

Managing Dengue outbreak with COVID-19

STAR HEALTH DESK

When we all are struggling to fight the COVID-19 pandemic, Dengue is an overburden for us. Since we must deal with the diseases, we need to know the prevention and management better.

Factors increasing the risk of DHF outbreaks: The occurrence of the Dengue Haemorrhagic Fever (DHF) outbreaks is linked to a number of factors, including the density of mosquito vectors, particularly that of *Aedes aegypti*. In many instances, a small number of actively biting female mosquitos can infect an entire household. Virus transmission is, of course, increased by denser human populations.

Dengue virus may also spread in settings involving large numbers of people, such as in hospitals where visitors, patients and staff may be bitten by infected *Ae. aegypti*.

A distinct seasonal pattern in DHF outbreaks is evident in most places. DHF hospitalisation rates increase during the rainy season and decline several months after the cessation of the rains. During these seasonal lulls, virus transmission is most likely to occur in endemic urban areas where high densities of the human population ensure a



constant supply of susceptible individuals, and numerous vector breeding and resting sites around human dwellings insulate vector populations from the effects of seasonal rainfall.

Control of dengue haemorrhagic fever: To control outbreaks of DHF, two operations must be conducted simultaneously: emergency mosquito control and treatment of patients in the hospital. The following steps should be immediately taken when an outbreak of dengue or DHF is suspected:

- A public information campaign should be instituted, stressing the basic epidemiological characteristics

of dengue and DHF and the measures the individual can take to reduce the risk of infection, e.g. personal protective measures, the use of household aerosol insecticides, source reduction efforts at home and in the neighbourhood.

- The geographical area should be defined in order to determine the extent of the insecticide spraying operation required.
- An inventory of the location, quantity and availability of pesticides and the equipment for their application should be made.

The objective of emergency mosquito control measures is to eliminate infected mosquitos and to break the transmission cycle by reducing mosquito populations to extremely low levels during

the time necessary for viraemic subjects to recover.

Control of an epidemic may not be feasible if adult populations of *Ae. aegypti* cannot be sufficiently reduced. However, a sustained reduction of vector populations will inevitably result in fewer cases.

Prevention of dengue haemorrhagic fever outbreaks: Prevention of DHF outbreaks is based on vector control, as a vaccine is not yet available. Currently, the only effective way to avoid dengue virus infection is to avoid being bitten by infected mosquitos.

A broad approach to the prevention of DHF involves the integration of the measures

described in previous chapters. Such a programme would combine two or more of the following components:

- Disease surveillance and treatment, whether centralised or based on local health care systems.
- Vector surveillance and control, with a mixture of environmental management and chemical and biological control.
- Provision of reliable potable water, sanitation and solid waste management.
- Health education, public health communication and community participation.

Dengue virus transmission is often a problem of domestic environmental management, and members of a household can frequently reduce their risk of DF and DHF at little or no cost by controlling larval habitats and combating adult mosquitos by screening windows and doors and using household insecticide space sprays.

A challenge for public health authorities is to find ways of getting a community to recognise the problem, assume a share of the responsibility for its solution and acquire the capability and motivation to prevent and control dengue fever.

Source: World Health Organisation

DID YOU KNOW?



Exercise training reduced resistant hypertension

Exercise has been shown to reduce blood pressure (BP) in patients with essential hypertension. To determine whether an exercise training programme could also reduce BP in patients with hypertension labeled as “resistant,” researchers performed a small, randomised trial.

Sixty patients aged 40 to 75 years with diagnosed resistant hypertension were recruited from two centers in Portugal and randomly assigned to a 12-week, moderate-intensity aerobic exercise training program or usual care (control group). The exercise group performed three 40-minute supervised exercise sessions per week.

Twenty-six patients in the exercise group and 27 in the control group completed the study (mean age, 60 years; 45% women). Compared with the control group, those in the exercise group had significant decreases in both systolic (–7.1 mm Hg) and diastolic (–5.1 mm Hg) 24-hour ambulatory blood pressure. Daytime BP was also significantly reduced (–8.4 /–5.7 mm Hg), as was office systolic BP (–10.0 mm Hg) in comparison with controls.

This small, proof-of-principle study suggests that exercise can lower BP, even in patients with resistant hypertension. Particularly interesting is how large the benefit was for such a short intervention (12 weeks).

BP reductions on the order of 10/5 mm Hg are similar to what can be achieved with a single antihypertensive medication and would be expected to be associated with significantly lower risks for cardiovascular morbidity and mortality.

HEALTH bulletin



Cycling is associated with lower risk for death in people with diabetes

Diabetes is associated with excess risk for premature all-cause and cardiovascular-related death. In a prospective cohort study, European researchers determined the associations between weekly outdoor bicycling minutes (and changes in cycling time) and death in 7,500 adults with diabetes (mean age, 56; mean body-mass index, 29 kg/m²; mean diabetes duration, 8 years).

After a mean follow-up of 15 years, 1,700 deaths had occurred, of which 800 were cardiac related. Adjusted for multiple variables, cycling was associated with 20% to 30% lower all-cause mortality across a range of cycling times from 1 hour to >5 hours weekly. A subset of 5,400 participants completed a second examination (4 years after the first examination) to determine effects of change in cycling: After a mean follow-up of 11 years, those who cycled then stopped — as well as those who did not cycle then started — had a 35% lower risk for all-cause death than people who reported no cycling at both visits. Similar results were obtained for cardiac-related death.

In this study, which is subject to confounding, any outdoor bicycling was associated with lower risk for death in people with diabetes. Editorialists note that “cycling requires fitness, a good sense of balance, and the means to purchase a bicycle,” along with safe streets. The results highlight the importance of physical activity in people with diabetes.

Beaware of the conditions that look like anxiety

STAR HEALTH DESK

There are certain conditions that look like anxiety, but are some other diseases in fact. Often this drags us to dangerous, even fatal conditions sometimes. Let's know some of these conditions.

Heart problems: These can spike your heart and breathing rates the same way anxiety does. Panic attacks and heart attacks in particular have similar -- and sometimes identical -- symptoms. Both can cause dizziness, chest pain, and trouble breathing. They can also trigger sweating, nausea, and a feeling of fear. It can be hard to tell them apart without testing. Be alert if you have any of these symptoms, especially if you don't have a history of panic attacks.

Asthma: Both it and anxiety can cause shortness of breath, chest pain, and lightheadedness. Both can be triggered by stressors like relationship or financial problems. Many people with asthma also have panic attacks. You may think it is anxiety if you start to have these symptoms as an adult, but you could be dealing with adult-onset asthma. Red flags include wheezing, coughing, and symptoms that change day by day.

Diabetes: With uncontrolled diabetes, sugar rushes and dips can lead to trembling, sweating, and a fast heart rate. It can cause headaches and nausea, too. These symptoms are sometimes confused with anxiety. Talk to your doctor if you are often very hungry, thirsty, tired, or peeing a lot. Or if you are losing weight, have blurry vision, dry skin, or sores that heal slowly. You may need your blood sugar tested.



Hyperthyroidism: Hormonal imbalances can look like anxiety. For example, an overactive thyroid gland makes too much thyroid hormone. This can speed up your metabolism and lead to nervousness, restlessness, and a fast heartbeat. It can also cause sleep trouble and irritability, all common with anxiety. A “thyroid storm” can look very similar to a panic attack. Keep an eye out for unexplained weight loss and increased sensitivity to heat, both signs of hyperthyroidism.

Sleep apnea: When you cannot breathe properly at night, you might wake up feeling breathless or with a racing heart. Sleep apnea can lead to other anxiety-like symptoms including headaches, mood changes, memory trouble, and nightmares. It can even trigger panic attacks. Talk to your doctor about getting tested for sleep apnea, especially if you also snore loudly.

Irritable Bowel Syndrome (IBS): Many people with anxiety get stomachaches. But IBS can also cause belly pain and cramps. These conditions often go hand in hand, and each can make the other worse. So it is sometimes hard to know which is the root cause. If you have

bloating, gas, constipation, and diarrhea, IBS may be the source. Getting the right treatment will help you feel better physically and mentally.

Lung diseases: They often cause shortness of breath, a common symptom of anxiety, along with nausea and chest pain or pressure. If you also cough or wheeze a lot and have trouble taking a deep breath, you could have chronic obstructive pulmonary disease (COPD). The risk is higher if you're a smoker or have had a respiratory infection.

Endometriosis: This condition happens when your uterine lining grows outside the uterus. Many people go undiagnosed for years because the pain can be hard to pin down. It is often chalked up to IBS or “bad periods.” It can also be misdiagnosed as anxiety. And if you actually do have anxiety, it may stem from your symptoms. Talk to an obstetrician/gynecologist, if you have irregular, heavy, or very painful periods or ongoing pelvic pain. Be sure to tell them if you have pain during sex, stomachaches, or pain when you poop or pee.

Source: WebMD

COVID-19 vaccines for moderately to severely immunocompromised people

Centers for Disease Control and Prevention (CDC) now recommends that people whose immune systems are compromised moderately to severely should receive an additional dose of mRNA COVID-19 vaccine after the initial 2 doses. Widespread vaccination is a critical tool to help stop the pandemic.

People who are moderately to severely immunocompromised are especially vulnerable to COVID-19 because they are more at risk of serious, prolonged illness.

People who have compromised immune systems may benefit from an additional dose to make sure they have enough protection against COVID-19.

CDC recommends people who are moderately to severely immunocompromised should receive an additional dose of mRNA COVID-19 vaccine after the initial 2 doses.

CDC recommends that people with moderately to severely compromised immune systems receive an additional dose of mRNA COVID-19 vaccine at least 28 days after a second dose of Pfizer-BioNTech COVID-19 vaccine or Moderna COVID-19 vaccine. CDC does not recommend additional doses or booster shots for any other population at this time.

The recommended additional dose is for people who have:

- Been receiving active cancer treatment for tumors or cancers of the blood
- Received an organ transplant and are taking medicine to suppress the immune system
- Received a stem cell transplant within the last 2 years or are taking medicine to suppress the immune system
- Moderate or severe primary immunodeficiency (such as DiGeorge syndrome, Wiskott-Aldrich syndrome)
- Advanced or untreated HIV infection
- Active treatment with high-dose corticosteroids or other drugs that may suppress your immune response

People should talk to their healthcare provider about their medical condition, and whether getting an additional dose is appropriate for them.

Source: CDC



/StarHealthBD

বঙ্গবন্ধু শেখ মুজিবুর রহমান
BSMMU (সাবেক IPGMR)-এ রক্ত সংরক্ষণাগার বিভাগ এবং
নতুন মহিলা ওয়ার্ড উদ্বোধনের সময় বঙ্গবন্ধুর নির্দেশ, ৮ই অক্টোবর ১৯৭২ইং

“আপনারা ডাক্তার, আপনাদের মন হতে হবে অনেক উদার। আপনাদের মন হবে সেবার, আপনাদের কাছে ছোট বড় থাকবে না। আপনাদের কাছে থাকবে রোগ; কারো রোগ বেশি, কারো রোগ কম। তাহলেই তো সমাজ ব্যবস্থার পরিবর্তন হবে এবং মানুষের মনের আপনারা সহযোগীতা পাবেন”

Doctors have to be very generous. You shall have a caring mind without discriminating anyone. You are going to treat the patient's disease; some with severe conditions, some with primary. Only then the society will change and you will have a place in people's heart.

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