

FOR YOU WITH YOU

HEALTH DEPARTMENT - NDMC

**Prevention & Control
of Dengue, Chikungunya and
Water Borne Disease**

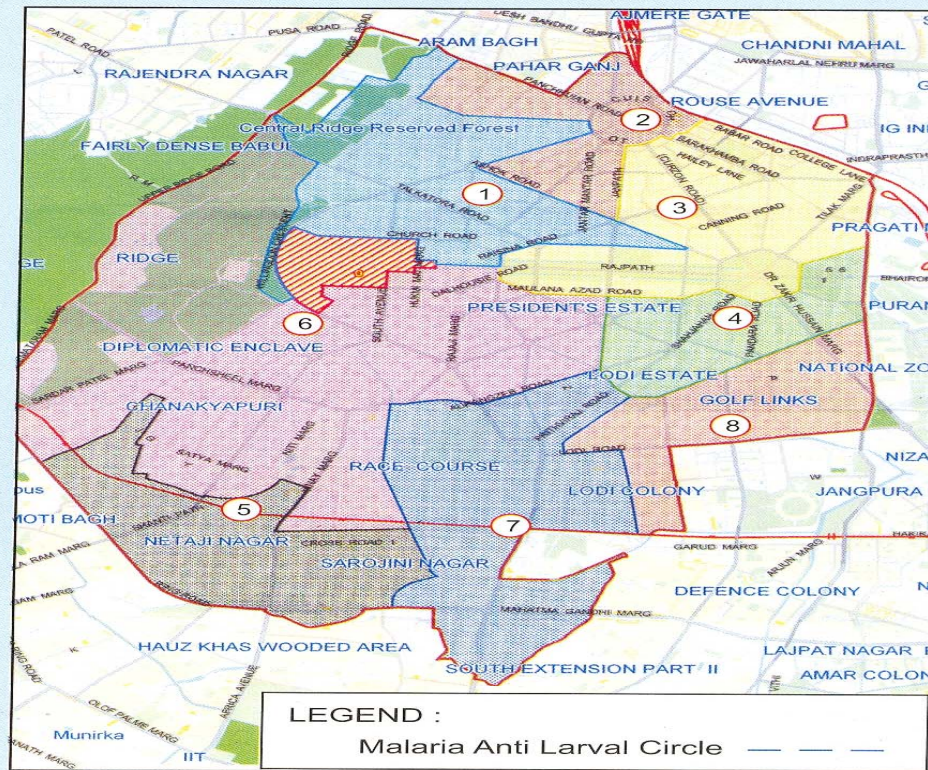


नई दिल्ली नगरपालिका परिषद्

New Delhi Municipal Council

New Delhi

NDMC's Malaria Circles (1-8)



Chief Malaria Inspector Officer

Sahid Bhagat Singh Complex
Tel. : 23340108

Circle No. 1	Gole Market	Circle No. 2	Mandir Marg
Circle No. 3	Prithvi Raj Lane	Circle No. 4	Prithvi Raj Lane
Circle No. 5	Begam Zaidi Market	Circle No. 6	Veterinary Hospital
Circle No. 7	Ali Ganj	Circle No. 8	Ali Ganj

DENGUE FEVER

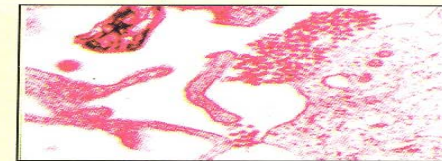
What is it ?

Dengue fever is a common communicable disease characterized by occurrence of high fever, severe body aches and intense headache. It is a very common disease that occurs in epidemic form from time to time. Delhi and parts of North India experienced a large number of cases of Dengue in 1996, 2003 and 2006. The disease is quite severe in young children as compared to adults. In 1996 and 2003 and 2006 - 423, 34 and 38 person died because of Dengue in Delhi.

It is estimated that every year 2 crore cases of Dengue fever occur in the world. Death rate varies from 5 per 100 cases to 30 per 100 cases. If adequate precaution not taken at individual level number of Dengue cases may increase in future.

Cause ?

It is caused by a virus (Dengue Virus) which has got four different types (Type 1, 2, 3, 4). Common name of the disease is 'break-bone fever' ('Haddi Tod Bukhar') because of severe body and joint pains produced.



Dengue Virus

Spread



Aedes Mosquito

Dengue fever is also spread by bites of Aedes mosquitoes. These are very tough and bold mosquitoes and most of the time bite during day time.

This disease occurs more frequently in the rainy season and immediately afterward (July to October) in India.

The Dengue virus is present in the blood of the patient suffering from Dengue fever. Whenever an Aedes mosquito bites a patient of Dengue fever, it sucks blood and along with it, the Dengue virus into its body. The virus undergoes further development in the body of the mosquito for a few days. When the virus is injected into the person's body and he/she becomes infected and can develop symptoms of Dengue fever.

Incubation Period : It is the gap between bite of an infected mosquito and appearance of symptoms of dengue fever in the bitten person. Commonly, it is 5-6 days. However it can vary from 3-10 days.

Symptoms of the disease

Symptoms depend upon the type of Dengue fever. There are three types of Dengue fever -

1. Classical (Simple) Dengue Fever
2. Dengue Haemorrhagic Fever (DHF)
3. Dengue Shock Syndrome (DSS)

DENGUE FEVER

The Classical (Simple) Dengue fever is a self-limiting disease and does not kill. However, the other types (i.e. DHF & DSS) can prove fatal if prompt treatment is not started.

It is important to recognize whether Dengue fever is Simple or DHF or DSS. The following symptoms will help in diagnosis -

1. Classical (Simple) Dengue Fever :

- Sudden onset of high fever with feeling of chills ("Thandi Lagna")
- Severe Headache, Pains in muscles and joints.
- Pain behind the eyeball especially on pressing the eyes or on moving the eyeball.
- Extreme weakness, loss of appetite, feeling of nausea.
- Change in taste sensations in mouth.
- Pain in abdomen by itself or on touching
- Mild pain in throat.
- Patient feels generally depressed and very sick.



Rash on the skin : Pinkish red rash appears on the skin in the form of diffuse flushing, mottling or pinhead eruption on the face, neck and chest. Later on, the rash may become more prominent.

The entire duration of Classical Dengue Fever last for about 5 - 7 days and the patient recovers.

2. Dengue Haemorrhagic Fever (DHF) -

It should be suspected if with above mentioned symptoms of Classical (Simple) Dengue Fever, one or more of the following symptoms appear -

Bleeding (haemorrhagic) manifestation : Bleeding from nose, gums, blood in the stools or in vomiting, bleeding spots on the skin which are seen as dark bluish-black, small or large patches. If a health worker carries out a Tourniquet Test, it is positive. Certain laboratory investigation carried out on a blood sample also confirm DHF.

3. Dengue Shock Syndrome (DSS) -

All symptoms as mention above in DHF are present plus the patient also develops a condition called 'shock'. Symptoms of shock in a Dengue Fever case are -

- The person is very restless and the skin feels cold and clammy despite high fever.

DENGUE FEVER

- The person may start losing consciousness.
- If you examine the pulse rate of the patient, it is weak and rapid. Similarly, blood pressure will be low.

Treatment :- No Vaccine / Drug is available against this disease :

If it is classical (simple) Dengue Fever, the patient can be managed at home. As it is a self-limiting disease, the treatment is purely supportive and symptomatic –

e.g. –

- Keep the fever low by giving paracetamol tablet or syrup as per health worker's advice.
- Avoid giving Aspirin or Dispirin tablets to the patient
- If fever is more than 102°F, carry out hydrotherapy to bring down the temperature.
- Give plenty of fluids water, shikanji etc. to the patient.
- Confirm normal feeding. In fever, the body, in fact, requires more food.
- Allow the patient to rest.

If any of the symptoms indicative of DHF or DSS develop, rush the patient to the nearest hospital at the earliest where appropriate investigation will be carried out and necessary treatment instituted, e.g., transfusion of fluids or platelets (a kind of blood cells which become low in DHF and DSS). **Please remember that every patient does not require blood platelet transfusion.**

Please remember

Even DHF and DSS can be managed successfully if a correct diagnosis is made and the treatment is started early.

4. Prevention

Prevention of Dengue Fever is easy, cheap and better. What is required are some simple measures for –

- A) Preventing breeding of Aedes mosquitoes
- B) Protection from Aedes mosquitoes' bites.

For protection against mosquitoes –

Aedes mosquitoes breed only in clear stagnant water in & around houses, office, room coolers, broken bottles, old discarded tyres, containers and similar sources, open overhead tanks, flower pots etc.

DENGUE FEVER

- Don't allow water to remain stagnant in and around your house. Empty the room air coolers and flower vases completely atleast once in seven days and let them dry. Dispose off old containers, tins and tyres etc. properly.
- Keep the water tanks and water containers tightly covered so that the mosquitoes do not enter and start breeding.
- Most common breeding points are - over head tanks, discarded tyres, coconut shell & junk in open.
- Wherever it is not possible to completely drain the water off from room cooler, water tanks etc., it is advised to put about two tablespoons (30ml.) of petrol or kerosene oil into them in a week. This will prevent mosquito breeding.
- You can put small fish (Gambusia) which eat mosquito larva into these water collections. These fish can be obtained from Channels/Pond present in the School/House and Sanitary inspector.
- Wherever possible, practicable and affordable, prevent entry of mosquito into the house by keeping wire mesh on window and doors.
- Use mosquito repellent sprays, cream, coils, mats or liquids to drive away/kill the mosquitoes. Use of googal smoke is a good indigenous method for getting rid of mosquitoes.
- Wear cloths which cover the body as much as possible. School Children an advice to wear full pant and full shirt or full salwar/sameej. during the season of Malaria and Dengue fever i.e. from July to October.
- Don't turn away spray workers whenever they come to spray your house. It is in your own interest to get the house sprayed.
- Use insecticidal sprays in all areas within the house atleast once a week. Don't forget to spray behind the photo frame, curtains, calenders, corners of house, stores.
- Keep the surroundings of your house clean. Don't litter garbage. Don't allow wild herbs etc. to grow around your house (atleast in a radius of about 100 metres around your house). They act as hiding and resting place for mosquitoes.
- Do inform and take help from your area sanitary inspector in case you notice abnormal density of mosquitoes or too many cases of fever are occurring in your area or mosquito bite in day time.
- It is good to remember that Aedes mosquitoes usually bite during daytime and hence one should take precautions against their bite during day time. Maximum biting during dawn & dusk.
- Dengue fever occurs most frequently in India in the months of July to October because this season provides very suitable conditions for breeding of mosquitoes. Hence all these preventive steps must be taken during the season.



CHIKUNGUNYA FEVER

Lastly, it is advisable to always keep the patient of Dengue fever under a mosquito net in the first 5-6 days of the illness so that mosquitoes don't have an access to him/her. This will help in reduction in spread of Dengue fever to other persons in the Community.



If you ever notice that many persons have suffered from an illness which may appear to be Dengue Fever, please inform this NDMC at the earliest. This will help in preventing the disease acquiring epidemic proportions.

CHIKUNGUNYA FEVER

What is Chikungunya Fever?

Chikungunya fever is a viral disease transmitted to humans by the bite of infected Aedes mosquitoes.

What type of illness does chikungunya virus cause?

This infection can cause a debilitating illness, most often characterized by fever, headache, fatigue, nausea, vomiting, muscle pain, rash, and joint pain.

The incubation period (time from infection to illness) can be 2-12 days, but is usually 3-7 days.

Acute chikungunya fever typically lasts a few days to a couple of weeks, but as with dengue, some patients have prolonged fatigue lasting several weeks. Additionally, some patients have reported incapacitating joint pain, or arthritis which may last for weeks or months.

Symptom & Sign of chikungunya are similar to Dengue except mortality rate is very high in Dengue.

How do humans become infected with chikungunya virus?

Chikungunya fever is spread by the bite of an infected Aedes mosquito.

MALARIA

How is chikungunya virus infection treated?

No vaccine or specific antiviral treatment for chikunguna fever is available. Treatment is symptomatic – rest, fluids and ibuprofen, naproxen, acetaminophen, or paracetamol may relieve symptoms of fever and aching. Aspirin or Dispirin should be avoided during the acute stage of the illness.

What can people do to prevent becoming infected with chikunguna virus?

The best way to avoid Chikungunya infection is to prevent mosquito bites. There is no vaccine or preventive drug. Prevention tips are similar to those for Dengue.

MALARIA

What is it?

Caused by a parasite "plasmodium" this disease is spread by bite of anopheles mosquitoes that usually breed in clean water around our homes.

Symptoms :

High Fever, headache, fatigue, nausea, vomiting, body pains. If malaria affects brain ("cerebral Malaria"), the person becomes drowsy, loses consciousness and gets convulsions. Cerebral Malaria can cause death if not treated on time.



Treatment:

Please get a blood slide made and take treatment from a doctor. Keep the fever down by giving paracetamol. Drink lots of fluids.

Prevention :

Prevent mosquito breeding and mosquito bites. Please see previous pages for these tips.

PRECAUTIONS

PRECAUTIONS FOR PREVENTING DISEASES THAT USUALLY OCCUR IN SUMMER & MONSOON MONTHS

The months of May, June July and August are the months when disease like diarrhea (loose motions), gastro-enteritis, cholera ("Haiza"), typhoid fever and Jaundice ("Peeliya", Hepatitis) occur more frequently. Heat Stroke ("Loo Lagna") occurs when someone gets exposed to severe heat for a long time without proper protection.

They occur because of

1. Consumption of unclean water and food.
2. Eating stale food/food sold in open.
3. Dirty hand and nails.
4. Flies and dirty surroundings.
5. Heat Stroke occurs due to exposure to severe heat for a long time.

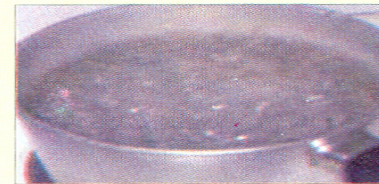


Prevention

You can prevent almost all these diseases by following some simple precautions. These are specially important for young children.

1. Please drink only that water which has been properly chlorinated/boiled/filtered through instruments such as Aquaguard, R.O. system etc.
2. If you have to boil water at home, keep boiling the water for 15-20 minutes after boiling starts.
3. Don't drink water from road side water sellers or dhabas or dirty hotels etc. They don't use clean glasses.

Boiling is the best method to purify water.



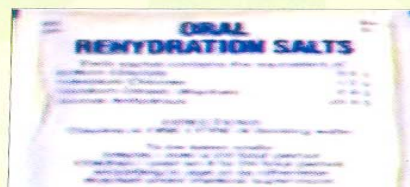
PRECAUTIONS

4. Always wash hands with soap and water :-

- Before eating anything with hands.
- After going to the toilet.
- After playing.



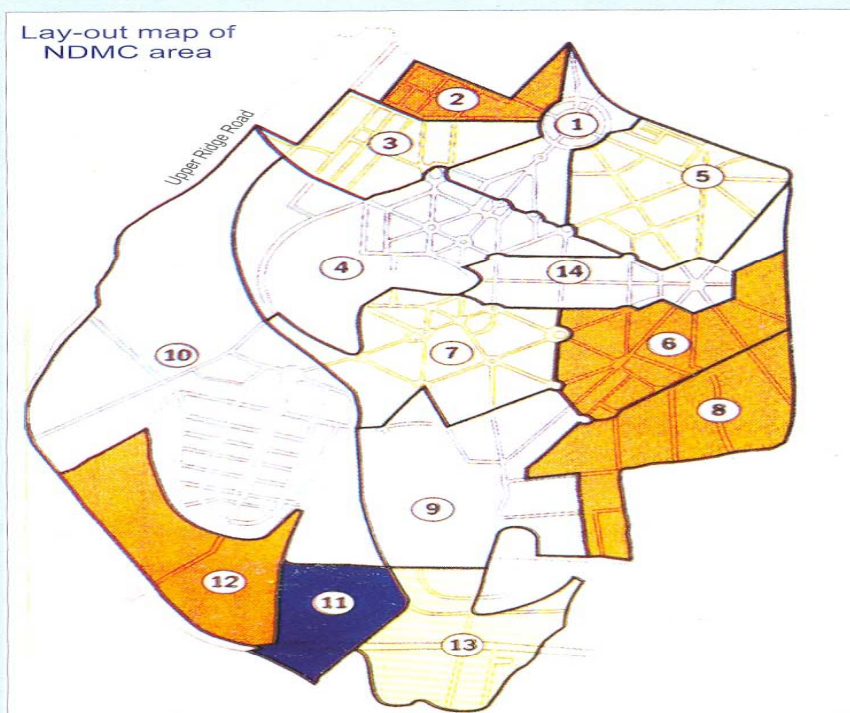
5. Never eat food items that are sold in open (such as cut fruits, sweets) etc.
6. Avoid drinking roadside sugarcane juice. Don't drink any liquid in which commercial ice has added directly.
7. Don't bottle feed young babies. Use katori/glass and spoon.
8. Keep your house and surroundings clean because garbage breeds flies.
9. Avoid eating chaat, golgappa, kulfi and "Jal Jeera" etc. from roadside vendors. They are unclean.



10. If some one has loose motions/vomitting, please start giving lots of fluids (lassi, ORS, sugar shikanji, water, Daal ka pani) etc. to such patients. Very young children should be specially taken care of in such a situation. Kept feeding
11. Avoid eating salads in parties/functions
12. Always wash raw vegetables (e.g. carrot, radish, cucumber) and fruits (e.g. apples, mangoes, watermelon etc.) in running water before eating.
13. Don't expose yourself to hot sun for a long time. Always use cap, umbrella, sunglasses etc. Keep drinking a lot of water.



NDMC's Sanitation Circles (1-14)



SANITARY CIRCLES

Circle No. 1	Connaught Place
Circle No. 2	Mandir Marg
Circle No. 3	Gole Market
Circle No. 4	Pt. Pant Marg
Circle No. 5	Bengali Market
Circle No. 6	Pandara Road
Circle No. 7	PM House Area

Circle No. 8	Lodhi Colony
Circle No. 9	Jor Bagh
Circle No. 10	Chanakyapuri
Circle No. 11	Sarojini Nagar
Circle No. 12	Moti Bagh
Circle No. 13	Kidwai Nagar
Circle No. 14	Central Vista

For Prevention & Control of DENGUE/CHIKUNGUNYA

May contact any time on the following addresses, phone numbers

DR. P. K. SHARMA

Medical Officer of Health

Tel.: 011-23742752

DR. R. N. SINGH

Chief Medical Officer

Tel.: 011-23366648

Sh. Satish Sharma (Dy SO)

Tel.: 23366648

Sh. S. K. Gambhir (CSI)

Tel.: 23366648

Circle No. I

Sahid Bhagat Singh Market Lane, Near Kole
Depot No. 2, New Delhi -2 Tel : 23746072

R.M.L. Hospital, Pant Marg, North Avenue,
Rafi Marg, Mahadev Road, Bishambhar Das Road,
Dil Area, Bhai Veer Singh Margh.

Circle No. III

Near Lok Nayak Bhawan,
Prithvi Raj Market Lane, New Delhi
Tel : 24635726

Bangali Market, Firozshah Road,
Karzan Road, Sindhia House, Babar Road,
Sangali Mess

Circle No. V

Begum Zaidi Market,
Moti Bagh-1, New Delhi
Tel.: 24676331

Sarojini Nagar, Netaji Nagar, Nauraji Nagar,
Moti Bagh-1st , etc.

Circle No. VII

Near Residential Block No.-22,
Ali Ganj, New Delhi Tel.: 24629341

AIIMS, Safdarjung Hospital, Ansari Ngr., Kidwai Ngr.,
Laxmi Bai Ngr., B.K. Dutt Colony, Jor Bagh, Ali Ganj,
Rase Course, Sufdarjung Airport, South Ave. Lane,
Aurangzeb Lane, Prithvi Raj Road, etc.

Circle No. II

NDMC Workshop, Near Balmiki Mandir,
Mandir Marg, New Delhi

Connaught Place, R. K. Ashram Marg,
Mandir Marg, Lady Hearing Hospital.

Circle No. IV

Near Lok Nayak Bhawan, Prithvi Raj Market Lane
New Delhi Tel : 24635726

Bapa Nagar, Pandara Road, Pandara Park,
Jamnagar House, Ravindra Nagar, National Stadium,
Suprem Court, Patiyala House, High Court,
Amrita Shergill Marg, CM House, 10 Japath, etc.

Circle No. VI

Animal Dispensary Complex, Moti Bagh-1,
New Delhi Tel.: 24676331

Satya Marg, Vinay Marg, Chanakya Puri Police Sta.,
Malcha Marg, Bapu Dham, Maurya Hotel, South Ave.,
Teen Murti Bhawan, Ashoka Hotel, Raksha Bhawan,
Nirman Bhawan, Meena Bagh, Akbar Road, etc.

Circle No. VIII

Near Residential Block No.-22,
Ali Ganj, New Delhi Tel.: 24629341

Lodhi Colony, Qtr. of Mausam Bhawan,
Lodhi Estate, Amrita Sher Gill Marg, Bharti Nagar,
Golf Link, Golf Club, Kaka Nagar, Obearoi Hotel,
Blind School etc.



NDMC - HEALTH DEPARTMENT

Control Room : 23340108, 23366648

DENGUE FEVER

The Classical (Simple) Dengue fever is a self-limiting disease and does not kill. However, the other types (i.e. DHF & DSS) can prove fatal if prompt treatment is not started.

It is important to recognize whether Dengue fever is Simple or DHF or DSS. The following symptoms will help in diagnosis -

1. Classical (Simple) Dengue Fever :

- Sudden onset of high fever with feeling of chills ("Thandi Lagna")
- Severe Headache, Pains in muscles and joints.
- Pain behind the eyeball especially on pressing the eyes or on moving the eyeball.
- Extreme weakness, loss of appetite, feeling of nausea.
- Change in taste sensations in mouth.
- Pain in abdomen by itself or on touching
- Mild pain in throat.
- Patient feels generally depressed and very sick.



Rash on the skin : Pinkish red rash appears on the skin in the form of diffuse flushing, mottling or pinhead eruption on the face, neck and chest. Later on, the rash may become more prominent.

The entire duration of Classical Dengue Fever last for about 5 - 7 days and the patient recovers.

2. Dengue Haemorrhagic Fever (DHF) -

It should be suspected if with above mentioned symptoms of Classical (Simple) Dengue Fever, one or more of the following symptoms appear -

Bleeding (haemorrhagic) manifestation : Bleeding from nose, gums, blood in the stools or in vomiting, bleeding spots on the skin which are seen as dark bluish-black, small or large patches. If a health worker carries out a Tourniquet Test, it is positive. Certain laboratory investigation carried out on a blood sample also confirm DHF.

3. Dengue Shock Syndrome (DSS) -

All symptoms as mention above in DHF are present plus the patient also develops a condition called 'shock'. Symptoms of shock in a Dengue Fever case are -

- The person is very restless and the skin feels cold and clammy despite high fever.