

# Water and Sanitation Support Organization, UP

[www.wssoup.org](http://www.wssoup.org)



# State Water and Sanitation Mission, UP

[www.swsup.org](http://www.swsup.org)



**Department of Rural Development, UP**



# Health Issues:

Cholera,  
Diarrhea,  
Dysentery,  
Japanese Encephalitis (JE)/  
Acute Encephalitis Syndrome (AES)  
and  
other water born diseases  
& Its primary treatment.



## **Facts:**

### **Availability of water:**

- **About 97 per cent of earth's water, unfit for human consumption.**
- **Of the remaining 3 per cent, 2.3 per cent is locked in the polar ice caps and glacier.**
- **The balance 0.7 per cent is available as freshwater.**



**We can get the idea about share of various sources of water:**

<b>Sources</b>	<b>Percentage</b>
Oceans	97.0
Ice caps and glaciers	02.3
Ground water	00.66
Lakes and ponds of fresh water	00.009
Inland sea and saline lakes	00.008
Soil moisture	00.005
Vapor	00.001
Rivers and streams	00.0001

## **Facts:**

- **More than 3.4 million people die each year from water, sanitation, and hygiene-related causes. Nearly all deaths, 99 percent, occur in the developing world.**
- **According to WHO, diarrhoea alone claims the lives of 1.8 million people every year.**
- **About 12 millions people get infected by typhoid every year.**
- **780 million people lack access to an improved water source; approximately one in nine people.**
- **More people have a mobile phone than a toilet.**



## Waterborne diseases

- **These diseases are caused by consumption of water contaminated by human or animal excreta *i.e.* diarrhoea, cholera, typhoid and gastro-enteritis etc.**
- **The human and animal excreta contain various disease causing microorganisms such as bacteria, virus, worms and amoeba etc.**



**Water induced diseases/**

**Water related insect-vector diseases**

- **These are caused by insects, especially flies and mosquitoes that breed in contaminated water sources and act as vectors (carriers of microscopic pathogens).**
- ***i.e.* malaria, dengue, sleeping sickness (*Trypanosomiasis*), JE and yellow fever etc.**



## Water-washed or water scarce diseases

- **These are caused by poor personal hygiene and skin or eye contact with contaminated water, e.g. trachoma (eye infections), flea and typhus etc.**





## Some examples of Water borne diseases:

### **Typhoid:**

- **Typhoid fever is caused by *Salmonella typhosa* bacteria by ingesting contaminated food and water. Symptoms are characterized by headache, nausea, loss of appetite.**
- **It can be prevented by providing access to safe drinking water, sanitation and good hygiene.**



## **Cholera:**

- **It is highly contagious disease and caused by *Vibrio cholerae* bacteria.**
- **Typical symptoms include diarrhoea, vomiting, rapid dehydration, muscular cramps etc.**
- **It can be controlled by early detection of the disease, improving sanitation facilities and prompt treatment.**
- **Tetracycline and Cotrimoxazole should be administered as antibiotics**



## **Diarrhoea:**

- **It is caused by viruses, bacteria, protozoan and characterized by dehydration.**
- **This can be prevented by sanitation and good hygiene.**

# Some examples of Water induced diseases

## **Malaria:**

It is caused by parasite, *Plasmodium* sp. and is naturally transmitted by the bite of a female *Anopheles* mosquito. When a mosquito bites an infected person, a small amount of blood is taken, which contains malaria parasites.

**Symptoms:** After transmission, the malaria parasites start to multiply within red blood cells, causing symptoms that include fever and headache. Other symptoms are periodic fever, associated with shivering and sweating, **arthralgia** (joint pain), vomiting, anemia (caused by **hemolysis**), retinal damage etc. Fever is intermittent and occurs after 3 or 4 days.

**Control:**

- i. Destruction of mosquitoes by spraying mosquitocides.
- ii. Destruction of mosquito larvae by larvaecides.
- iii. Eliminating the breeding places like stagnant water body.
- iv. Destruction of larvae and eggs with the help of biological control. e.g. fishes and some insect larvae.

**Treatment:** Anti-malarial drugs - quinine, chloroquine and camoquine.

## •Dengue:

• It is transmitted by the bite of an *Aedes aegypti* mosquito infected with any one of the four dengue viruses (Genus: *Flavivirus*). It occurs in tropical and subtropical areas of the world. An estimated 50 to 100 million people contact dengue each year in over 100 countries. The virus is not contagious and cannot be spread directly from person to person. There must be a person-to-mosquito-to-another-person pathway

**Symptoms:** It appears 3—14 days after the infective bite. Symptoms range from a mild fever, to incapacitating high fever, with severe headache, abdominal pain, vomiting, bleeding, pain behind the eyes, muscle and joint pain, and rash.

**Control:**

- i. Destruction of mosquitoes by spraying mosquitocides.
- ii. Destruction of mosquito larvae by larvicides.
- iii. Eliminating the breeding places like stagnant water body.
- iv. Destruction of larvae and eggs with the help of biological control.  
e.g. fishes, some insect-*i.e.* *Mesocyclops*, and bacteria-*Wolbachia*.

**Treatment:** There are no specific antiviral medicines for dengue. It is important to maintain hydration. Early clinical diagnosis and careful clinical management by experienced physicians and nurses increase survival of patients. Use of acetylsalicylic acid (e.g. aspirin) and non steroidal anti-inflammatory drugs (e.g. Ibuprofen) is not recommended.



• **Filaria (Filariasis):**

It is caused by nematodes (worms), transmitted by female mosquito *Culex*.

**Symptoms:** Its includes swelling legs, genitals and it disability.

**Treatment:** Antimony, and arsenic compounds (arseenamides) can cure disease.

# दिमागी बुखार / नवकी बीमारी (इन्सेफैलाइटिस) से बचाव के उपाय

## दिमागी बुखार/नवकी बीमारी के लक्षण एवं बचाव के उपाय:-



- अचानक तेज बुखार आना।
- मरीज का पूरी तरह होशो-हवास में न आना।
- मरीज के व्यवहार में अचानक परिवर्तन आना।
- मरीज को पहली बार झटके आना।

पात: एवं सांयकाल जब मच्छर अधिक सक्रिय होते हैं, उस समय शरीर को पूरा ढक कर रखें एवं सोते समय मच्छरदानी का उपयोग करें।

दिमागी बुखार का टीकाकरण 01 से 15 वर्ष तक के सभी बच्चों का अवश्य कराये।

तालाबों, कुँओं में मच्छर के लार्वा को खाने हेतु गोम्बूसिया व गप्पी मछलियों को डाले जिससे मच्छर को पनपने से रोका जा सके।

तालाब, कुएं तथा कम गहरे हैण्डपम्प के पानी का उपयोग पीने व खाना बनाने में न करें।



सुअरों को हमेशा, सुरक्षित बाड़ों में और आवादी से दूर रखें।



गहरे हैण्डपम्प (इण्डिया मार्क-II) / पाईप पेयजल योजना के पेयजल का ही उपयोग पीने एवं खाना बनाने में करें।

## क्या करें



शौच करने के लिए शौचालय का उपयोग करना।



खाने से पहले एवं शौच करने के बाद साबुन से हाथ धोना।



घर का कूड़ा गड्डे में डालकर हल्की मिट्टी से ढकना।



बच्चे के मल को भी घर के शौचालय में ही डालना।



पीने के पानी को साफ बर्तन में ऊँचे स्थान पर ढककर रखना और पानी को इंडीवाले लोटे से निकालना।



खाना बनाने एवं परोसने से पहले साबुन से हाथ जरूर धो लेना।

## क्या न करें



खुले में शौच न करे।



शौच करने के बाद मिट्टी या गंदे पानी से हाथ न धोए।



अपने घर के आसपास या अपने टोले मुहल्ले में कूड़ा-कचरा या बच्चे के मल को न फेंके।



गन्दे हाथ से खाना न पकाएं एवं खाना न परोसें।



पीने के पानी को खुले में न रखे और अँगुली हुवाकर पानी न निकालें।

\* अगर हैण्डपम्प के प्लेटफॉर्म में टूट-फूट है तो उसकी गाम पंचायत से तुरन्त मरम्मत करायें। नालियों की नियमित सफाई करें जिससे गन्दा पानी इकट्ठा न होने पाये।

कृपया पेयजल के सम्बन्ध में जानकारी के लिए उ.प्र. जल निगम/ एस0इब्लू0एस0एम0 के टोल फ्री नम्बर पर सम्पर्क करें।

18001025030 18001800525

अधिक जानकारी के लिए सम्पर्क करें :

गांव की आशा, आंगनबाड़ी कार्यकर्त्री, ए0एन0एम0, प्राथमिक चिकित्सा केन्द्र, मुख्य चिकित्सा अधिकारी, अधिशासी अभियन्ता, उ0प्र0 जल निगम, मुख्य विकास अधिकारी, जिला अधिकारी, राज्य तथा जिला पेयजल एवं स्वच्छता मिशन।







धन्यवाद