



A primary school campaign against Dengue.



The Dengue mosquito

A report by the National Dengue Control Unit showed that most of the Dengue breeding sites were discarded material and water storage items.



The Dengue mosquito is dangerous

DENGUE ON THE RISE!

SOLUTION IN OUR HANDS



Dengue mosquitoes breed in these places.

AANYA WIPULASENA

The number of Dengue cases in Sri Lanka in July this year, as reported by the National Dengue Control Unit of the Health Ministry, is 3,292. The cases reported in July last year were 2,164. This is a difference of over 1,000 patients.

Health officials warn that if this trend continues, deaths of Dengue patients are expected to increase due to lack of facilities in hospitals that are already overwhelmed by the increase of Covid-19 cases in the island.

"Now we are undergoing a situation as never seen before. Covid-19 is spreading fast and many patients are hospitalized," Dr. S. Mahendra Arnold, Deputy Director General of Health Services said during a press conference this week.

He said if Dengue fever spreads uncontrollably, deaths will also increase as medical attention and facilities are given to treating Covid-19 patients.

"This year the number of Dengue patients has increased drastically compared to last year. We need to pay similar attention that we are paying to Covid-19 to Dengue," he said. That sounds serious. But how bad is it?

According to officials at the National Dengue Control Unit most of the cases are reported in Colombo in the Western Province.

Latest statistics show that in July last year, the number of patients who sought medical assistance at hospitals in the Colombo district was 361. The number of patients reported from the same district last month (July) was a staggering 1,286.

Meanwhile, this month, till Tuesday (10), the number of Dengue patients reported in the island was 477. In addition to Colombo, Gampaha, Kalutara, and Kurunegala have recorded the highest number of cases.

Officials also said that all four Dengue virus types (DENV-1, DENV-2, DENV-3, DENV-4) are detected from the community. This means a patient could get Dengue fever several times.

Epidemic vs. pandemic

One of the major reasons why Covid-19 and Dengue are hard to distinguish is because the initial symptoms are generally the same. A patient may get fever, headache and body pain.

"Only a qualified doctor can say if the patient has Dengue or Covid-19. Therefore, we urge patients not to judge, and seek medical attention as soon as they have these symptoms," Dr. Himali Herath, Consultant Community Physician, National Dengue Control Unit at the Health Ministry said.

Much like Covid-19, the spread or control of dengue is in the hands of the public. Dr. Herath said the breeding of the killer mosquito is related to people's behaviour because Dengue mostly breeds on man-made sites so Health authorities have urged the public to clean these sites.

"We are hoping to see a decrease in Dengue cases," she said adding that the public has an important role to play in ensuring that the country will not be burdened by a sudden surge in Dengue cases in addition to the Covid cases.

Outsmarting a killer mosquito

The public is advised to keep their vicinity clean. A report by the National Dengue Control Unit showed that most of the Dengue breeding sites were discarded material and water storage items. Ornaments and ponds, and discarded tyres were also found to be popular breeding sites.

"Since March 2020 a rapid decrease in the number of reported Dengue patients was observed throughout the year," the report stated.

"Despite the Covid-19 pandemic prevailing in the country, the regular Dengue control measures were carried out uninterrupted through the central, provincial, district and MOH level Health teams," the report stated regarding the decrease in Dengue cases reported in 2020.

Health officials say that the public also played a crucial role by keeping their gardens clean during the same year.

Dr. Herath of the Health Ministry urged the public to do the same this year, especially as the health care institutions are overburdened by the ongoing pandemic that is not showing any sign of slowing down at the moment.

Roma and Johnny to the rescue

Two police K9s are being trained to detect mosquito breeding sites. Their trainers believe that this will help health officials to detect places where mosquitoes breed that are not visible to the naked eye.

"The training of the dogs is still at the basic level. We are hoping to put



A young dengue patient



One can be co-infected with both Dengue and Covid.

them into the field in a month's time," Chief Inspector Chandana Kolugala, training OIC of the Sri Lanka Police Kennels Division said.

However, there's only so much K9s Roma and Johnny can do against Sri Lanka's battle against dengue. Keeping people's vicinity clean at all times is the solution, health officials stressed.

Dengue, Rat Fever or Covid?

With the onset of monsoon, like every year, spread of vector-borne diseases like Malaria and Dengue is on rise. While this happens every year, the Coronavirus pandemic has posed a unique challenge of diagnosis as one may see some cases of Dengue-Covid-19 co-infection.

According to a study published in National Centre for Biotechnology Information of India, "similar symptoms and laboratory findings between Dengue and Coronavirus disease 2019 (Covid-19) pose a diagnostic challenge in some dengue-endemic countries in Asia." In this study, which was conducted on three cases of suspected Covid-19-dengue co-infection in hospitals of Bali, Indonesia, co-infection of Dengue and Covid-19 was found in one patient.

Symptoms of Malaria, Dengue, and Covid-19 may overlap with each other which makes diagnosis and treatment difficult. Also, steps must be taken to prevent simultaneous infection of

Covid-19 and vector-borne diseases

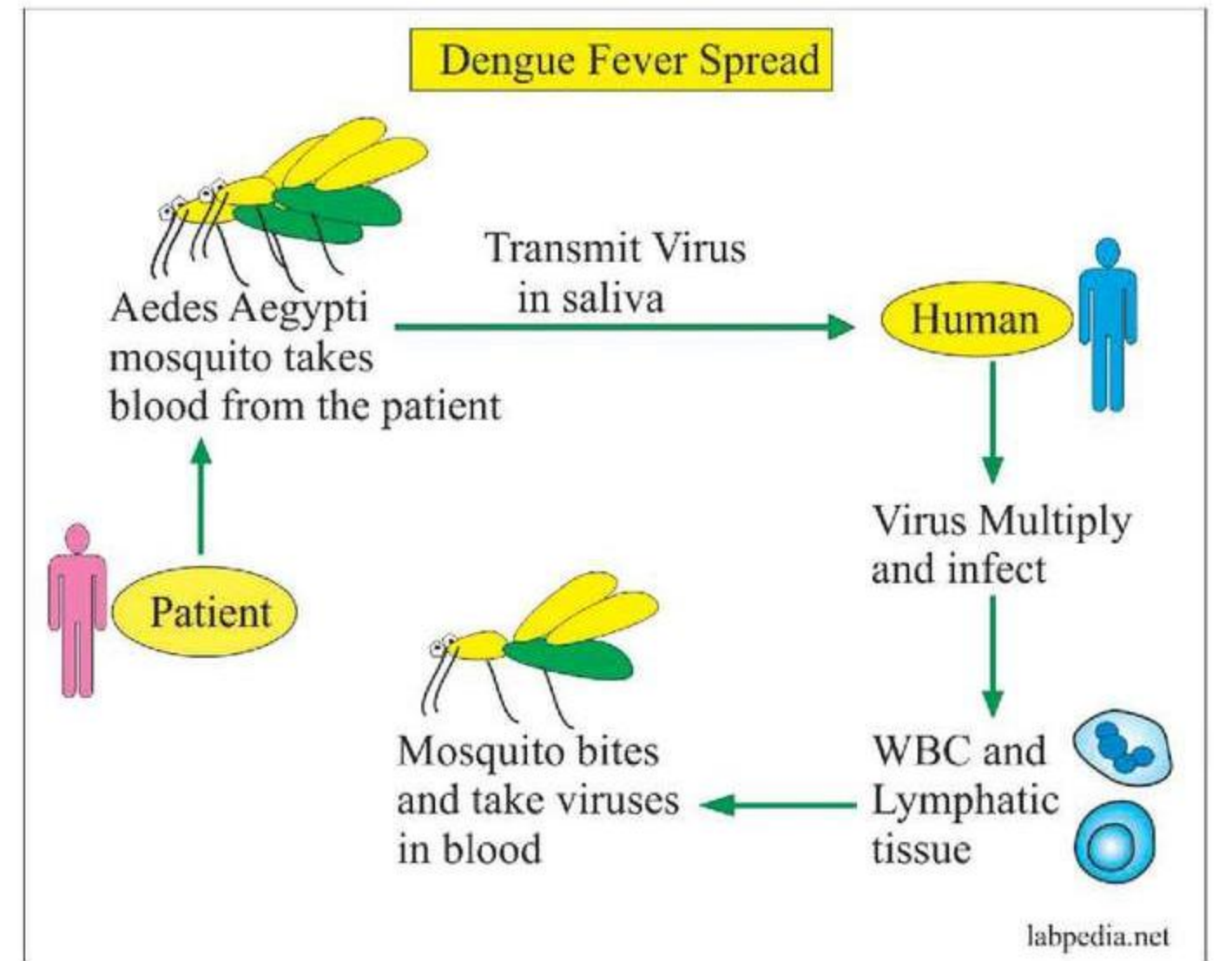
"Every year during the monsoon, we see a spike in cases of Malaria, Leptospirosis and Jaundice. These diseases have similar symptoms like fever, diarrhoea, vomiting, headache

and joint pain. However, additional symptoms like cough, loss of smell or taste, or sore throat may aid in the diagnosis for Covid-19. Preventing co-infection will allow in segregating and treating Covid patients accurately while reducing chances of wrong treatment that can lead to higher morbidity or mortality rates," says Dr. Sharat Kolke, a senior physician in India.

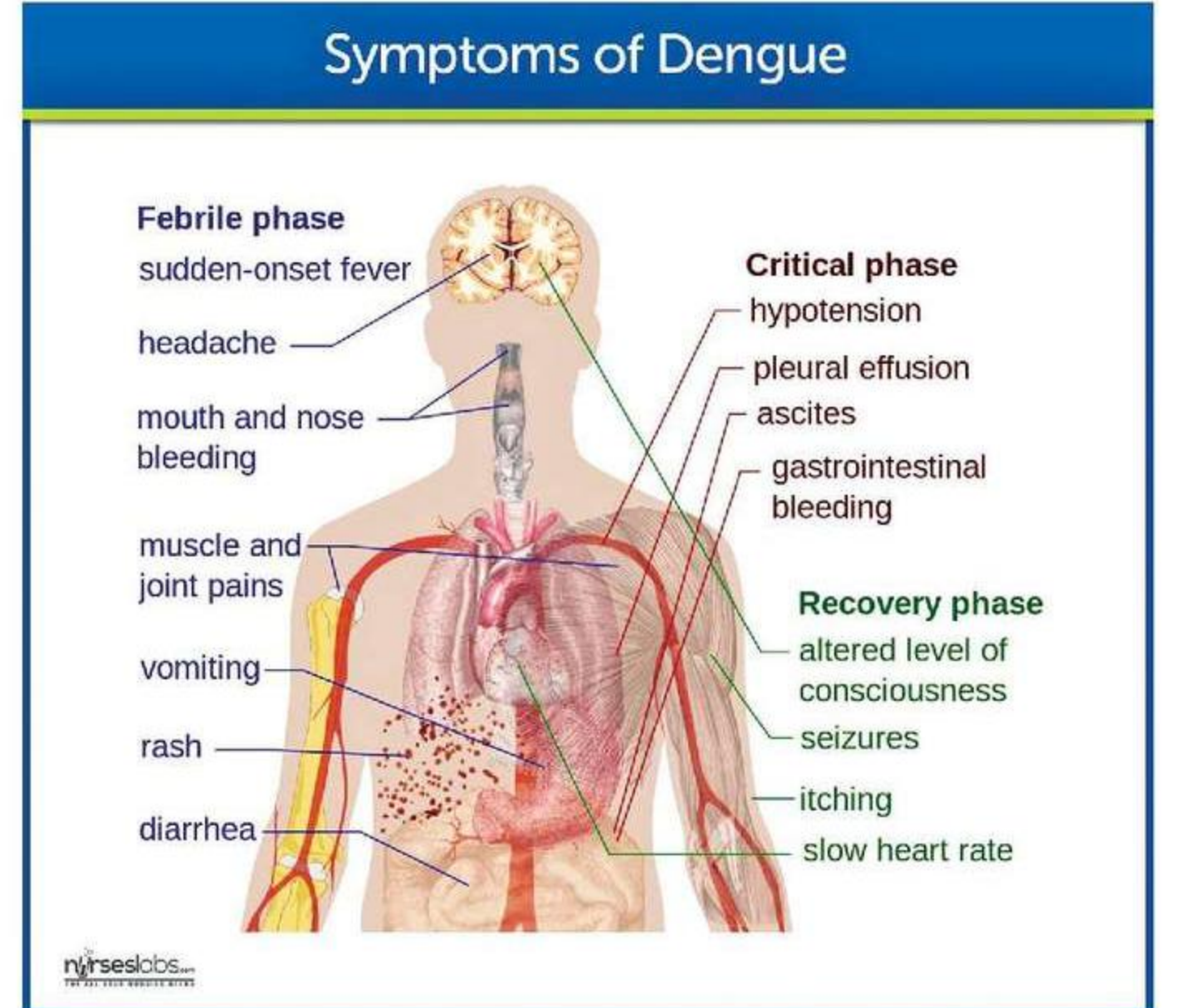
With seasonal illnesses on rise, the symptoms of each of the monsoon diseases must be carefully observed. In Dengue, for example, the common symptoms are sudden high fever, nausea, vomiting, severe body ache, low platelet count, rashes, etc. In case of Chikungunya, there may be acute joint pain, pain in back of eyes, chills. In Leptospirosis, kidney-related issues, Jaundice, redness of eyes can be seen.

"People should consult a doctor if their fever does not subside within two or three days. If it is associated with chills, myalgia, rash or headache, they should be more cautious. These symptoms could be because of Dengue. Children and the elderly should be given immediate attention. Also in the monsoon, fever with vomiting and loose stools, and yellow discoloration of eyes can point towards Jaundice or acute Gastroenteritis. Take medication as prescribed by the doctor and do not opt for any home remedies," warns Dr. Vikrant Shah, consulting physician, intensivist and infectious disease specialist.

There are ways to stay safe from these various infections: keep your home and surroundings mosquito-free; use mosquito repellents and wear full-sleeved clothes before stepping out; avoid going to crowded places to reduce risk of viral infections; drink boiled water; consume fresh homemade food; make sure your home is well-ventilated; wash hands before eating any food; and



How dengue spreads



Dengue symptoms

avoid touching your nose and mouth without washing your hands.

Heat sensitive

Infection with the Dengue virus makes mosquitoes more sensitive to warmer temperatures, according to new research led by Penn State (Pennsylvania State University) researchers. The team also found that infection with the bacterium *Wolbachia*, which has recently been used to control viral infections in mosquitoes, also increases the thermal sensitivity of the insects. The findings suggest that global warming could limit the spread of Dengue fever but could also limit the effectiveness of *Wolbachia* as a biological control agent. "Dengue fever, a potentially lethal disease for which no treatment exists, is caused by a virus, spread by the bite of the mosquito *Aedes aegypti*. This mosquito is also responsible for transmitting a number of disease-causing viruses, including Zika, Chikungunya and Yellow Fever," said Elizabeth McGraw, Professor and Head of the Department of Biology at Penn State. "Aided by increasing urbanization and climate change, this mosquito's range

is expected to overlap with 50 percent of the world's population by 2050, dramatically increasing the number of people who could potentially be exposed to these viruses."

In recent years, research groups around the world have attempted to control these viruses by infecting *Ae. aegypti* with the bacterium *Wolbachia pipiensis* and then releasing the mosquitoes into the environment, McGraw explained.

"*Wolbachia* have been shown to prevent viruses, including Dengue, from replicating inside mosquitoes," she said. "Importantly, *Wolbachia* are passed down to the mosquitoes' offspring, making them a self-propagating and lower-maintenance approach to disease control in the field."

McGraw noted that both the Dengue virus and *Wolbachia* infect a variety of tissues throughout a mosquito's body, and although they are not toxic, they do evoke an immune stress response. "Since mosquitoes that are infected with the Dengue virus and/or *Wolbachia* are already suffering a stress response, we thought that they would be less well-equipped to deal with an additional stressor, such as heat," she said.



PHI and Armed Forces personnel educate householders on Dengue.