma)
- Give Paracetamol if there is fever.

Role of a teacher
- This is a contagious disease and therefore teachers should ensure that the students visit the doctor and get treated. Teachers should also advise children on personal hygiene.
- Teachers can also inform people of the village that treatment of this ailment is available.
**Visual Impairment**

Eyes: The world is as one sees it.

Eyes: Eyes are important part of the body to behold the beauty of nature and all the objects created by nature and human beings. Mere words are abstract. They acquire meaning when we see the objects they describe. Black board words written on a black board, charts, and picture can only be seen and understood when students can see them. Therefore it is of utmost important for children to take immense care of their eyes. Carelessness may lead to various kinds of visual impairment.

**Ailment:**

Eyes are priceless and one of the most sensitive organs of the body. Eyes contribute immensely to the study of various subjects. School years are important for the physical and mental growth of children. They are the formative years. Visual impairment of ophthalmic problems may cause tremendous hindrance in overall development of children and subsequently affect their future.

- **Types of visual impairment / ophthalmic disorder**

- Myopia: Children suffering from this disorder can clearly see thing which are close to their body but not the things which are at a distance.
- Hypermetropia: Children suffering from this disorder find it difficult to see thing which are close to them.
- Apart from this, some children develop a condition wherein they can see things clearly but often complaint of headache while reading.

**Main symptoms**

Myopia is a common problem among children. Normally, children do not complain about their ophthalmic problems because they are unaware of it. Children with weak eye sight adjust themselves with following problems.

- Night blindness or unable to see in dim light
- Headache
- Burning of eyes
- Double vision
  - To cope with the problem they -
  - Sit nearer to the black board
  - Keep the book nearer to the eyes when reading
  - Rub eyes
  - Avoid activities that demand visual concentration
  - Children often complain about headache while reading.

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**Myopia is a common problems seen among children**

Check up for myopia can be done in the school by a trained teacher or health worker.

**Objective:** Normally, children do not complain about their ophthalmic problem. The objective of the check up is to detect the problem at an early stage and refer the child in order to treat the problem by getting a suitable pair of specs.
Place:
A child's eyes should be checked at a place where -
- There is adequate light: An open space with day light is ideal for eye check-up
- There is adequate space: The room should have an open space of 22 feet or more

Steps for check-up
- Measure a distance of 20 feet
- Ask the child and the teacher to stand as shown here.

- Demonstrate before the children how to see the chart and how to draw 'E' with its open ends in proper directions.

- Check eye sight
First, ask the child to cover his / her left eye with the palm of his / her left hand and then see and tell the direction of the open ends of 'E' using the vision of his / her right eye. Then, ask him / her to use the left eye to tell the direction of the open ends of 'E' on the other side of the chart.

- Advice:
If the child fails to decide the direction of the open ends of 'E' with either or both of his / her eyes, note down your observations. The child has ophthalmic problem and needs referral services

Treatment:
Children having visual impairment should be advised to wear spectacles and referred to the nearest CHC to be examined by ophthalmic assistant who will provide suitable pair of specs free of cost after proper examination.

Treatment at Health Centers
- Paramedical Ophthalmic Assistant shall accord priority to children who come to avail referral services for examination of eyes.
- The child will be provided specs free of cost from District Blindness Control Society.
- The Medical Officer should also look for other ophthalmic problems and symptoms of deficiency of vitamin - A

Ophthalmic Disease
1. Night blindness
2. Long and short sightedness (Hypermetropia and Myopia)
3. Weak and hazy eyesight
4. Spots in eyes.
5. Accident

* **How to keep the eyes healthy?**
  - Get your eyes checked an Ophthalmologist regularly
  - Take dosage of vitamin - A as per the advice of the doctor. Take leafy vegetables, carrot, red fruits, and ripe fruits daily.

* **Precautions to be taken**
  - Wash eyes with clean water
  - Do not read in dim light
  - Do not read with sharp light directly getting into your eyes.
  - Do not read in a moving bus, train or plane
  - Keep away from colors containing chemicals during celebration of colour festivals
  - Keep away from fire crackers in Diwali (Celebrate with your parent nearby)

**Role of a teacher**
- Keep an eye on students' behaviors in the class to find out students who are suffering from visual impairment or ophthalmic problems.
- Advise parents to take their children to eye specialist for ophthalmic check-up
- Reassure the child who feels shy or is afraid to talk about his / her problem.
- Eye disorders can be prevented by helping the children give up bad habits.
- Give necessary information in this regard periodically.
- Advice children to read at 45 angle and keep the book at a distance of 1 and 1/2 feet away from the eyes.
- Advice the children not to view T.V., computer screen from very close distance and for a long time
- Stop children from playing games with a ruler or pen in the class room.
- Ask children to wear spectacles without feeling shy if they have already got them.

**Role of a teacher**
1. Cover all the children for ophthalmic examination during School Health Check - up programme
2. All the teachers must know about the symptoms indicating visual impairment or ophthalmic disorders. The list has been given above.
3. Explain to children proper methods of reading discourage viewing of T.V. from very close distance and encourage wearing specs.
4. After completion of School Health Check-up advice children, who have been given Referral service cards, to go to the health center for ophthalmic examination. This message should be given special emphasis during the assembly, prayer and also in the class room.
5. Also look for symptoms like redness in eyes, burning, discharge from eyes etc. at the time of examination of eyes. If you find any child with these symptoms, refer him / her immediately.
Discharge from ears

* **Problems:**
  Discharge from ears due to infection in the cavity of ears is a common problem found among children. This disorder should be treated immediately otherwise it may lead to permanent deafness or hardness of hearing.

* **Symptoms**
  - Discharge from ears in a result of ear infection and earache is the common symptom.
  - The affected child may develop fever.
  - Normally, in such cases, the child has a history of discharge from ear. In acute condition, discharge can be clearly seen flowing from the ear tunnel.

* **Health Check-up in school**
  - Look for history of discharge from ear.
  - Pull the ear gently to know whether infection has set in. If the child feels pain, decide that the child has ear infection.

**Treatment**
- Child suffering from ear discharge needs to be treated with antibiotics. Refer the child to CHC/ PHC for treatment.
- Advise the parents to keep the child's ear dry by following the procedure shown here below.
  Prepare an ear bud by wrapping a clean tiny piece of cloth on a tooth pick or a used match stick. Insert the stick in the affected ear and keep it inside for a minute to allow the discharge to be absorbed by the bud. Remove the ear bud and insert another clean bud in the ear. Repeat this procedure till the ear bud comes out clean. This will take about 10 minutes. The ear should be dried clean in this manner four times a day.
- Ascertain whether the child had been administrated tetanus vaccine. The Health worker should take special care to ensure that all the children who have not been administrated tetanus vaccine are given the same.
  **Note:** pouring oil or other medicines in the ear will prove ineffective, and their use should be discouraged.

**Treatment at Health Centers:**
- The disorder of discharge from ear can be of acute nature or may be chronic.
  1. in acute cases (where the problem of discharge from ear has started before less than two weeks)
- Give any one antibiotic for not less than five days (cotrimoxazol, Amoxicillin or Ampiciline - Oral dose)
- Give Paracetamol if there is fever
- If there is discharge, clean the ear with ear buds as shown above
- Examine the child after five days. If the symptoms still persist, give antibiotic for five more days. If the problem is not cured even after 10 days refer the child to an ENT specialist.
  2. for problem continuing for a long time (where the problem of discharge from ear has continued to exist for more than two weeks)
- Treatment by antibiotic is not necessary
- If the ear is kept dry, the discharge will stop. Teach parents the method of keeping the ear dry. The process for
keeping the ear dry is time consuming for both the health worker and parents. However, it should be borne in mind that this is the effective method to keep the ear dry.
- If the child has been suffering from this problem for a long time, refer him / her to an ENT specialist so that it can be ascertained whether the ear drum has burst or any secondary infection, has developed.

Do not forget to administer tetanus vaccine to the child if the child is not immunized against tetanus earlier and the child is suffering from scabies, skin infection or discharge from ear.

**Role of a teacher**
- Discharge from ear at a young age is an important cause for deafness. If a teacher finds anything unusual about any child, he / she should refer the child immediately to save him from permanent deafness.
  Advise parents on how to keep the ear dry.
- Advise the children not to insert stick, pencil or any pointed object in the ear.
Dental Problem

Dental problems

* Problem
  Dental problems mainly consist of the following three -
  1. Tooth decay
  2. Gum related problems
  3. Jagged teeth
The first two problems are caused mainly due to inadequate cleanliness of mouth and bad food habits. Unclean teeth lead to infestation of germs which produce acid in the mouth causing tooth decay and gum inflammation. Some bad habits like sucking thumb or fingers, biting nails, breathing through mouth sucking tongue are responsible for jagged teeth.

Symptoms

1. Tooth decay:
   Surface of the tooth turns black or develops cavities. In this condition children complain of-
   - Tooth ache while consuming hot or cold food or drink.
   - Shooting pain
   - Food particles getting stuck between teeth.

2. Gum related problems
   Normally, gum related problems do not cause pain and therefore children do not complain. However, if such conditions are not treated timely, the tooth bone may crack up and teeth become loose. The gums may -
   - Turn red (Normally, gums are light pink in colour)
   - Turn inflamed
   - Start bleeding at minor injuries
   - Bad breath

3. Jagged Teeth
   Jagged teeth are uneven teeth and cause following problems to the child.
   - The child cannot close the lips
   - Upper teeth are more projected and lower teeth appear more inward.

* School Health Checkup
   Every child should be examined in natural sun light

Look for following problems.
   - Change in the color of the teeth, stains on the teeth (For this examine the outer and inner surfaces of the teeth)
   - Cavities
   - Inflammation in gums, bleeding or septicemia
   - Uneven teeth

Treatment
   Normally, it is not possible to provide dental treatment in Primary Health Centers and Sub Centers. Children with dental problems should be sent to a dentist.
Role of a teacher

Educating children about dental health will prove advantages to them in the long run. Teachers may give following advice to children.

1. **Food**
   For good, strong teeth and gums, children should be advised to take food rich in protein and vitamins e.g. milk, butter, eggs, green leafy vegetables, carrot, reddish fruits (apple and guava)

2. **Sweet items should be consumed in limited proportion:**
   Excess of sweets can cause tooth decay. Sweets prepared with sugar, chocolates and other sweet items should be consumed in limited proportion.

3. **Keep the teeth clean**
   Children should be advised to brush their teeth at least twice a day in the morning and before going to bed. Use tooth brush, datan or a branch of neem tree for brushing teeth. Start brushing teeth from the edge of the gums and brush the teeth with up and down strokes. Upper teeth should be brushed downwards and lower teeth should be brushed upwards. The hard surface of teeth should be brushed with circular movements.
   Advice children to wash their mouth with water after consuming any food item. They should also be advised to clean their teeth and rub the gums with their finger while performing a mouth wash.
Problems:

Tuberculosis is caused by bacteria. The disease normally affects the lungs but it can also affect other parts of the body like bones, kidney, intestine etc. There may be T.B. patients in your village. You can identify them and help them by recording their names for the treatment.

Pulmonary T.B. is spread through air. When a person, suffering from T.B. coughs or sneezes, bacteria comes out from his / her lungs and spread in the air and when they are inhaled by other persons, they enter their bodies. Other parts of the body can also be affected by T.B. T.B of reproductive organs can cause sterility in a woman.

Symptoms

- Constant coughing with sputum for more than two weeks.
- Low fever particularly in the evening
- Loss of appetite
- Weight loss
- Sputum stained with blood

If above mentioned symptoms are found in old people, they are normally ignored or overlooked as inevitable sings of old age. But it should be borne in mind that any person who has these symptoms is a potential T.B. patient.

* Vulnerable Persons
- Malnourished persons
- People living in slums or more crowded areas
- People living in poorly ventilated places
- Persons affected with HIV/ AIDS
- Both women and children are equally vulnerable

Generally, poor people live in abovementioned conditions and therefore they are at more risk of being infected by T.B.

* Services available under Revised National Tuberculosis programme.

- People who have been suffering from cough for more than two weeks are helped to undergo sputum test thrice. Their sputum is examined under microscope for diagnosis. You should ask the Health Worker about the place where such test is carried out so that you can help suspected patients.

- If T.B. is diagnosed after the sputum test, treatment for tuberculosis is started which may continue for 6 to 8 months according to the advice of the doctor.

- Some people require getting an x-ray and then, if required, they are given treatment. Treatment is available at District T.B. Centers, T.B. Treatment Centers, Government dispensaries, Govt. hospitals, CHCs and PHCs,

You can educate yourself about how T.B. is treated by asking the Health worker. DOTS (District Observation Treatment Short course) has been started for this purpose. Under DOTS, treatment is provided free of cost under the direct observation of Health worker.
You will also provide treatment under DOTS in the future. You will be given separate training for this so that you can understand the method of providing DOTS.

## Role of a teacher

**Early diagnosis helps the treatment**
- If you find any child with the abovementioned symptoms, refer him/her.
- Advice should be given to take medicines regularly if T.B. is diagnosed and it should also be ensured that the medicines are taken regularly.

**While providing DOTS services**
- Person who provides 'DOTS' service in the area educate people about DOTS and its importance and encourage them to undergo the treatment
- Cultivate understanding among people about T.B. control by giving following advice.
  - Cover your mouth with handkerchief while coughing/sneezing
  - Do not spit in open spaces
  - Show them affordable alternatives for nutrition
  - Advise people to immunize their children against BCG immediately after their birth.
- Advice children and their parents to cultivate good, hygienic habits, take nutritious food and keep their living place ventilated.
Leprosy

* Problem
- Leprosy is an infectious disease caused by bacillus mycobacterium leprae.
- The disease mainly affects the skin, the peripheral nerves, mucosa of the upper respiratory tract and also the eyes, apart from some other structures.
- People of all ages can become victims of leprosy irrespective of sex.
  Leprosy can be cured completely with multi drug treatment of six to 12 months. A patient of leprosy can leave a normal life.
  If the disease is detected early and treated with multi drugs, it can be cured quickly without any disability setting in.
  Encourage children and parents for self examination of their skin.

Signs and Symptoms
Spots or sores appear on skin and that particular spot becomes insensitive. The spots or sores are of dull, radish or copper in colour. They may appear flat or a bit thicker on the skin with no itching no pain, no sensation of heat and cold. In insensitive to touch. They appear any where on the body.
Other symptoms are as follows.
Small, radish or skin coloured tumors or smooth shiny skin, completely insensitive

Types of Leprosy

<table>
<thead>
<tr>
<th>Pauci bacillary Leprosy</th>
<th>Multi bacillary leprosy</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 1 to 5 spots / sores on the skin</td>
<td>More than 5 spots / sores on the skin</td>
</tr>
<tr>
<td>- Affects one nerve</td>
<td>Affects two or more nerves</td>
</tr>
</tbody>
</table>

Treatment
Multi Drug Treatment

- Pauci bacillary Leprosy:- Six months treatment by 6 blister packs
- Multi bacillary leprosy:- Twelve months treatment by 12 blister packs
- Every month first dose of MDT by direct supervision of Health worker

Role of a teacher
- If pale spots or sores appear on a child's body, the child must be diagnosed for leprosy.
- It should be ensured that the child affected by leprosy take multi drug therapy for the entire period.
- Teachers should help in creating positive attitude that "Leprosy can Surely be cured"
- Teachers should endeavor in removing prejudices and taboos associated with leprosy.
**Problem:**
Malaria is caused by a parasite and the infection is spread through infected mosquito bite. When infected mosquito bites the normal person, the person will get malaria.

**Symptoms of Malaria**
- Fever with rigor
- Fever on daily/alternate day
- Headache and body ache
- Vomiting
- Temperature comes down after excessive sweating.
- Patient feels weakness and uneasiness after temperature comes down.

**Treatment**

**Treatment of Malaria**

<table>
<thead>
<tr>
<th>Age</th>
<th>Number of Chloroquine tablets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First Day</td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>1/2 (Half)</td>
</tr>
<tr>
<td>1-4</td>
<td>1</td>
</tr>
<tr>
<td>5-8</td>
<td>2</td>
</tr>
<tr>
<td>9-14</td>
<td>3</td>
</tr>
<tr>
<td>Above 14</td>
<td>4</td>
</tr>
</tbody>
</table>

- All the patients suffering from fever should be treated only after taking of their blood samples.
- Treatment should be given to all the affected people including children and pregnant women
- Chloroquine tablets are given for killing the parasites present in the blood
- Certain cases of malaria pose threat to the affected person. In such cases, it is necessary to give radical treatment after the possible treatment.
- Anti-malarial drug should not be taken on empty stomach.

**National Vector Borne Disease Control Programme**

Government Health Centers take anti malarial steps under this programme as follows.
- Blood sample of all patients with fever are taken by health worker.
  For this, thin and thick smears are prepared
- The smears are tested and malaria is diagnosed if the parasite is present.
- Once malaria is diagnosed, the patient it given radical treatment free of cost as per the advice of the doctor or the health worker with Chloroquine.
Please remember, primaquine tablet should not be given to pregnant mother and child below one year of age.
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* Preventive measures

- All the places which are possible breeding grounds for mosquitoes e.g. ditches, puddles of dirty water should be filled up with mud or the water should be emptied/disposed
- Burnt oil should be poured in puddles and water logged places. This will prevent mosquito breeding.
- Use mosquito net, medicated mosquito net is more effective.
- Fumigate the house with neem smoke. Apply neem oil on exposed parts of the body, this will reduce mosquito bites.

**Role of a teacher**

In order to help early diagnosis:
- Assist the health worker in identifying children who have fever.
- Ensure that blood sample of every child suffering from fever is taken.
- Educate members of the community about the fact that blood sample of a child should be tested for malaria whenever the child has fever.

**For treatment and referral services**

- It should be ensured that complete treatment is provided to children tested positive for malaria, along with their family members. They should also be explained the importance of Chloroquine.
- If a child with fever display following Symptoms
  - Uneasiness
  - Dizziness
  - Difficulty in sitting/standing
  Such child should be immediately taken to the nearest dispensary or hospital.

**Preventive Measures**

Create awareness about the preventive measures mentioned earlier.
**Human immunodeficiency virus (HIV)** is a lentivirus that causes acquired immunodeficiency syndrome (AIDS), a condition in humans in which the immune system begins to fail, leading to life-threatening opportunistic infections. The virus can only be detected through a specific blood test. An HIV positive person appears as normal as any other person. HIV spreads in following ways:

- Unprotected sexual intercourse with an infected person
- HIV Infected blood transfusion.
- When injecting equipment that has been used by an infected person is then used by someone else.
- From HIV positive mother to her child during or after pregnancy.

HIV does not spread through -

- Touching or kissing an infected person
- Playing or swimming with an infected person
- Using a toilet which was earlier used by an infected person.
- Mosquito bite
- Sharing utensils, clothes, towel and other items with the infected person

**Risky Sexual Behavior**

Risky sexual behavior is the major reason for the spread of HIV/AIDS. Having sex with multiple partners without using condom is a risky sexual behavior. People like truck drivers, who live away from their family for a long period, normally indulge in such behavior. In India, women are more prone to be infected by HIV/AIDS mainly because of their poor economic condition, lower social status and gender inequality. The existing social structure and separate social norms and rituals for man and women greatly influence sexual activities and risky behavior and therefore women are affected more compared to men. Women find it very difficult to convince her husband or sexual partner to use condom or get treatment for a sexual disease.

In our country, in more than 85% cases, HIV/AIDS is spread through unprotected sexual activities. Risky groups are not large in numbers. However there are some people whose behavior is very risky which make them and other who come in to their contract susceptible to HIV/AIDS.

**Window Period**

If a person has indulged in risky behavior i.e. if he/she have sex with an HIV positive or a potentially risky partner, it takes 6 to 12 week for the HIV test to reveal its positive status. This period is called the "Window period" Therefore such person should allow six to 12 weeks to pass before getting his/her blood tested for HIV.

* AIDS is a disease

**Symptoms**

- Continuous loss of weight
- Constant diarrhea
- Fever or sickness for more than a month
- Minor symptoms like chronic cough, itching, rashes, sores in mouth which do not heal, inflammation of lymph node in the root of the thigh and frequent illness.

AIDS is treated as a social taboo and often the woman suffering from AIDS is often kicked out of the house. We can help in avoiding this situation; we can join hands with organizations and associations working for HIV positive persons.

You can help in preventing HIV/ AIDS. Prevention is the only way to be saved from disease. Following points are very important in this regard.

- Generate awareness in the community regarding the risk of getting affected and how HIV is spread. It is important to convince men and women not to indulge in sex with multiple partners.
- Use condom every time you have sex
- Counsel people to get tested for HIV

A woman looks after her family. But if she is infected with HIV, she does not receive necessary care and support from her family. Therefore counseling plays an important role for family. Insist up on using condom and early diagnosis of sexually transmitted diseases. After diagnosis, take complete treatment and insist up on getting the sexual partners treated also. Many hospitals provide exclusive treatment to pregnant women. HIV positive pregnant women are provided counseling there and then their blood is tested for HIV and if she is HIV positive, she is treated there. This reduces the possibility of her child getting infected. Along with sex education, it is important to generate awareness about healthy family life among adolescents.

Almost all the district hospitals have the facility to test blood for HIV. Counseling has been linked with the test for HIV/AIDS.

**Role of a teacher**

Students in higher secondary schools should be told how HIV spreads and how it is not spread.
**Obesity**

* **Role**
  It is better to be healthy but not obese. Obesity is one of the most alarming problems in the world. Half of the amount spent for consuming food is spent for removing obesity. Obesity is a kind of disease that develops as a result of enjoying sweets, fried and spicy food. People realize its adverse effects much after the disease has set in. People accept the disease gleefully. But this disease bring along many other diseases uninvited. In a way, this disease comes not alone but with its entire family. It is necessary to be careful about the food habits in order to prevent it.

We often find people living with the philosophy that life is for eating. We should completely reverse this kind of life style and start eating for longer life. It is easy to prevent obesity with appropriate use of science, awareness about proper and nutritious diet and adopting a scientific outlook.

Carbohydrates, protein, fat, vitamins, minerals and water are important nutrients for proper functioning of our body. Fat provides twice amount of calorie compared to carbohydrates. But fat is also the root cause of obesity.

Normally, an adult should take 80 gram of fat in his / her daily diet. Oily food, butter, ghee, meat, eggs are rich source of fat.

**What causes obesity?**

**Factors that cause obesity**

- Obesity in seen in people of all age groups. The prime factor of obesity is excessive fat.
- Excessive consumption of meat, fish, ghee, oil, potato etc. leads to obesity as they are rich in fat (calorie).
- Lack of physical activity or out door games because of T.V., computer, video games.
- Decrease in physical exercise.
- Lack of scientific approach towards food and diet.
- Non inclination towards Yoga-Pranayam and other exercises.
- Lack of awareness that there should be a gap of 2-3 hours between dinner and retiring to bed at night.
- Fast life
- Stressful life style
- Excessive consumption of food
- Fat deposits in body because of consumption of ghee. Fat contains fatty acid and it increases cholesterol. This increases the possibility of heart attack.
- If one or two hours are spent religiously for body everyday, the remaining part of the day passes of without any trouble. Lack of this understanding leads to obesity.
- Excessive use of fast food and baby food.
- Blind imitation of modern or western life style
  - “Avoid Bread Butter” philosophy
  - Taking of simple but balanced diet habit

- **Symptoms of obesity (Effects of obesity)**
  Effects of obesity are quite dangerous. An obese person starts feeling weight of his / her own body and experience following difficulties.
- Breathlessness during walking or running.
- Excessive sweating that leads to quick loss of water from body.
- High pulse rate, fatigue after any physical activity
- If the disease acquires serious proportion, it may lead to heart attack. Accumulation of cholesterol in arteries creates blockage to flow of blood.
- Body looks ugly
- Efficiency decreases
- In the long term, increase in population of obese people creates adverse effect on the national economy. In order to save ourselves from this situation, let us imbibe the spirit of "Be Healthy Be Happy" in life. Let us work towards making the world healthy. If the youth is enlightened, obesity shall vanish and people will become more active, which is the need to the time.

**Role of a teacher**
- Advise and motivate children to take healthy food.
- Explain the importance of regular exercise.
Tobacco Control and Role of Teachers

Mental and physical health contributes immensely towards formation of a healthy society. In this century, diseases linked with addiction, particularly to consumption of tobacco, have increased despite the spread of education and knowledge. Tobacco use is the leading preventable cause of death in the world. Statistics released by WHO indicate that in the year 2005, 5.4 million people died because of consumption of tobacco. If this trend continues, it is estimated that more than 100 crore people will die of tobacco related disease by the end of this century in the world and almost 80 crore of them will die in a developing country like India.

Number of death caused by tobacco consumption is increasing in the country. More than one million people die in India because of smoking and tobacco consumption. According to National Family Health Survey - 3 (2005-06), 57% men and 11% women consume tobacco in India. In Gujarat, 60% men and 80% women consume tobacco.

According to Global Youth Tobacco Survey -2003, conducted in Gujarat, 29.3% of boys and 4.3% of girls studying in the std.-8 to 10 consume tobacco. It is presumed that 20% more students shall start consuming tobacco during the next year.

About Cigarettes and Bidis

- Cigarettes contain more than 4000 chemicals and from among these 4000 chemicals, 70 are cancer producing agents.
- Content of nicotine and tar is found twice as much in passive smokers compared to active smokers.
- Carbon monoxide is found five times more in these agents which decrease oxygen in blood.

<table>
<thead>
<tr>
<th>Cancers</th>
<th>Chronic Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larynx</td>
<td>Stroke</td>
</tr>
<tr>
<td>Oropharynx</td>
<td></td>
</tr>
<tr>
<td>Trachea, bronchus or lung</td>
<td>Coronary heart disease</td>
</tr>
<tr>
<td></td>
<td>Pneumonia / tuberculosis</td>
</tr>
<tr>
<td>Diseases at highest risk</td>
<td>Chronic obstructive</td>
</tr>
<tr>
<td>- Chronic respiratory, Symptoms, asthma, tuberculosis and recurrent chest infections</td>
<td>Pulmonary disease (COPD). asthma and other respiratory effects</td>
</tr>
<tr>
<td>- Coronary heart disease</td>
<td></td>
</tr>
<tr>
<td>- Lung cancers</td>
<td>impotence</td>
</tr>
<tr>
<td>Smoker's Gangrene (Buerger's disease)</td>
<td>Health effects specific to women</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td></td>
<td>- Reduced fertility</td>
</tr>
<tr>
<td></td>
<td>- Spontaneous abortion</td>
</tr>
<tr>
<td></td>
<td>- Low birth weight babies, still</td>
</tr>
<tr>
<td></td>
<td>births</td>
</tr>
<tr>
<td></td>
<td>- cancer of the cervix</td>
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</tbody>
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Benefits of Quitting Smoking

<table>
<thead>
<tr>
<th>Benefits of Quitting Smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quitting makes you feel better and you start tasting food better.</td>
</tr>
<tr>
<td>2 hours after quitting: nicotine is out of the system.</td>
</tr>
<tr>
<td>12 Hours: carbon monoxide is out of the system and lung function being to improve.</td>
</tr>
<tr>
<td>2 day: sense of smell improves; physical activity becomes easier and more air gets into the lungs.</td>
</tr>
<tr>
<td>2 months: lungs work more efficiently and are able to remove mucous; blood flow to the limbs improves.</td>
</tr>
<tr>
<td>12 months: risk of heart disease is half that of a continuing smoker.</td>
</tr>
<tr>
<td>10 years: risk of lung cancer is less than half that of a continuing smoker.</td>
</tr>
<tr>
<td>15 years: risk of heart attack and stroke is almost the same as a person who has never smoked.</td>
</tr>
</tbody>
</table>

Financial Benefits of quitting smoking

- One tobacco pouch Rs.4; daily consumption of 20 pouches
- Daily expense Rs. 80
- Monthly expense - Rs. 2400
- Yearly expense - Rs. 28800
- At this rate, approximately Rs. 3 lakh can be saved in 10 years

To protect people from the dangerous health effects of Tobacco, the Government of India enacted a national Tobacco Control Act named Cigarette and Other Tobacco Products Act, 2003 (COTPA)

<table>
<thead>
<tr>
<th>Section of the Act (COTPA, 2003)</th>
<th>Provision in the Act for educational institutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section - 6 (A)</td>
<td>Prohibition on the sale of cigarettes or other tobacco products to a person below the age of 18 years.</td>
</tr>
<tr>
<td>Section - 6 (B)</td>
<td>Prohibition on the sale of cigarettes or other tobacco products in an area within a radius of one hundred yards of any educational institution.</td>
</tr>
</tbody>
</table>
Tips to develop Tobacco Free schools

(1) A board mentioning "Tobacco free school" or "Tobacco Free Educational Institute" should be displayed at the main entrance.

(2) Smoking and tobacco use in the premises should not be allowed to anybody including teachers / students/ school staff/ visitors etc.

(3) A 60 x 30 cm. board, clearly mentioning "No smoking area, Smoking here an offence" (As approved under the Act) should be displayed in the premises of the school.

(4) A "Tobacco Control Committee" should be formed under the chairmanship of the administrator / principal of the school.

This committee should comprise the school science teacher or other teachers, school counselors (if any), at least two NSS/ NCC/ SCOUT students, at least two representatives of the parents, local MLA, local SHO, Municipal Councilor, member of Panchayati Raj Institute and other members. The committee shall monitor the activities for Tobacco Control. The committee shall meet quarterly and send its complete report to district administration.

(5) State Nodal Officer for Tobacco Control should be consulted.

Role of a teacher

Chanakya has proclaimed "A Teacher is always special as destruction and creation both are nurtured in his lap."

A teacher is the sculptor of the society. For small children, the teacher is an idol who commands more respect and influence than their parents and other family members. If teachers play an active role for tobacco control, the future generation can definitely be saved from the destruction which consumption of tobacco is likely to bring. This may herald the rise of a healthy society.

(1) There is a famous story about Lord Buddha who gave up eating jaggery before advising others to stop eating the same. Similarly, before advising the students to quit tobacco, the teacher himself should quit smoking or consuming tobacco. He/she should lead by example.

(2) Teachers should show the students the chart and explain how tobacco is consumed in different ways and then explain to them the harm it causes.

(3) A street play demonstrating the dangerous effects of smoking and tobacco consumption should be enacted.

(4) People who have already suffered from smoking and tobacco consumption should be invited to deliver lectures to the students. Such a lecture can create a deep impact on the minds of the students. In Mahabharat, Duryodhan says:
"I know what is dharma' but I am unable to follow it;
I know what is adharma' but I am unable to give it up."
The examples of Buddha and Duryodhana are before you. It is up to you teachers to decide Whom to follow.
Introduction

Normally, when a student passes through the primary and secondary levels of education, he/she also passes through adolescence. During adolescence, boys and girls experience major physical and mental changes and at times they find it difficult to cope with these changes because of lack of proper knowledge. Their frustration and anxiety often affect their studies. During this phase, students should be asked sympathetically to express their problems and they should be explained the solution so that they do not feel stress during their studies on account of the changes their bodies undergo.

To study the mental condition and the adolescence, one needs to observe their growth closely and constantly from the age of 12 to 16 years. According to Vinoba Bhave, adolescence is the 'spring of life' (Vasantotasava). Some philosophers call it the "Golden Period". However, for many reasons, school-going children encounter a number of problems and illness during this period in their lives.

Adolescence - A transition from childhood to puberty
- This period is marked by rapid growth and development
- Children undergo major physical and mental changes during this period
- It is important to pay special attention to the health of adolescents as the status of health and productivity largely hinge on their sobriety.

As they enter puberty, their body undergoes major physical changes as hormones start secreting. In order to cope with this onslaught of rapid mental and physical changes, they need warmth and support of the elders.

As their faculty to think develops, they begin to think about themselves, their friends, and family and this is quite visible in their behavior. They start taking independent decisions and show an inclination to assume responsibility.

* Three stages of adolescence
  Early: Primary stage of adolescence lasts from the age of 11 to 14. In this period, they start to realize the changes.
  Middle: During this stage i.e. from the age of 14 to 16, their sexual organs develop and they start getting attracted to the opposite sex.
  Late: During the later stage of adolescence, they develop understanding about their personality and start planning for a definite future.
### Changes that occur in girls

<table>
<thead>
<tr>
<th>Change in breasts: Almost all girls experience growth of breasts during puberty. The growth is heralded with a lump like swelling just beneath the nipples. The swelling continues gradually over the years. During the initial growth, size of one breast may be smaller than the other. This is normal. Subsequently, when they achieve their full growth, their size appears almost similar.</th>
<th>Growth of body: Hands and legs develop more rapidly compared to other limbs. Shape of the body: Adolescents grow in height; their shoulders become wide, weight increases considerably. Many boys feel swelling beneath their nipples. They palpably feel they might develop breasts and therefore get worried. Their muscles also develop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hair: Hair starts growing around their sexual organs. The hair turns thick and curly. Hair also grows on hands, legs and under the armpits.</td>
<td>Voice: Voice becomes hoarse.</td>
</tr>
<tr>
<td>Shape of Body: Buttocks grow to become wider and waist becomes slender. Fat starts accumulating on buttocks and legs. This is normal and as a result, a girl's (Woman's) body develops curves.</td>
<td>Hair: Hair start growing around sexual organs, on hands, face, chest. However, all men do not have hair on their chest.</td>
</tr>
<tr>
<td>Size of Body: Growth of hands, legs is more and faster than other parts of the body.</td>
<td>Skin: Becomes oily and perspires more</td>
</tr>
<tr>
<td>Skin: Skin becomes oily as the gland producing oil in the body becomes active. As a result, acne start appearing in the face. Acne appears on adolescents' face at some point during adolescence.</td>
<td>Sexual organ: Size of crotch increases. With more secretion of testosterone, penis gets erect and tight during sexual excitement or otherwise also. This is common. At times the erect penis discharges semen in sleep which is known as &quot;night fault&quot;</td>
</tr>
</tbody>
</table>

### Questions to be asked to depressed students in the class.

1. Do you sleep easily?
2. Do you feel hungry?
3. Do you find talking to people interesting?
4. Why have you developed a negative attitude?
5. Do you get angry soon?
6. Do you feel irritated?
7. Do you feel sad?

After asking these questions to the students, it is essential to contact an expert psychiatrist to counsel the students if required. If depressed students do not get treatment in time, they take shelter in smoking and other bad habits. They may turn to criminal activities or commit suicide. Therefore, it is important to hold their hands and walk a few steps with them to reassure them.
Study of adolescence

According to World Health Organization, period from the age of 10 to 19 is the period of adolescence. In order to help the students build their respective careers properly and resolve their problems arising out of adolescence in a relaxed manner, it is necessary for the teachers to study this important period of their life in depth. Following points may help towards that end.

1. For healthy growth of adolescent students, simple but nutritious food, healthy thought process and outdoor activities including sports are necessary.
2. Sexual Attraction: During adolescence, a student gets attracted to people of opposite sex. He/she needs to be guided with care and proper education during this delicate period.
3. Intelligence: Intelligence during adolescence is poised to be molded in a manner that it may equip him/her to handle any situation in the future with diligence and positive frame of mind.
4. Influence: Students try to impress people during adolescence.
5. Appearance: They become conscious about their look and appearance.
6. Morality and ethics: This is an important period to help students imbibe moral values and cultivate ethical conduct.
7. Role model: A student can go on to become a role model for his peers and the generations to follow if he/she is imparted with proper guidance and profound vision.

Role of a teacher

- A teacher should provide scientific explanation for the physical changes that take place during adolescence.
Imparting health education to students is an integral part of the duty of teachers. Teachers can play an important role in educating students about how to adopt a healthy lifestyle. Imparting health education in childhood goes a long way in helping the students to cultivate healthy habits based on proper health education. Healthy habits have positive influence on their conduct and attitude. The child develops into a sensible and responsible citizen and becomes instrumental in creating a healthy society. A teacher is supposed to perform many tasks that involve various responsibilities. However, if primary teachers concentrate their attention on aspects which are absolutely essential at the primary level, they will bring significant change not only to the lives of the students, but to the lives of their families and the society and will be able to bring noticeable change in their overall lifestyle.

* Personal hygiene and principles of Health

1. Washing Hands: Children should be taught to wash their hands with soap and water after defecation and before having meal. If soap is not available, they may use ash which is normally available in homes in villages.

2. Children should bathe everyday in clean water and with soap in order to prevent skin diseases, scabies, itching.

3. Children should brush their teeth regularly in the morning and before retiring to bed at night. They may use brush, datun or salt and oil for cleaning teeth.

4. All clothes including inner wares and bed sheets, towel should be washed and kept clean. Do not share your clothes with others.

5. Wash your hair at least once in a week and apply oil to them regularly.

6. Do not walk barefooted. Always wear footwear when you step outside your home.

7. Do not spit in the open. This may spread germs if you are affected with any infectious disease. Cover your mouth with hand or handkerchief whenever you cough or sneeze.

8. Keep your fingernail clean and cut them once in a week.
* **Cleanliness of water and food.**

  9. Fetch water for drinking and cooking from tapped a water source, covered well, hand pump. This will protect children from diseases. Store drinking water in a clean pot/utensil. This utensil should be rinsed and cleaned regularly. Earthen pots (*Matakas*) should be kept covered with a lid. Take care that the fingers do not touch the water while drawing water from the pot. Use a ladle for drawing water. Water should be boiled for at least 10 minutes to make it safe for drinking. Food should be kept covered and should never be exposed to bees and germs which are responsible for spreading infection.

  10. Clean Environment: Always use closed latrines. Do not defecate in the open, particularly nearby a water body otherwise the water bodies will be contaminated leading to water borne diseases like diarrhea, vomiting, dysentery, typhoid, jaundice and polio.

  11. Dispose rubbish in the waste container only.

  12. Prepare soak pits for disposal of used water or develop a kitchen garden in the premises of your home / school to utilize the used water. Do not dispose water in the open. It becomes a breeding place for mosquitoes spreading diseases like malaria, falaria (elephantiasis)

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**Role of a teacher**

- Inculcate good habits in to students.
Balanced Diet

It is necessary to provide balanced diet to a child for his / her healthy physical and mental development. Inadequate food or lack of nutrients in food leaves the child malnourished. A child remains malnourished more because of lack of knowledge and understanding regarding healthy habits, poverty or insufficient food. Teachers should be well informed about the importance of adequate and balanced diet so that they can educate the students about it.

Balanced Diet:

Balanced diet includes all the following essential ingredients. Mainly food can be classified into following four categories and we should include some food in our diet from each of these four categories.

1. **Staple Diet:**
   
   Foods that provide energy fall under this category. They are easily available sources of energy or calorie. The more physical work a child does, the more energetic food he / she should take. Energetic foods mainly consist of the following.

   - **Grains:** Wheat, rice, jowar, maize, ragi
   
   - **Food containing starch:** Potatoes, sweet potatoes, sabudana
   
   - **Fruits rich in starch:** Banana, chiku

2. **Foods rich in protein**

   Protein helps build the body. Protein is necessary for proper growth of the body. It is necessary for the development of body muscles and other organs of the body. Every human being must take foods that provide protein in adequate proportion to the body.

   Energy rich foods do not provide protein in required proportion. Our diet must consist following items in our diet.

   - Pulses, peas, gram
   - Milk, curd, butter, eggs, meat, fish etc.
   - Soybean and grams are rich in protein
   
   A fistful of grams or groundnuts provide sufficient protein to the body.

3. **Fatty food**

   Food rich in fat provide much calorie and sugar to the body. Excess fat deposit in our body and whenever the body requires energy, our body converts fat in to sugar. Therefore, our diet must contain some foods which provide fat or oil to the body. Food items that provide extra energy to the body are as follows.

   - **Fats:** Oil, butter, meat,

   - **Food rich in fat:** Fruits that have dry carnal, groundnuts, butter
Sugar: Sugar, honey, jaggery

4. **Foods rich in Vitamins and minerals**
   Vitamins are part of our diet. Vitamins and minerals protect bones, teeth and blood. They help the body to work efficiently. Deficiency of Vitamins and minerals weakens the body and brings illness.

**Foods rich in Vitamins and minerals**
- Green leafy vegetables - Palk
- Dark yellow vegetables - carrot, pumpkin
- Other vegetables, tomatoes
- Papaya, *Avala*, orange, mango, lime

**Example of foods rich in salt**
- Small grains e.g. millet, ragi etc. which are rich in calcium and iron
- Jaggery and *Amali*
- Green leafy vegetables
- Sea algae

* **What is balanced diet?**
Balanced diet means diet that provides sufficient proportion all the essential ingredients necessary for keeping the body healthy. Every human being must take some food from each of the four categories mentioned above. Some people take excessive amount of foods rich in pulses, gram, leafy vegetables and fruits in adequate amount. They remain malnourished.

**Role of a teacher**
Educate children about balanced diet and explain to them why we should include foods of all the abovementioned categories in our diet.
A teacher has an important place in society. They command respect from not only the students but their parents also. A teacher can play an important role in motivating their students and their families for cultivating good food habits. They should remain in close contact with the parents in the students through parent teacher meetings.

1. **Vaccination**
   Children should be immunized against all the diseases which can be prevented by vaccination. All primary Health centers vaccinate all children free of cost. Parents should be educated about the following scheduled of vaccination.

### National Vaccination Schedule

<table>
<thead>
<tr>
<th>For pregnant women</th>
<th>T.T.1 (Injection)</th>
<th>T.T.2 or T.T. Booster (Injection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- During early pregnancy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- After one month of T.T.1</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For Children</th>
<th>BCG (Injection and OPV (&quot;O&quot; dose))</th>
</tr>
</thead>
<tbody>
<tr>
<td>- At the time of birth</td>
<td></td>
</tr>
<tr>
<td>- In the sixth week</td>
<td>- BCG (If not immunized at the time of birth) - DPT-1st dose (Injection) and OPV-1st (oral drops)</td>
</tr>
<tr>
<td>- In the 10th week</td>
<td>DPT-2nd and OPV-2nd</td>
</tr>
<tr>
<td>- In the 14th week</td>
<td>DPT-3rd and OPV-3rd</td>
</tr>
<tr>
<td>- After 9 months</td>
<td>Measles (Injection)</td>
</tr>
<tr>
<td>- Between 16-24 months</td>
<td>DPT- Booster and OPV Booster dose</td>
</tr>
<tr>
<td>- At the age of 5-6 years</td>
<td>DT (Injection)</td>
</tr>
</tbody>
</table>

If there is no concrete evidence of providing DPT earlier, second dose of DT should be given after one month.

<table>
<thead>
<tr>
<th>- At the age of 10 and 16 years</th>
<th>TT (Injection)</th>
</tr>
</thead>
</table>

If there is no concrete evidence of providing DPT, DT or TT earlier, second dose of TT should be given after one month.

### Treatment for ordinary diseases

**Diarrhea:**
This is a common (ordinary) disease seen among children. Diarrhea spreads due to contaminated water and...
food. Parents should advice their children to drink safe water and maintain personal hygiene. In diarrhea, parents should be advised to -
- Give liquid to the child frequently, clear rice water, clear dal water, lassi, ORS, water are some of the alternatives.
- Keep feeding the child during diarrhea.
- Contact health worker if the child gets irritated, lapses in to drowsiness and refuses to eat or show other symptoms like frequent vomiting, passing blood in stool etc.
- Do not give antibiotic or other medicines if it is ordinary diarrhea. Do not give any medicine without consulting a doctor.

Pneumonia
Pneumonia is manifested among children in the form of excessive cough and respiratory problems. If a child feels any difficulty in respiration, he / she should be immediately taken to a doctor for treatment because the child may have developed pneumonia and there is a threat to his / her life if not treated immediately.

3. Nutrition
A weak and malnourished child is susceptible to infection. Physical and mental development of a child is largely based on the fact that how he / she was nourished during the childhood. Teachers should educate parents, particularly women about the benefits of exclusive breast feeding.
- A child should be exclusively breast fed for the first four months after the birth. If the child is breast fed adequately, he / she do not require any other liquid.
- After four months, start feeding the child with semi liquid foods like smashed potato, smashed banana, Kichadi, rice and dal etc. in addition to mother's milk. Increase the amount of food gradually as the child grows up.
- When a child reaches the age of two, he / she needs half of the food as required by he mother. Importance of this fact must be emphasized. A child should then be fed five or six times in a day with small quantity.
- Breast feeding should be continued for as long as possible.

Symptoms of common diseases in children
Table showing diagnosis, treatment and necessary advice

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>See / Ask</th>
<th>Possible diagnosis</th>
<th>Treatment and Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>By Health Worker</td>
</tr>
<tr>
<td>1.</td>
<td>Paleness of nails and tongue?</td>
<td>If yes, Anaemia</td>
<td>- Give tablets of iron and folic acid for 12 weeks</td>
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<td></td>
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<tr>
<td>2.</td>
<td>Worms passing in stool?</td>
<td>If yes, worm, infection</td>
<td>- Give de-worming medicines</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td>Complaint about passing blood and pus in stool?</td>
<td>If yes, Dysentery</td>
<td>- Give tablet <em>Metronidazole</em> for seven days</td>
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<td></td>
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<tr>
<td>4.</td>
<td>Can see in dim light or during night time?</td>
<td>If no, Night blindness (Deficiency of vitamin-A)</td>
<td>- Give 2 ml, solution of vitamin - A - Give similar dose after one month</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ધણી ભાષાતઓ પ્રત્યે બદલથી આપવામાં થોડો વધારે કરી શકાય છે
કેટલાંક ભાષા પ્રત્યે નહીં
તદેશમાં તેના હાલનું નિર્માણ ઘર રહ્યુ હોય છે
તેનામાં લોહી અને રહ્યુ હોય છે
તેનું ચેટાલંગ બિકસી રહ્યુ હોય છે
‘આપતી કાલ’ તેનો પરસ્પર તેને ન આપી
શકાય
‘આજ’ એ તેનું નામ છે.

(ગ્રેિન્ચેલા મિસ્નાલ
અંગ્રેજી ક્રિયત પરથી)