

Health Guide For Teachers in School Health Work

SCHOOL HEALTH PROGRAMME



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PREFACE

It is estimated that one-fifth of the country's population is comprised of school going children. Hence health care of this group assumes paramount importance. Although school health service is considered important among the national priorities in health, this service is largely unavailable for want of resources both in personnel and in kind. It is impracticable for a country like ours to have a system in which we have physicians to take direct responsibility for the care of school children.

The role of teachers in health care of the community is increasingly being recognised. They certainly can share part of the responsibility in school health work. Based on this philosophy, the community health department of M. G. D. M. Hospital has launched a new system of school health work involving teachers in the various levels of health care delivery to pupils. This publication is intended as a guide for our teachers who are so graciously involved in this new venture.

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SECTION I

INSTRUCTION AND STANDING ORDERS

(a) HOW TO RECOGNISE A SICK CHILD ?

The teacher is in a unique position to carry out 'daily inspection' of children as he is familiar with children and can detect changes in the child's appearance or behaviour that suggest illness. The following clues will help the teacher in suspecting that the child is ill. (1) Child is less active is irritable and fretful and not attentive in the class (2) Has an unusually flushed face. (3) Has red or watery eyes. (4) Has rashes or spots on the body or face (5) Has a running nose, or sneezing (6) Complains of sore throat (7) Complains of ear-ache (8) Has a rigid neck (9) Has swelling over the face and other regions eg. Mumps, Dental abscess.

Then what do you do?

Inspect child closely to assess the seriousness of the child's problem, Take a history as to the duration and severity of the symptoms. Try to assess if the child's condition is serious enough to send for medical aid. Decide if the child has any one of the communicable diseases such as mumps, chicken pox, which are highly infectious; if so, the child should be removed from the school environment as early as possible.

(b) COMMON SYMPTOMS AND THEIR MANAGEMENT

Fever

Is a common symptom of many diseases especially the infectious diseases such as chicken pox, measles, mumps etc: Record the temperature. If the fever is high (over 101°—102°F) child needs to be sent to the doctor immediately. Look for rashes or spots on the body or face; look for swelling on face and check angle of the jaw for mumps. Examine throat for inflamed tonsils. If the child has none of the above symptoms and is otherwise well, symptomatic treatment with antipyretics (Aspirin) may be tried for 1 or 2 days. If the fever persists after 2 days, send the child to doctor,

Cough and Cold

If the child has got cough and cold with not much of fever or respiratory difficulty, he may be treated for a short period with a cough syrup. If child is not well after 48-72 hours or develops difficulty in breathing or any other serious symptom, he should be referred to the doctor.

ACHES AND PAINS

Headache:

Mild headache of short duration associated with a running nose and bodyache is caused by influenza. These children can be treated symptomatically for short periods with cough syrup and analgesics such as aspirin. Headache is often caused by stress or strain, tension, sleeplessness etc. These cases can be treated with rest and analgesics such as aspirin. But if headache is persistent or recurrent, medical help shall be sought. Headache can be a symptom of severe brain disease such as meningitis or, encephalitis, or brain tumour if it is associated with vomiting. If any child who has headache and also has of vomiting, shall be sent to the doctor immediately.

Tooth-ache:

For temporary relief of tooth-ache, clean the cavity with a swab of cotton wool on a toothpick; then pack the cavity with a bit of sterile cotton wool dipped in oil of cloves. Be careful not to drip the oil on the gums or tongue; it burns. If the pain comes not from a cavity but from some part of the gums or jaw, hold a hot-water bottle to the face on the side that aches. Aspirin may help to relieve pain temporarily. Send the pupil to a dentist if pain persists.

Earache:

If foreign body or discharge is not found, give aspirin. Refer to the doctor if the child is not better after a period of observation.

Abdominal pain

May be caused by diet upsets, dyspepsia or gaseous distension of stomach, but could also be caused by serious disease such as appendicitis. Suspect appendicitis if the child complains of

vomiting along with pain in abdomen which starts at the umbilicus (Navel) and is associated with vomiting and fever. Give the child a few doses of carminative mixture $\frac{1}{4}$ oz. three times a day (diluted) for 1 or 2 days. If the symptom persists, send the child to the doctor.

Vomiting

Any child who has serious vomiting (more than one or two bouts) should be sent to the doctor.

Diarrhoea

Simple diarrhoea (loose, frequent, excessive bowel movements), resulting from dietary indiscretion, change of food or water, or from fatigue or tension, usually subsides in 12 to 48 hours. Relief is best accomplished by refraining from food for the first 18 to 28 hours. Because the body is dehydrated, replacement of fluids is important. Give the patient weak tea, lime juice, salted or salty broth every hour or after every bowel movement. Liquids should be tepid (not hot, not cold). Rest in bed may hasten recovery. When bowel movements have ceased for 18 hours, begin feeding the patient a light, bland diet—bread, kanji, well cooked rice, butter milk and liquids as above. Avoid spicy foods and do not use laxatives. If diarrhoea persists, consult the doctor. Severe diarrhoea with a large number of watery stools can be serious and the child should be hospitalised.

(c) EMERGENCIES AND FIRST AID

First aid for emergencies are given in alphabetical order for easy reference.

Bites—Animal

Wash the wound immediately under running tap water to flush out the animal's saliva. Then wash the wound for five minutes with a gauze dressing and plenty of soap and water. Rinse thoroughly with running water and cover with a dressing. Consult a doctor immediately.

Bleeding—Severe

Get the child to lie down to prevent fainting. To stop the bleeding, press a sterile gauze dressing or a clean handkerchief,

firmly over the wound with your whole hand. If the dressing becomes saturated with blood, lay a fresh dressing directly over the saturated one and continue pressure. If bleeding from an arm or leg cannot be stopped by direct pressure over the wound, try shutting off circulation in the artery supplying the blood by pressing firmly against it with the palm of your hand. Apply a tourniquet or tie with a handkerchief. Not to give things to drink, this may result in delay in setting the bones under an aetherla which requires that the stomach should be fully empty above the wound. Release the tourniquet after 10 minutes. If the bleeding continues, send child to hospital after reapplying it. When the bleeding has stopped, bandage the dressings in place firmly, but not so tightly that you can't feel the pulse below or beyond the wound. Send the pupil to a doctor.

Bones—Fractures

While waiting for the doctor, keep the patient warm, and treat for shock if necessary. If the broken bone protrudes through the skin and there is severe bleeding, stop the bleeding, but do not attempt to push the bone back in place. Make no attempt to clean the wound. Wait for medical aid. If no doctor is available and the pupil must be moved to receive medical aid, dress the wound if any. The fracture should be immobilised with splints to prevent further damage. For splints, use anything that will keep the broken bones from moving; newspapers or magazines for arms, I boards for legs. Make the splints long enough to reach beyond the joints above and below the fracture site.

If the limb must be straightened before splints can be applied, support the limb with a hand on either side of the fracture site while someone gently eases it into a position as nearly natural as possible. Pad improvised splints with cotton wool or clean rags and tie them snugly (but not too tightly) in place with bandages, belts, ties or strips of clothing. Body splinting may also be used: a fractured forearm against the chest for instance, or an injured leg against the sound one. Splinting is done merely to immobilize the fractured limb. If possible, don't splint and don't move the patient at all. If the fracture is in the back, neck, pelvis or skull, don't attempt to move the patient. Don't assume that no bones are broken merely because the child can move the injured joint or limb. To avoid complications, get a doctor promptly. Do

not give fluids to drink, this may result in delay in setting the bones under anaesthesia which requires that the stomach should be fully empty.

Broken Neck or Back

If the child cannot move his fingers readily, or if there is tingling or numbness round his shoulders, his neck may be broken. If he can move his fingers but not his feet or toes, or if he has tingling or numbness in his legs, or pain when he tries to move his back or neck, his back may be broken. Loosen clothing round neck and waist. Cover the child and summon a doctor or ambulance. Don't move the child for examination. Don't lift his head to give him water. Don't let him try to move. The spinal cord extends down through the neck and back vertebrae, and any pressure or movement may cause damage to the spinal cord and result in Paralysis.

Burns — Chemical

Sluice the burned area thoroughly with water to dilute and remove the chemical. Then treat as you would a comparable heat burn. If an eye is burned by a chemical, sluice the eye gently but thoroughly with sterile water or with a saline solution. Cover the eye with a sterile dressing and consult a doctor immediately.

Burns and Scalds — Minor

Run cold tap water over the burn to reduce the pain. Wash your hands thoroughly before touching the burn. If the skin is not blistered, smooth on petroleum jelly and cover the burn with several dressings, one on top of the other. If the skin is blistered, cover the burn with sterile dressings, to prevent contamination. Don't apply ointment, oil or antiseptic. Don't break or drain the blisters.

Caution: Minor (superficial) burns or scalds may be dangerous if large areas are involved. Send the pupil for Medical attention.

Convulsions (Fits)

In convulsive spasms the child's lips turn blue, his eyes roll upwards, his head is thrown back, his body is jerked by uncontrollable spasms. Don't try to restrain convulsive movement. Place the child on the floor, and turn his head to one side to allow saliva to drain. Move furniture so that he cannot injure himself. Put a rolled handkerchief between his teeth to keep him from biting his tongue. If he is feverish, place cool, wet cloth on his forehead and sponge his body with cold water. When the spasms subside, make him as comfortable as possible. Convulsions do not usually last more than a few minutes. If the pupil is not known to have had convulsions in the past, send the child for urgent hospitalisation.

Cuts, Scratches, Abrasions

1. To minimize the possibility of infection, wash your hands thoroughly before treating any wound. Using sterile gauze, clean the skin round the wound with soap and running tap water. To avoid contamination wash away from the wound, not towards it.

2. When the area round the wound is clean, wash the wound itself with soap and running tap water for five minutes, using a fresh piece of gauze for each swabbing. Clean out all dirt and debris. If it is necessary to use tweezers to remove debris, boil them first for ten minutes or sterilize them in the flame of a spirit lamp.

3. Using sterile gauze, apply mild antiseptic to the wound and the skin surrounding it.

4. When the antiseptic is dry, cover the wound with sterile gauze held in place by bandage or adhesive tape.

5. Watch carefully for the signs of infection - which may not appear for several days: (a) a reddened, hot, painful area surrounding the wound; (b) red streaks radiating from the wound up the arm or leg; (c) swelling round the wound, accompanied by shivering or feverishness. If infection appears, see a doctor at once.

6. Remember that there is always danger of tetanus (lockjaw) in any wound; in deep, extensive or dirty wounds, the threat is serious. If the child has been previously immunized with tetanus

toxoid (triple vaccine) and immunity has been maintained with refresher injections, toxoid given by a doctor at the time of injury will provide protection. But, if the child has not been immunized previously, toxoid cannot give immunity fast enough, and the doctor will then administer antitoxin. (Antitoxin gives temporary but not lasting immunity) Antitoxin should be followed by a course of 3 tetanus toxoid injections first along with the ATS, then 2nd after 6 weeks and 3rd 6 months after the first shot.

Fainting

Place the person on his back, head low. Loosen tight clothing, apply cold cloth to his face and forehead, allow him to inhale aromatic spirits of ammonia. When he revives, give him hot coffee or tea. If the fainting lasts more than a minute or two, keep the patient covered warmly and summon a doctor. Fainting may be caused by fatigue, hunger, sudden emotional shock, a poorly ventilated room, etc. The patient's breathing is usually weak, pulse feeble, face pale and the forehead covered with beads of perspiration. If the pupil merely feels faint, make him sit in a chair, bending forward, with his head between his legs and lower than his knees, and tell him to breathe deeply.

Head Injury — Fracture, Concussion

Suspect head injury in any traffic accident, fall or other incident of violence. Symptoms: child dazed or unconscious, bleeding from mouth, nose or ears; pulse rapid but weak; pupils of eyes unequal in size, paralysis of one or more extremities: headache or dizziness. Or the child may appear quite normal and have a momentary loss of consciousness or a lack of memory of the event causing the injury — only to lapse into unconsciousness later. Keep the patient lying down and covered for warmth until the doctor comes. Even though the blow may not have brought about unconsciousness, there is always danger of brain haemorrhage and serious trouble later. Lying quietly lessens the chance of haemorrhage. If the patient's face is flushed and if you're sure his neck or spine is not fractured raise his head and shoulders on a small pillow or jacket. If his face is pale, don't raise his head. If you must move him, keep the patient lying flat while doing so. If he is

unconscious or choking, turn his body and head gently to the side so that blood or mucus can drain from the corner of his mouth. If his scalp is bleeding, place a sterile dressing lightly over the wound, without pressure, and bandage it into place (Pressure may push bone fragments into the brain).

Do not permit the child to sit up or walk about. Don't leave him unattended. Get medical aid at once. Keep him lying down and completely quiet until help comes. If he is unconscious do not attempt to give him anything by mouth.

Nose Bleed

Make the patient sit quietly, with the head thrown forward, and press the nostrils together for five minutes. This may cause a clot to form over the ruptured blood vessels. If this fails, pack each bleeding nostril with a plug of sterile gauze, leaving one end of each plug outside so that it can be removed from the nostril easily. Get the patient to lie down, with his head elevated, and place a cold wet towel across his face. Slight nose bleeds often occur spontaneously, particularly in children. In event of persistent nose bleed, consult a doctor.

Poisoning by Mouth

- 1 Contact the doctor immediately. Tell him what the suspected poison is and follow his instructions.
- 2 If you can't get medical advice, dilute the poison in the stomach by giving the child several glasses of milk or water. Save the vomitus in a bottle for examination.
- 3 If the poison is known to be a strong acid or alkali — if the child's mouth is burned, you can assume it's one or the other or paraffin or petrol, proceed to step 5. If it is n't, or if it is unknown, induce the child to vomit by sticking your fingers in to his throat or by giving him several glasses of warm water containing one tablespoonful of salt per glass. Keep his head low and turned to one side so that he won't inhale any vomit.
- 4 After the child has vomited, administer several more glasses of milk (two to four) or the whites of four raw eggs mixed with a glass of milk.

- 5 If the poison is a strong acid (such as carbolic) or alkali (like, ammonia) or paraffin or petrol, do not induce vomiting. Instead, attempt to dilute and neutralize the poison. Neutralize acids with two teaspoonfuls of magnesia to a glass of water. Neutralize alkalis with a teaspoonful of lemon juice or vinegar to a glass of water. Give several glassfuls, but not enough to cause vomiting. Then give a glass of milk or four egg whites. If the poison is paraffin, petrol or similar solvent, merely administer four or five glasses of water. Get the child to a doctor or hospital. Always keep the container of poison to show to the doctor.

Puncture Wounds

- 1 Gently squeeze or "milk" the wound, to encourage bleeding. (Punctures that are caused by nails, wires, needles, pins or any other penetrating objects tend to "seal in" contamination)
- 2 Wash your hands and then clean up the wound and apply an antiseptic.
- 3 Cover the wound loosely with a sterile dressing. Apply cold compresses.
- 4 Take the pupil to a doctor. The doctor will clean the wound, opening it further if necessary, and will administer a refresher injection of tetanus toxoid or an injection of tetanus antitoxin if necessary. The chance of child getting tetanus is high with puncture wounds.

Shock — How to treat it

In any serious injury (bleeding wound, fracture, major burns), always expect shock and act to lessen it. Symptoms: the skin is pale, cold, clammy; the pulse is rapid; breathing shallow, rapid or irregular; the injured person is frightened, restless, apprehensive.

- 1 Keep the patient lying down with head at a lower level than the feet.
- 2 Loosen his clothing.
- 3 Keep him lightly covered, but do not cause sweating. Don't apply heat, such as a heating pad or hot-water bottle. The object is to conserve body heat, not to overheat the patient.
- 4 In the case of head or chest injuries, raise the patient's head and shoulders on pillows or rolled up coats so that his head

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- is ten inches higher than the feet. If the patient develops difficulty in breathing, lower the head as in Step. 1.
- 5 If the patient is conscious and thirsty, give him plain water (neither hot nor very cold), a few sips at a time. Do not give water if the patient is nauseated, or if he has a deep abdominal wound.
 - 6 Shock due to loss of blood volume requires urgent hospital attention for blood transfusion.

Swallowed Objects

Small round objects (beads, buttons, coins, marbles) swallowed by children usually pass uneventfully through the intestines and are eliminated. Do not give cathartics, laxatives or bulky foods—give just the normal diet. If there is pain, consult a doctor. For several days, strain stool through muslin to determine whether object is eliminated. Sharp or straight objects (hair-pins, open safety pins, bones) are dangerous, and if the child has swallowed any one of them, immediately send the pupil to the hospital.

Throat — Something Caught in.

Encourage the victim to cough up the object. Do not probe with your fingers; probing is less effective than coughing and may push the object deeper. If coughing doesn't work, hold him head-down and slap him hard on the back between the shoulder blades or make him bend head-down, or lay him across something head-down, and slap him hard between the shoulder blades. If the substance cannot be dislodged, send for a doctor or ambulance.

SECTION II

SIMPLE DENTAL CARE

Function of the Teeth.

Food must be broken into small pieces in the mouth so that it can be swallowed easily, and to enable further digestion in the stomach. It is, therefore, important that the teeth are well cared for as well as the gums around them so that they have a good chance of being kept healthy.

Dental Decay — How Dental Decay starts.

After each meal, food particles may remain in the cracks on the top of the teeth, or between the teeth. Bacterial action on this

food make an acid which dissolves the enamel of the tooth. A small hole therefore forms which will get bigger unless something is done about it. At this stage a dentist can remove the decayed part of the tooth and do a filling. If this treatment is not carried out the hole will get bigger and as it gets nearer the nerve pain will be felt.

Symptoms of Decay.

The pain will only be felt with hot, cold, sweet and acid foods at first, but later it will be felt all the time and will be severe. If the tooth is left untreated the decay will kill it and then an abscess may form. An abscess is an infection round the end of the root which has reached there from the decay in the crown of the tooth.

The symptoms of an abscess are:

- 1 The tooth hurts when it is knocked gently.
- 2 There may be some swelling in the mouth next to the tooth.
- 3 The whole side of the face may be swollen.

Treatment:

If there is any swelling near the bad tooth it is usually advisable to give a course of antibiotics. When the swelling has subsided the tooth should be removed as soon as possible. If the extraction is not done, the swelling and pain will recur. If there is no swelling and you are quite sure which tooth is causing the pain it may be extracted by the dental surgeon.

Keeping the Teeth clean:

Dental decay and gum disease are caused by food resting on the teeth and gums, so when a pupil comes with bad teeth or gums it is important to teach him how to keep them clean so that he will not have trouble in the future. Often gingivitis can be completely cured by cleaning the teeth and gums correctly. Instruction in cleaning the teeth is for everyone, not only for those who already have dental disease. Prevention is better than cure. Teach those who do not have gum disease so they are less likely to get it.

What to use for Brushing.

A small toothbrush, and toothpaste (dental cream) are the best means, but a stick (chewed at one end to make a brush) is quite good if it is used correctly. Common salt may be used on the stick or brush instead of toothpaste. Charcoal powder (umikkari) has

been found to be of no value. Constant use will damage the enamel. Its action is only that of a polishing agent.

When to brush the Teeth.

After breakfast in the morning. It is no good brushing them before breakfast because you soon make them dirty again when you eat. Before you go to bed at night. It is important that you sleep with a clean mouth. If possible, after the midday meal also.

Method of cleaning Teeth.

Always start on the gum above or below the teeth and brush away from the gums over the teeth. When all the teeth have been cleaned like this, brush the tops. Ensure that each surface of each tooth has been brushed at least ten times. This is not always easy, especially at the back of the mouth, and it will require practice. After a short time however, it will become easier but should take at least two minutes. After brushing, the mouth should be thoroughly rinsed with water three times to wash away all the food that has been cleaned off the teeth.

Foods that are bad for the Teeth.

These are ones which stick to the teeth and most of them contain a lot of sugar, such foods being cakes, biscuits and sweets. If these foods are to be eaten they should be taken with meals because the teeth decay starts half an hour after sweet foods have been in the mouth. If these foods are eaten between meals then the teeth will obviously be decaying for a longer time.

Foods that are good for the Teeth.

These are those vegetables and fruits which are firm and fibrous and which have to be chewed hard: pineapple, mangoes, coconut, apple. It is a good idea to eat foods like this at the end of each meal.

DISEASES OF THE GUMS

Gingivitis.

This is the name given to inflammation of the gums. The pupil complains of soreness and bleeding of the gums. It is usually caused by food being left around and between the teeth. If the patient does not keep his mouth clean this condition gets worse and spreads down towards the root, destroying the fibres attaching the

tooth to the jaw. As this continues, the tooth begins to get loose and painful, and eventually it may be necessary to extract it. The condition is made worse by tartar (a hard substance which sticks to teeth that are not kept clean) which is most often seen behind the lower front teeth.

Treatment.

If there is tartar present this should be removed (scaling) with a special instrument. When this has been done, or if tartar is not present, the patient should be taught how to brush the teeth correctly. Brushing the teeth properly prevents food resting on the gums and the inflammation (gingivitis) should subside.

Acute Ulcerative Gingivitis.

This disease is not so widespread as simple gingivitis but is also found in people who do not keep their mouths clean. It is often seen in young malnourished adolescent school children.

Signs.

Ulcers are seen along the margins of the gums, being next to one tooth or several. The mouth is very sore, and because of this the pupil may not wish to eat. The ulcers which may have a white covering, bleed easily and the patient's breath has a characteristic smell. Sometimes the patient feels generally unwell and may have a slight temperature.

Treatment.

Carefully apply a strong antiseptic on a very small piece of cotton wool to the ulcers. Do this once a day. Tell the child to keep the mouth clean. If it is too sore to use a brush, cotton wool or even a damp cloth may be used to wash the teeth. Rinsing the mouth with warm salt water after meals is also helpful. As soon as possible correct brushing with a toothbrush should be started. It is also important to ensure that the patient is having a balanced diet.

Section III

PREVENTION OF MALNUTRITION IN SCHOOL CHILDREN

Protein and Calorie Malnutrition.

Child will be under-weight with stunted growth. (Weight and Height of children should be recorded annually and checked against the standard chart provided). Advise cheap sources of protein — Pulses should be advised to be eaten every day with rice;

ground-nut is a good source of protein, which is easily available and cheap.

Deficiency Vitamin A.

Deficiency of this Vitamin affects eyes and vision. Careful examination of the eyes will reveal deficiency of this vitamin. Keep eye open for 30 seconds and look for dryness of conjunctive (white portion). Also look for irregular white patches on this area (Bitot's spots). These are early evidence for Vit. A deficiency and also many complaints of night blindness i. e. inability to see in dim light. In advanced case of Vit. A deficiency the cornea will be affected with dryness or ulceration. If the cornea is affected, send the child to hospital immediately. Early cases of Vit. A deficiencies can be treated with A + D Cap. given daily for 1 or 2 months or Vit. A concentrate 1 dose or fish liver may also be used. Child shall be instructed to eat plenty of green vegetables such as 'cheera' to get good amounts of Vit. A in diet.

Vit. C Deficiency.

Children with Vit. C deficiency will have unhealthy and bleeding gums. They should be asked to take fruits like 'oranges and gooseberry and fresh vegetables'. Vit. C tablets also may be given for short periods.

Deficiency of Vit. B Complex.

Will be manifested by soreness of mouth and tongue, fissure of the angle of the mouth etc. Parboiled rice should be advised and also fresh vegetables. B complex tablets could be given for a period of 1 or 2 months.

Iron Deficiency anemia.

Children with iron deficiency anemia will look pale, and inattentive in class and will be backward in studies. The nail and conjunctive will look pale. In doubtful case Hb. estimation should be done. If Hb. (Haemoglobin) less than 10 gm¹⁰⁰%, iron should be given in the form of tablets. Dosage 2 — 3 tablets a day for 2 or 3 months. Children should be asked to consume a diet rich in iron such as green leafy vegetables such as cabbage, cheera etc. Jaggery taken instead of sugar will provide good amount of iron. Children with severe anemia (Hb. less 5 gm¹⁰⁰%) shall be hospitalised. Stool examination for hook worm should be done in all severe cases.

SECTION IV

IMMUNISATION AND PREVENTION OF COMMUNICABLE DISEASE**Small pox Vaccination**

If the child is not vaccinated at the time of school admission, advise vaccination. Revaccination is to be done once in 3 years. This vaccination prevents small pox. Following the vaccination, some pupils may develop excoriation and ulceration at vaccination site. This does not require any special treatment. However boric powder may be applied locally to reduce the inflammation. No other dressings or medicaments are to be applied. If any other untoward reaction develops, it should be reported to the school physician.

B. C. G.

Inspect children for vaccination scar at school entry (small puckered scar on the shoulder). If not vaccinated, arrange vaccination with school team. Revaccinate 5 years after the primary vaccination. B.C.G. helps to prevent tuberculosis and is believed to be of some value in preventing leprosy.

Diphtheria, Tetanus Vaccination

At the time of school admission, find out if the child has received Triple Antigen and polio vaccine. If the child has not received them, make a note and arrange immunisation with school health team. 2 doses at 6 weeks interval will suffice. Booster dose of toxoid to be repeated every five years.

Polio vaccination

Can be given to the children who have not received them but polio being common only in younger children, it may not be very necessary.

Prevention of Spread of Communicable Disease

Above mentioned immunization help to prevent certain diseases in individual children. Sometimes these diseases spread very rapidly and become epidemic. Cross infections occur very commonly in school. So teachers have a role in the prevention of spread of communicable diseases. This will be possible by early case detection and isolation and imposing quarantine for cases and their contacts. The following table will give the sign symptoms isolation and quarantine period of some common communicable diseases.

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INFECTIONS DISEASES

Suggestions for quarantine regulations

Disease	Signs&Symptoms	Patient is released from isolation and may return to school	Susceptible contacts may re-enter school.
Diphtheria	Throat pain, fever	On recovery and after 2 or 3 successive negative cultures: each from nose and throat: taken after cessation of anti-microbial therapy and at intervals of not less than 24 hours.	When two or more successive cultures of nose and throat are negative, or not for at least 7 days after last exposure
Measles	High fever, cough, cold, red eyes, red spots on the face	On recovery: at least 8 or 9 days (5 days after appearance of rash)	Exclusion from school is of no practical value; when practiced, at least 14 days must elapse after last exposure
Smallpox	Fever, bodyache, eruptions on the face	On recovery and after disappearance of scabs and crusts: usually 3 to 6 weeks.	16 days after successful vaccination
Chickenpox	Fever, headache, bodyache, eruptions on the body and extremities	On recovery and when crusts have formed; not sooner than 7 days after onset.	Exclusion from school is of no practical value; when practiced, at least 21 days must elapse after exposure.
Whooping cough (Pertussis)	Cold, paroxysmal cough with whoop and vomiting	Not before 3 weeks after onset of typical paroxysms	14 days after exposure if clinically well
Mumps	Fever, headache, swelling in the jaws	When swelling has disappeared.	No restriction
Infectious Hepatitis	Fever, loss of appetite, yellow urine, vomiting	After first week of illness.	No restriction

Appendix I

School Formulary

Tablets	Dosage, uses and side effects	
Aspirin	—	Aches and pain, fever. One tablet 3 or 4 times a day to be taken after meals. (not to give on empty stomach)
Iron	—	For treatment of iron deficiency. 2 or 3 tablets daily after meals, to be give for 2 or 3 months.
B. Complex	—	One tablet twice daily for 1 or 2 months. For children with signs of B. Complex deficiency such as sore tongue and angle of mouth etc.
A & D Capsules	—	One or two capsules daily for one or two months for children with signs of Vit. A deficiency such as night blindness, dryness of conjunctive etc.
Multi Vitamin	—	One or two tablets daily for general debility and Vitamin deficiency states.
Mixtures		
Cough syrup	—	One or two teaspoon 3 times daily for 2 or 3 days for children with common cold, cough etc.
Carminative mixture—		$\frac{1}{2}$ oz. of diluted mixture (1:4) 3 times daily for one or two days, For children who complain of miln paid abdomen, colics.
Kaolin mixture	—	$\frac{1}{2}$ oz. 3 times daily for one or two days for children who complain of mild diarrhoea.
Local applications		
Benzyl Benzoate	—	(25% solution) For treatment of scabies and pediculosis. To be applied all over the body except head and face after a

bath at night to be repeated morning and bed time for 2 days and take bath after that. Treatment may have to be carried out for other members of the family and contacts.

Calamine lotion — For itching and urticaria. To be applied locally.

Ointment

Furacin ointment — For infected skin wounds or other lesions.

Whitefield ointment— For treatment of superficial fungal infections of the skin such as ring worm.

Sulfa acetamide eye drops (LOCULA)— For red eyes, (conjunctivities) and Trachoma.

Appendix II

LABORATORY TESTS BY TEACHERS

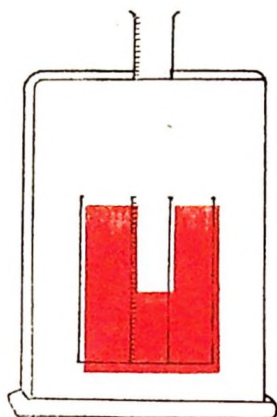
Haemoglobin estimation

Finger tip is cleaned thoroughly with spirit and is dried with a piece of cotton. The finger is held with a very gentle pressure on the sides. The needle is sharply plunged to a depth of 3 mm. deep. The pressure is released and blood is allowed to flow freely. The blood should be collected in the pipette within one minute.

PROCEDURE

Sahli Method

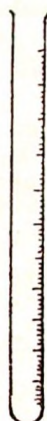
Place N/10 hydrochloric acid in the tube up to the lowest mark. Blood is drawn into the pipette up to the 20 mark, and transferred into the tube and mixed well. The tube is shaken well and wait for 10 minutes and allow the brown colour to develop. Then dilute the solution with distilled water drop by drop; till the colour matches with the glass plates of the comparator. Matching should be done in good sun-light. The reading is then taken, from the markings on the tube. (N/10 HCl can be made by adding 1 ml. of con. HCl. with 99ml. of distilled water).



COMPARATOR WITH TUBE



PIPETTE



TUBE

Urine Examination

Urine sugar test (Benedicts test)

Take 5 ml. of benedicts qualitative reagent and to it add '8' drops of urine and boil for 3 to 5 minutes and note the colour of solution.

Blue colour (no sugar)	—	Negative
Green colour	—	small amount of sugar (0.5./.)
Yellow colour	}	Moderate amount of sugar (1./.)
Orange colour		(1.5./.)
Red colour		Large amount of sugar (2.1./.)



NEGATIVE



0.5%



1%



1.5%



2%

Albumin test (sulphosalicylic acid test)

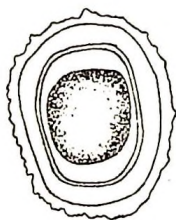
To 2 ml. of clear urine add an equal volume of 3% sulphosalicylic acid and allowed to stand for 10 minutes.

No cloudiness	—	No albumin
Cloudiness against a black back ground	—	Trace amount of albumin.
Cloudiness with granules and definite flocculation	—	Moderate amount of albumin
Cloudiness with flocculation	—	Large amount of albumin

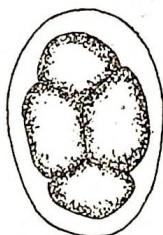
Motion examination for parasites

Take a small amount of faecal matter on the end of a narrow stick and make a thin emulsion in a drop of normal saline placed on a glass slide and put a cover slip over it. The thickness of the preparation should be such that one should be able to see fine prints through it and examine the slide under a microscope. Identity the parasites from the diagrams given below:

OVA OF COMMON PARASITES



ROUND-WORM OVUM



HOOK-WORM OVUM



WHIP-WORM OVUM

References :-

1. Text Book of Preventive and Social Medicine by J. E. Park and K. Park; Published by Banarsidas Bhanot Jaipur, 1976.
2. Simple Dental care for rural hospitals by David J. Halestrap, Published by The Medical Missionary Association, London, 1970
3. Text-Book of Pediatrics by Nelson, Vaughan and McKay. Published by W. B. Saunders Company. Philadelphia, 1975.
4. Hand Book of First-Aid-Reader's Digest Publication.
5. Hand Book of Medical Laboratory Technology. Published by the Staff of the department of clinical pathology and Blood Bank of the Christian Medical College and Hospital, Vellore, Tamil Nadu.