Seasonal Communicable Diseases

An information booklet

World Health Organization
Regional Office for South-East Asia

CDS Department

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World Health Organization
Regional Office for South-East Asia
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*(*for use by WHO staff)*

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Introduction

Communicable diseases touch our lives at one time or the other. The best way to keep communicable diseases away is to prevent them. We can stay healthy if we maintain a proper immunization schedule, adhere to hygienic rules in preparation and consumption of food and water, and take preventive measures including prophylaxis whenever necessary.

The incidence of communicable diseases varies, and can be seasonal. Summer is a season for water-borne diseases like diarrhoeas, viral hepatitis, typhoid etc, especially in areas with poor sanitation. The rainy season facilitates the breeding and proliferation of mosquitoes that transmit several diseases like malaria, dengue, Japanese encephalitis etc. The cold winter season, coupled with overcrowding, leads to easy transmission and propagation of diseases like measles, seasonal influenza and meningitis. However, some conditions like viral fevers and acute respiratory infections, can occur during any time of the year or due to a change in season.

This information booklet contains the vital information on what you can do to protect yourself, your family and others from selected communicable diseases.

"Know the communicable diseases to stay free of them"

Diarrhoeas (including cholera)

Diarrhoea is frequent passage of loose or watery stools. It may be accompanied by vomiting and pain in the abdomen. Diarrhoea is usually caused by infectious agents which gain entry through water and food which are contaminated with faeces or vomitus of a patient.

The disease occurs after 3-8 days of ingestion of contaminated water or food. In most instances it is a self-limiting disease but prolonged and severe diarrhoea can cause dehydration.

The risk of dehydration is significantly more in children.

What can you do to protect yourself?

- Drink water from a safe source, otherwise drink boiled or chlorinated water
- Eat thoroughly cooked food
- Wash vegetables before cooking and avoid uncovered cut fruits
- Ensure proper disposal of waste and human excreta.
- Always wash hands before and after eating food
- To prevent dehydration, take as much fluid as possible. Fluids that normally contain salt are useful. These include:
  - salted yoghurt drink
  - vegetable or chicken soup with salt
  - salted rice water
  - commercially available oral rehydration salt (ORS).
- Avoid self-medication with antibiotics and anti-diarrhoeal agents unless recommended by the physician
- Consult a physician in case of high fever, passage of blood with stool or intractable diarrhoea.

Viral hepatitis (enterically transmitted)

Hepatitis (inflammation of the liver) is caused by several viruses designated as A, B, C, D and E. It mainly manifests as yellow discoloration of the skin and sclera of the eyes, passage of dark urine and pale stools (Jaundice).

Hepatitis virus A and E are transmitted through food and water that have been accidentally contaminated with virus. The disease manifests after 3 to 8 weeks of ingestion of contaminated food. Hepatitis A is a mild disease compared to those caused by B, C, D and E viruses. Hepatitis E virus causes acute outbreaks of jaundice.

Hepatitis A and E are self-limiting viral infections followed by recovery. No antiviral drugs are available. No vaccine against hepatitis E is available.

What can you do to protect yourself?

- Drink water from a safe source, otherwise drink boiled or chlorinated water
- Eat food which is thoroughly cooked
- Ensure proper disposal of waste and human excreta
- Always wash hands before and after ingestion of food
- Consult the physician for vaccination against hepatitis A
- Pregnant women should take precautions against hepatitis E which may occur in a fulminant form in pregnancy
- Avoid self-medication.

Typhoid fever

Typhoid fever is a bacterial infection of the intestinal tract and bloodstream. Typhoid fever may occur after eating food or drinking beverages that have been handled by a person who is infected or by drinking contaminated water.

The interval between contracting infection and development of the disease is 1-3 weeks. The symptoms can be mild or severe and include:

- high fever
- malaise
- anorexia
- headache
- constipation or diarrhoea
- rose-coloured spots on the chest area.

After recovery from typhoid fever some people may continue to carry the bacteria. These carriers can be a source of infection for others. The carriers need treatment with antibiotics.

What can you do to protect yourself?

- Drink water from a safe source, otherwise drink boiled or chlorinated water
- Wash hands before and after ingestion of food
- Eat food which is thoroughly cooked
- Ensure proper disposal of waste and human excreta
- Consult the physician for vaccination against typhoid fever
- If symptoms, as described above appear, consult your physician.

Malaria

Malaria is caused by a parasite and transmitted through the bite of an infected mosquito. There are two main kinds of malaria. Falciparum malaria is the severe type and vivax malaria is usually mild.

The disease manifests after 9-14 days of mosquito bites. The clinical features include:

- high fever
- headache
- chills and rigors
- Nausea and vomiting in severe cases.
- No malaria vaccine is available. However drugs are available that cure malaria.

What can you do to protect yourself?

- Screen the doors and windows with mesh wire
- Use mosquito nets (preferably insecticide-treated) around beds at night especially for babies, young children and pregnant women
- Indoor residual spray can kill mosquitoes
- Personal protection measures to prevent mosquito bites include application of repellents to the skin, using mosquito coils or synthetic pyrethroid-impregnated mats in electric heaters
- Wear shirts with long sleeves and full trousers after sunset
- Those visiting malaria endemic areas should have maximum protection by using both drug prophylaxis and protection from mosquito bite
- Start drug prophylaxis one week before arrival from a non-malarious area and continue for at least four weeks after return to a non-malarious area
- Immediately seek medical aid if symptoms suggestive of malaria develop.

Dengue fever and dengue haemorrhagic fever

Dengue fever is an acute viral infection transmitted by the bite of an infected mosquito during day time. Dengue mosquitoes breed in stored, exposed water collections viz. drums, jars, pots, buckets, flower vases, tanks, discarded bottles, tyres, water coolers, etc.

Dengue fever manifests after 4-7 days of the bite of an infected mosquito as:

- high fever
- headache
- pain behind the eyes
- body aches and joint pains

Dengue haemorrhagic fever, a potentially lethal complication of dengue fever is characterized by:

- high fever, restlessness
- severe and continuous pain in abdomen
- bleeding from the nose, mouth and gums or skin bruising
- black stools
- pale, cold skin.

No vaccine or specific antiviral drugs are available.

What can you do to protect yourself?

- Protect yourself from mosquito bite
  - Wear full sleeve clothes and long dresses to cover the limbs
  - Use mosquito coils and electric vapour mats during the daytime
  - Use mosquito nets, coils or repellents for patients sick with dengue to prevent mosquitoes acquiring the virus by feeding on patients
- Prevent breeding of mosquitoes in your vicinity
  - Drain water from coolers, tanks, barrels, drums and buckets at weekly intervals
  - Practice "dry days" – dry your coolers once a week for 2-3 hours
  - Remove solid waste and objects where water collects
- If dengue fever is suspected, avoid aspirin and ibuprofen as these may increase the bleeding tendency and abdominal pain. Take paracetamol or acetaminophen for fever and body aches
- Seek medical care immediately if one or more signs of bleeding are seen.

Chikungunya fever

Chikungunya fever is a viral illness that is spread by the bite of infected mosquitoes. The disease resembles dengue fever, and is characterised by:

- severe, sometimes persistent, joint pain (arthralgia), as well as fever and rash.
- The condition is rarely life threatening.

Chikungunya epidemics appear and disappear cyclically, usually with an inter-epidemic period of 7-8 years.

Chikungunya fever was reported recently from several countries including India, and various Indian Ocean Islands. Co-occurrence of chikungunya and dengue fevers has been observed in Maharashtra.

Treatment consists of mitigating pain and fever using anti-inflammatory drugs and rest. Though recovery is expected, convalescence can be sometimes prolonged. Persistent joint pain may require pain medication and long-term anti-inflammatory therapy.

What can you do to protect yourself?

- No vaccine is available against this viral infection. Prevention is entirely dependent upon taking steps to avoid mosquito bites and elimination of mosquito breeding sites
- Protect yourself from mosquito bites
  - Wear full sleeve clothes and long dresses to cover the limbs
  - Use mosquito coils and electric vapour mats during the daytime
  - Use mosquito nets, coils or repellents for patients to prevent mosquitoes acquiring the virus by feeding on patients
- Prevent breeding of mosquitoes in your vicinity
  - Drain water from coolers, tanks, barrels, drums and buckets at weekly intervals
  - Practice "dry days" – dry your coolers once a week for 2-3 hours
  - Remove solid waste and objects where water collects.

Japanese encephalitis

Japanese encephalitis (JE) is a viral disease transmitted by mosquitoes that breed in rice fields. JE is primarily a rural disease. Water-birds and pigs are most important in the chain of transmission of the disease to humans.

JE is a killer disease that affects mainly children, and causes infection of the brain and its covering membranes. Those that survive the disease are often left neurologically disabled.

The disease is characterized by:

- rapid onset of high fever
- headache
- neck stiffness
- disorientation
- coma
- seizures
- paralysis
- if not treated early, leads to death.

Intensive supportive medical and nursing care may lead to complete recovery or minimize neurological complications. No specific antiviral treatment is available. Effective vaccines against JE are available.

What can you do to protect yourself?

- Protect against mosquito bites using repellents and/or mosquito nets
- Vaccination against JE is recommended for those traveling to JE endemic areas
- JE is a medical emergency- rush the patient with symptoms suggestive of JE to the nearest health facility.

Seasonal influenza (Flu)

Flu is an acute infection of the respiratory tract caused by a group of viruses. It is contracted by coming in contact with the respiratory droplets released during coughing and sneezing of a patient with flu or touching infectious droplets present on an object such as a door knob and then touching one's mouth or nose without washing the hand. The usual interval between contracting the infection and developing the disease is 1-4 days.

Flu has the following symptoms:

- fever, headache
- cough
- runny or stuffy nose
- extreme tiredness
- sore throat
- muscle aches

Flu is a self-limiting condition and does not require any treatment except paracetamol for fever. Rarely, it may lead to pneumonia.

What can you do to protect yourself?

- Avoid close contact with people suffering from respiratory infections
- Wash your hands frequently
- If sick with flu, drink plenty of fluids, take rest and keep away from people to avoid infecting them
- Cover your mouth with tissue or a handkerchief when coughing or sneezing
- Consult your physician for treatment. Avoid self-medication
- Consult your physician for flu vaccine, especially if you are above 60 years of age or have a chronic medical condition.

Acute Respiratory Infections (including pneumonia) in children

Any new (acute) infection of the nose, throat, ear, voice box, air tubes and the lungs is called acute respiratory infection (ARI). ARIs are the most frequent cause of illness in children under the age of five.

The symptoms of ARI range from self-limited cough and cold with or without fever, ear ache to life threatening pneumonia. A child with pneumonia often has:

- high fever
- cough
- difficult and rapid breathing.

In some cases, when the child breathes in, the lower part of the chest goes in (chest indrawing). This is a sign of severe pneumonia which is a medical emergency.

What can you do to protect children from pneumonia?

- Wash your hands frequently especially before handling young children
- Avoid crowded places and exposure of children to indoor air pollution and parental smoking
- Ensure nutritional diet and exclusive breastfeeding to infants for the first six months of life
- Vaccinate the child against measles, and whooping cough to reduce possibility of occurrence of pneumonia as a complication
- Most coughs and colds are self limiting. Do not self-medicate
- Continue to breastfeed young children and encourage adequate intake of food and fluids during illness
- Consult a physician if cough persists for more than seven days or symptoms suggestive of pneumonia develop.

Measles

Measles is a viral disease and a leading cause of death in children. Young, unimmunized children are at highest risk. Measles spreads by airborne droplets (circulated as a result of coughing and sneezing) and through close personal contact with infected persons.

Measles is usually a mild illness, but sometimes it can be serious. The disease is characterized by:

- high fever
- runny nose
- cough
- red and watery eyes.

These clinical features may be followed by the appearance of a red, blotchy rash starting usually from the face and upper neck.

Complications include severe diarrhoea, pneumonia, ear infections, blindness, and encephalitis and can result in death or disability.

What can you do to protect yourself?

- All children should be vaccinated with measles vaccine at nine months of age, followed by another dose after the age of one year
- Children with measles should be given plenty of fluids and nutritious diet
- Medical care should focus on early detection and management of complications.

Meningitis

Meningitis is an infection of the thin lining that surrounds the brain and the spinal cord. Meningitis is a potentially fatal disease. The disease is contracted by coming in contact with the infectious respiratory droplets released during coughing and sneezing by a patient sick with meningitis. The interval between contracting infection and development of the disease is 2-10 days.

Meningitis should be suspected if the following symptoms are seen:

- high fever, severe headache and vomiting
- stiff neck or neck rigidity
- altered sensorium
- convulsions
- rash, pin-point red spots on the body.

Early diagnosis and management with safe and effective antibiotics and supporting care are urgently needed. Safe and effective vaccines are available.

What can you do to protect yourself?

- Avoid close contact with people who are sick with meningitis
- Consult your physician for prophylaxis against meningitis if:
  - you have come in contact with a patient with meningitis or
  - someone in the family is sick with this disease
- Immediately consult your physician for treatment if symptoms suggestive of meningitis develop.

Viral fevers

Change in seasons is often associated with the occurrence of mild fevers. These fevers may be due to certain unspecified viruses and hence are commonly known as viral fevers. These fevers are self -limiting and rarely cause severe illness.

The viral fevers are characterize by:

- mild to moderate fever
- body ache
- malaise
- at times dry cough and vomiting, especially in young children.

No serious complications have been associated with these viral fevers.

No vaccines or specific antiviral drugs are available against these viral fevers.

What can you do to protect yourself?

- Avoid close contact with a patient of viral fever
- Wash your hands thoroughly if you come in contact with the patient or his secretions
- Avoid crowded places
- If you develop viral fever stay at home during the duration of illness to avoid transmitting infection to others
- Take plenty of fluids and nutritious diet
- Do not take any antibiotic until advised by the physician
- Avoid taking aspirin or ibuprofen to lower temperature. Paracetamol is safer
- Consult your physician for any medical intervention.

Rabies

It is caused by rabies virus which is transmitted to human beings through rabid animal bites or through contamination of abraded skin or mucous membrane of the mouth, conjunctiva, genitalia or anus with saliva of the infected animal.

After a long incubation period of 1-6 months the virus reaches the brain tissue resulting in a typical clinical picture of "hydrophobia" – fear of water. Violent, painful contractions occur while attempting to drink water. These contractions are triggered also by other stimuli such as strong current of air, loud noise and bright light. Hydrophobia is preceded by pain and tingling sensation at the site of bite, fever, malaise (weakness), and headache.

Once hydrophobia sets in, death in a few days is inevitable. Treatment of a patient with rabies is purely symptomatic and such patients should be admitted into the hospital for immediate medical attention.

What can you do to protect yourself from rabies?

- The best way is to protect oneself from getting bitten
- Stay away from suspicious looking (excessive salivation, irritable, changed behaviour or habits etc.) dogs
- If bitten, the wound should be managed immediately and a physician consulted for other measures.
  - Wash the wound with plenty of water and soap
  - If soap is not available, flush the wound with copious amounts of water
  - Remove soap and apply any alcohol-containing solution
- Rabies immunization must be started at the earliest if indicated. If already immunized and within the protection period, a booster will be necessary

How can I protect my dog against rabies?

For the prevention and control of disease in animals effective immunization strategies and tools are now available. Consult a veterinary doctor or clinic.

For further information, please contact:

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World Health House, IP Estate, New Delhi 110002, India.
www.searo.who.int/en/section10.htm
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