

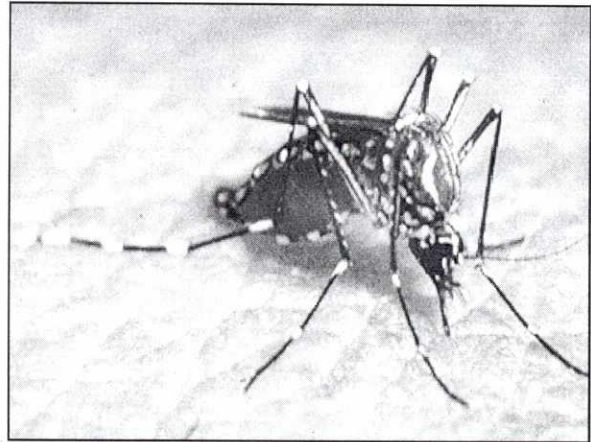
Dengue outbreak: a logical outcome of sanitation system failure

The second spike of mosquito transmitted dengue fever and dengue hemorrhagic fever is the direct outcome of the combined negligence of public health institutions and municipal bodies as well as local governments. Poor sanitation facilities in thickly populated areas invite mosquito breeding, resulting in malaria and dengue outbreaks.

Dengue fever infects more than 50 million people, most of them children, worldwide annually during or after monsoon, mainly in the populous cities of tropical areas. In this part of the world, India was the first victim of this disease where ten thousand people got infected and 80 died so far.

The second wave of dengue fever in Pakistan came in Karachi in October this year, where, according to official statistics, the number of people with dengue infection crossed 500 by the end of the same month. However, press reports put this number much higher.

Keeping in mind the aggravating situation in Karachi, the administration of other cities should have taken appropriate measures to cope with possible Karachi-like situation but nothing was done and the disease spread in various other cities of interior Sindh and



Rawalpindi, Islamabad and Peshawar in north. Although dengue does occur in only tropical areas, the passengers carrying dengue virus, probably, helped bring this disease to cities like Islamabad and Peshawar.

The performance of federal and provincial governments remained confined to press statements claiming that free testing facilities have been provided in all cities and fumigation campaigns are being started to stop mosquito breeding etc. The ground realities however, suggest otherwise. There are complaints in Karachi and other cities that Rs 700 to 800 are being charged to a patient to carry out blood tests in public sector hospitals. It is very much unfortunate that people in power corridors don't think beyond federal capital that's why there seem no precautionary measures or preparation to face the possible outbreak of this deadly disease in the cities, where dengue cases have not yet been reported, like Lahore.

Moreover, the excessive and irrational use of antibiotics and antiviral medicines in Pakistan has made the viruses and bacteria more resistant against medicines and diseases like dengue have turned into epidemics.



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Dengue fever: 20 questions and answers

Q1. How do humans get infected from dengue?

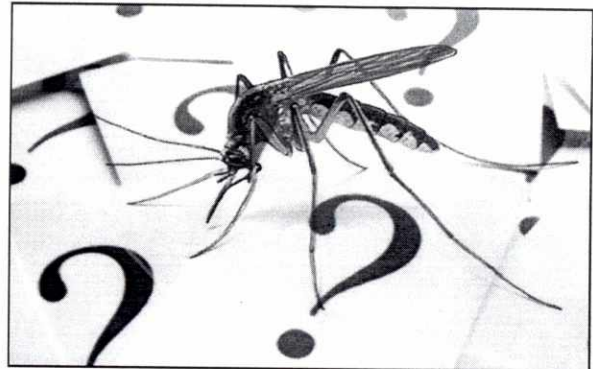
A. Dengue virus is transmitted in the human body when a particular type of infected mosquito bites someone. The similar type of uninfected mosquitoes when bites an infected human, they get infected and transmit the virus to other humans.

Q2. Are all kinds of mosquitoes able to transmit dengue virus?

A. No. Only two species of mosquito, *Aedes aegypti* and *Aedes albopictus*, have been responsible for all cases of dengue transmitted. *Aedes* mosquitoes are relatively big black mosquitoes with white spots on their body. They are found mainly in homes and live in clean water. They prefer to suck human blood as their food. One can get dengue virus infection from the bite of an infected *Aedes* mosquito. Mosquitoes become infected when they bite infected humans, and later transmit infection to other people they bite. An infected person can transmit the virus to mosquitoes within 3-4 days of being bitten and can continue to do so up to 12 days.

Q3. How many types of dengue are there?

A. There are four types of dengue viruses that cause dengue fever. The most fatal and severe one of them is the dengue hemorrhagic fever. In fact dengue hemorrhagic fever is a complication of common dengue fever. The symptoms of all the four types of dengue fevers appear to be the same at the initial stages of dengue illness, which can be cured with proper medication within the first two weeks of the illness. Dengue Hemorrhagic Fever mostly targets infant and children below 15 years of age; however the dengue hemorrhagic fever has affected adults as well. Dengue can



attack a person more than once in a lifetime. A person can not be immune to other types of dengue and will, in fact, be at risk of developing severe symptoms if they contract another type of dengue more than once even.

Q4. Are all types of dengue fever fatal?

A. No, if the dengue disease is diagnosed at the initial stages and treated properly, it can be cured. More than 95 per cent dengue fever patients have recovered within two weeks of infection. Occasionally Dengue fever can result in complication, the dengue hemorrhagic fever which leads to bleeding from gums, nose, bowel and into internal organs that is very severe and even fatal, due to deficiency of platelets in the blood. Platelets are small, blood-borne cells whose primary role is to 'plug' damaged blood vessels by forming blood clots, thereby preventing bleeding.

Q5. How can dengue fever be differentiated from common fevers?

A. Dengue is diagnosed by two types of blood tests to find out the presence of dengue virus in the blood. However, commonly dengue is suspected when one has sudden onset of high grade fever 103-105 degrees F, accompanied with severe headache (mostly in the forehead), pain behind the eyes, body aches and pains, rash on the skin and nausea or vomiting. The fever lasts for 5-7 days.



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Q6. Where dengue is not found?

A. Since dengue outbreaks occur in tropical areas, mostly, thus it is assumed that the mountainous regions at 4000 ft above sea level are safe from dengue.

Q7. What are the symptoms of common dengue fever?

A. The illness can range from a mild flu-like condition to a severe aching illness with marked headache, high fever, sore eyes, backache and leg and joint pains. There is seldom a cough but sometimes a rash on the chest and inner arms with spots on the roof of the mouth. Sometimes the fever seems to settle for a day or two and then recurs.

Q8. What are the symptoms of Dengue Hemorrhagic Fever?

A. Dengue hemorrhagic fever presents similarly to dengue fever but is associated with more severe bleeding problems (e.g. gum bleeding, nose bleeding and bleeding into the skin and internal organs) along with evidence of plasma leakage, shock and occasionally death.

Q9. How many people are infected with dengue in Pakistan?

A. According to official figures, more than 2500 patients with symptoms similar to those of dengue fever are admitted in different hospitals from whom 31 (1.2 per cent) people have died so far.

Q10. Which areas are more prone to dengue outbreak and why?

A. The populous coastal cities of tropical areas are more prone to dengue since dengue virus carrying mosquito breeds in clean water of water supply pipes and in the backyards and plant vases in homes. However, forested

villages also provide breeding facilities to dengue carrying mosquito therefore, dengue cases, though rarely, can be witnessed in such villages as well.

A11. Which age group is the favorite victim of the dengue virus?

A. Infants and under-15 children are more prone to dengue virus and this is the age group where the prevalence of dengue hemorrhagic fever, the fatal complication of dengue fever, is the highest. However, humans from all age groups can get infected.

Q12. When do the symptoms of dengue fever start appearing after the patient is injected dengue virus by infected mosquito?

A. It takes 3-6 days for symptoms to emerge after the biting of the infected mosquito.

Q13. Is there any specific treatment for dengue fever?

A. No. There is no specific cure for this disease, however, doctors use common fever and painkiller medicines along with the enhanced fluid intake and complete bed rest for two weeks.

Q14. What should be done immediately if dengue is suspected?

A. There is no need to get harassed. On suspicion, some good hospital should be accessed for blood screening for confirmation of dengue attack. It is worth to mention here that similar symptoms can occur in other diseases like chicken pox and some other infections too.

Q15. Which medicines are best avoidable in dengue fever?

A. Any medicine containing Aspirin and other blood thinners are best avoidable in dengue fever as they can escalate the deficiency of



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platelets.

Q16. Can humans transmit dengue virus to their fellow beings?

A. No. Dengue is non-transmittable by any other mean except infected mosquito. Human-to-human contact is absolutely safe. There is no threat for attendants and visitors of a dengue patient.

Q17. What are the timings of attack by dengue-carrying mosquitoes?

A. These mosquitoes normally bite during daytime. However, their favorite time to bite is two hours after and before the sunrise and sunset, respectively. Special measures should be taken during those timings to avoid mosquito attack. But it does not mean that they can not attack during other hours. It is evident that they can bite in the artificial light in night.

Q18. Is there any vaccine available in market for dengue?

A. No. There is neither any vaccine available in the market nor are the chances of any effective vaccine for next few years.

Q19. What are the precautionary steps, necessary to be taken on individual level to avoid dengue attack?

A. The only way to avoid dengue is to avoid mosquito biting. Dengue-carrying mosquitoes breed over clean water pots and plant vases in backyards. To avoid mosquito breeding in

homes, the appropriate water drain (both clean and sewerage water) from home, locality and the pools and ponds, should be ensured. The water storage facilities should be properly covered or fumigated. Mosquito repellents should be used to avoid biting. The windows and door screens and other openings should be repaired and remained shut properly. The children, who are more prone to this virus, should be protected carefully by get them sleeping under fly-nets, even during daytime. They must be covered with full-sleeve cloths in the areas where dengue is prevalent.

Q20. What are the collective measures, needed to be taken to cope with dengue attack?

A. Dengue outbreak is not only a problem of public health. Rather it is an issue of health and sanitation and even good governance. The way, our municipal and local bodies and development authorities encourage mosquito breeding through negligence, is resulting in malaria and dengue outbreaks. All the places, where sanitation is poor are prone to dengue attack. The cleansing of thousands of garbage heaps all over the country along with effective, proper and timely fumigation besides reforming the sanitation and sewerage system are the need of the hour. However, it is a huge test of district governments, well equipped municipal and development authorities with a bulk of human and financial capital. All they need is a political will.

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