

FIRST AID

DEALING WITH HARMFUL MICROORGANISM

It is exciting to see Vex explaining about disease-causing microbes, which are called pathogens. Microbes spoil leather, clothing etc. Some more information was given on the transmission and spread of diseases. Female mosquitoes carry the pathogens for diseases like malaria and dengue, and spread infection from one person to another. By using a handkerchief while sneezing or coughing, we can prevent the spread of infection. Infections are transmitted from animals to humans by eating uncooked chicken. Human diseases like cholera, common cold, chicken pox and tuberculosis spread from an infected person to a healthy person through air, water, food or physical contact. Microbial infection can be transmitted by direct contact with an infected person or animal, or by eating meat prepared from an infected animal. To prevent microbial infection in animals, antibiotics are mixed with the feed of livestock and poultry. Many pathogens attack crop plants like sugarcane, wheat, rice, potato and orange, and reduce their yield. Antibiotics, insecticides and pesticides are sprayed in the field to control many plant diseases. Anthrax, caused by a bacterium, is a dangerous human and cattle disease.

The foot and mouth disease in cattle is caused by a virus.

Antibiotics are used to cure a variety of diseases caused by fungi, bacteria and protozoa, but antibiotics are not effective against diseases caused by viruses. We should take antibiotics only on the advice of a qualified doctor. Medicinal use of microbes- Bacteria or fungi produce a specific chemical that prevents the growth of or kills microbes that cause disease. Penicillin was discovered by Alexander Fleming in 1929. Inactivated or weakened microbes introduced into the body are called a vaccine. When disease-carrying microbes enter our body, it produces self-protecting proteins called antibodies, to fight against the invader. Small pox has been completely eradicated

from the world. Several diseases, including cholera, tuberculosis and hepatitis, can be prevented by vaccination.

FIRST AID

First aid

First aid is the first or immediate care given to a patient in an emergency situation before taking the patient to a doctor

First aid box

First aid box contains items essential for first aid. A first aid box must contain essential articles like medicated cotton, bandages, scissors, sterile gauze, soap, glass, spoon, a thermometer and a torch. Apart from these articles, the box must also have some medicines like paracetamol, pain balm, glucose, oral rehydration salt packets, antiseptic cream and tincture. Paracetamol and pain balm help relieve mild pain, glucose and oral rehydration salt packets can be given for nausea and giddiness, while antiseptic creams and tinctures protect wounds from infection.

First aid box - Its necessity

Minor accidents and illnesses are common in our day-to-day life, and it is not always easy to get medical aid or professional treatment immediately. Therefore, it is very important for every home, school and office to have a well-stocked first aid box. First aid box will help in the initial treatment of the injured persons. It is also important to carry a first aid box when on a journey.

Precautions to be followed

1. Before using or purchasing any medicine, you must check its expiry date.
2. It is also important to consult a doctor or a medical practitioner before you consume any drug or medicine.
3. Another important practice to be followed is to keep creams and ointments with pungent smells apart.

Household prescription

We just follow certain household medication for minor illnesses and injuries. When suddenly our hand gets scrapped by a sharp object that was lying nearby, we immediately wash the wound with water. We just open the first aid box, which had several items like sterile gauze, antiseptic cream, tincture and bandages. We have to clean the wound with sterile gauze, apply the antiseptic cream and we have to dress the wound with a gauze bandage. This is a small administration of first aid to feel better.

Examples of household prescriptions

1. A change in the season usually results in most of us catching a cold and cough. Elders advise us to consume a concoction of tulsi, cloves, pepper and jaggery boiled together if we have cold or cough.
2. Another treatment to relieve cough is to suck roasted and crushed ginger along with salt.
3. Like ginger, garlic also has medicinal properties. Smelling crushed garlic helps a person recover from cold.
4. A household prescription to reduce swelling due to a sprain is to smear a few drops of honey mixed with slaked lime over the affected area.

Slaked lime is a colourless crystal or white powder obtained when calcium oxide is mixed

5. Slaked lime can also be mixed with turmeric and smeared on the affected area to reduce swelling caused by a sprain.
6. Drinking lukewarm milk laced with turmeric is also a great household remedy to reduce pain due to injury.
7. The pulp of the Aloe vera leaf also has several medicinal properties. It cools boils and heals wounds quickly.
8. Another remarkable home remedy is to suck mulethi or liquorice, which reduces small burns and blisters in the mouth.
9. Yet another household prescription is to chew saunf or fennel seeds after meals, which not only freshens the mouth, but also improves digestion.

Thus, household prescriptions and the first aid box play a very important role in providing immediate relief during minor illnesses and injuries.

FIRST AID MEASURES

First-aid

First aid is the first or immediate care given to a patient in an emergency situation before a doctor can attend to the patient.

First aid administered for a wound

If a person is injured while playing or cutting, certain steps are to be followed to provide him the first aid.

Wound or a cut should be washed thoroughly with warm water for about five minutes.

Remove foreign particles like soil and dust from the cut area using sterile gauze.

Raised the cut area above the level of the heart for some time. Place some ice folded in a clean cloth on the wound to stop the flow of blood.

Once the blood stopped flowing, dress the wound with clean antiseptic gauze to reduce any possibility of infection.

In case of serious injury it is better to call a doctor or take the injured person immediately to a hospital.

First aid administered for a snake bite

If a person is bitten by a snake, certain steps are to be followed to provide him the first aid.

Some blood should be squeezed immediately from the snake bitten area on the person's hand.

Snake bitten area should be thoroughly cleaned under running water. Apply potassium permanganate powder over the area and tie a piece of cloth tightly on either side of the bite. This prevents the flowing of venom to the heart.

Immediately rush to the doctor.

First aid administered for animal bites or a human bite

Clean the bitten area thoroughly under cold running water for about 5 to 10 minutes.

Clean the bitten area with soap and water.

Remove foreign particles using sterile gauze.

Clean the bitten area under running water for about 5 minutes again.

Dry the bitten area and raise it above the level of the heart.

Immediately visit a doctor for a tetanus or an anti-rabies injection.

First aid administered for an insect sting

In case of insect sting, first remove the sting using a pair of sterilised tweezers.

Or otherwise scrape across the skin with a sterilised blade or knife.

Wash the stung area thoroughly with soap and cold water.

Apply oil or Vaseline on the affected area.

Finally, cover the stung area with sterile gauze and adhesive tape.

Apply ice over the stung area if there is a swelling

Raise the stung area above the level of the heart.

First aid administered for burn

Depending on the severity, burns are classified into first degree, second degree or third degree

A first-degree burn is reddish in colour and superficial, and causes no damage to the nerves. There is no blister formation or swelling and the burn heals naturally. An ordinary sunburn is an example of a first degree burn.

A second-degree burn is much more severe and painful than a first-degree burn. In such burns, the burnt area is moist and is red to slightly whitish in colour. There is a blister formation in the affected area.

The most severe burn is a third-degree burn. It is quite deep and involves the full thickness of the skin. In such burns, the skin colour usually varies from white to black. In some cases, the skin may even get charred, and the victim usually feels no sensation in the affected area.

First aid measures for a first degree burn

For a first degree burn the first aid administered is very simple
Place the burnt area under cold running water for about 15 minutes.
Thoroughly washed the area with soap. Raised the burn area above
the level of the heart.
Leave the burnt area uncovered and immediately visit a physician for
a tetanus injection.

First aid measures for a second degree burn

The first aid measures for a second degree burn are the same as that
for a first-degree burn.

First aid measures for a third degree burn

In such burns, do not hold the burnt area under cold running water,
instead cover it with a dry, sterile cloth.
Immediately visit a doctor.

First aid administered for other cases

In case of a fracture, do not move or massage the affected part. Lay
the injured person down comfortably, and loosen or remove any
clothes from the fractured part.

If the fracture is in the hand, tie a sling and rest the hand on it.

In case of an eye irritation, do not rub the eye. Instead wash it gently
with clean water.

In case of a heart attack which is a more serious situation, the first aid
measure is to immediately lay the person down horizontally straight
and allow fresh air to come in. Loosen any tight clothes. Raise the

legs to allow more blood to flow towards the heart. Provide artificial respiration to the victim if required, and call an emergency medical service immediately.

If a person falls unconscious. There is no need to place the legs above the level of the heart or to give artificial respiration. If a person swallows poison by accident, he has to be offered lots of salt water to drink and then induce vomiting.

At times, during summers or while climbing high mountains, the nose may bleed, which also requires immediate first aid. First, tilt the head up and rest it. Press the nose lightly with a clean cloth for about ten minutes and encourage the person to breathe through mouth. Place a moist handkerchief on the nose and then tap the head after pouring some cold water over it. If the bleeding still does not stop, immediately consult a doctor.

First aid must be administered in case of drowning. Lay the person on the stomach and exert pressure on the back and the waist so that the water that the person may have swallowed comes out slowly. In case the breathing is slow or absent, give mouth-to-mouth artificial respiration. Once the breathing resumes, keep the person warm with a blanket. Immediately shift the person to a hospital.

Accidents may occur any time. Therefore, it is important to be aware of various first aid procedures to respond to emergencies. It will help to save a life.