



SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Readers/Doctors,

Hope you are well. We are in the midst of many problems - economic, political, and other problems. The summer season is going on, but the intensity of heat is comparatively less this year, at least up to mid-May. Please take care in this summer. Our last issue of ST covers some common precautions that could be of help to stay well this summer. It is reported that The incidence of coronavirus is rising in India also. But the government has told us not to panic as the matter is not fatal yet.



Good news that we would like to point out. Some researchers at IIMS, New Delhi, have developed a groundbreaking method for diagnosing Primary Ciliary Dyskinesia (PCD) with 640x greater precision. The PCD is a rare and often misdiagnosed genetic disorder affecting the respiratory system. They have done this by using transmission electron microscopy. Quoting a statement from AIIMS, it is reported that the new method was validated on 200 patients with suspected ciliary disorders. The technique confirmed the diagnosis in 135 cases. Medical experts reportedly hail this innovation as a game-changer in genetic diagnostics.

In this issue, we have discussed two important health-related matters. Story 1 discusses anaphylaxis disease. It is a severe allergic reaction. It is triggered by various substances like food, insect stings. These are the most common factors for triggering the disease. But certain medications, latex, and in some cases, some exercises, when it is combined with certain foods and extreme temperatures, can also be the causes of this health problem. What are the symptoms, and how can it be dealt with? All these are discussed in the story. It is not a very common problem in India, but it is potentially fatal. The prevalence in India varies, but some studies observed that it occurs in 1.5 to 7.9 per 1 lakh persons. But it is thought that cases of anaphylaxis are underreported, as in many mild cases, no hospitalization is required.

Story 2 is on Alzheimer's and how it can be prevented to an extent. Alzheimer's is a growing concern in India. Studies say the prevalence in India has been 7.4% among adults aged 60 and older. It is estimated that about 8.8 million Indians live with dementia. Alzheimer's is a specific type of dementia. But as a percentage of the population, it is lower than that of Western countries. It is projected that in India, it will be doubled by 2030 and tripled by 2050. So, it is hoped that both stories will be important for you. Expect that you will stay safe.

Thanking you.

Sanjib Acharya

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Anaphylaxis - Rapid Recognition and Treatment is Imperative to Avoid Fatality

Story 1

Anaphylaxis is a medical emergency and a life-threatening acute hypersensitivity reaction. It may be defined as a rapidly evolving, generalized, multisystem allergic reaction. If it is not treated or very late treated, its rapid progression may lead to respiratory collapse. The exposure to certain medications, foods, and insect stings is among the main sources of this disease. So, bee stings, fire ant bites, latex, and foods like peanuts, tree nuts, fish, shellfish, milk, eggs, wheat spelt, rye, barley, soya, red meat and sesame, etc., and medications like antibiotics, aspirin and other pain relievers, are major sources of this.

How does it happen?

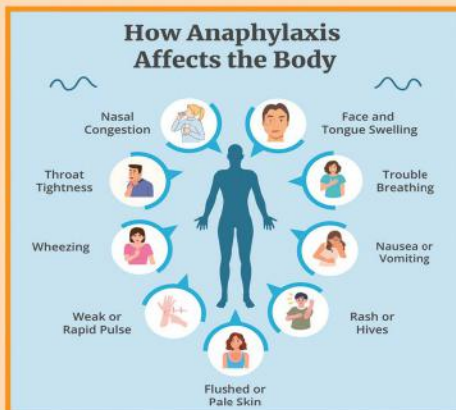
Anaphylaxis causes the immune system to release a flood of chemicals that can cause one to go into shock. That is, blood pressure drops suddenly and the airways narrow, blocking breathing. The immune system produces antibodies that defend against foreign substances. This is good when a foreign substance is harmful, such as certain bacteria or viruses. But some people's immune systems over-react to substances that do not normally cause an allergic reaction. Allergic systems are not usually life threatening, but a severe allergic reaction can lead to anaphylaxis. Anyone can be affected but it occurs to young people more.

Symptoms

The common symptoms are a rapid, weak pulse, low blood pressure, a skin rash, nausea and vomiting, constriction of airways, and dizziness and fainting.

Some risk factors

There are some prominent risk factors. One, if one already had anaphylaxis, the risk of having severity rises



more and more. Two, the risk of allergy or asthma risk of it increases. Three, there are other conditions, including heart disease and irregular accumulation of a certain type of white blood cell, i.e., mastocytosis.

How to prevent it?

The foremost step is to keep away from substances that cause a reaction. Secondly, wear a medical necklace or bracelet to indicate one has an allergy to specific substances. Thirdly, one can keep an emergency kit with prescribed medications available at all times. Fourthly, be sure to alert all one's providers to the medication reaction he/she has had. Fifthly, it is also suggested that when one is allergic to a stinging insect, a caution to be given around him/her. Sixthly, if anybody is food allergic, then careful reading of labels is necessary.

Diagnosis

A blood test is to be done to measure the amount of a certain enzyme that can be elevated up to three hours after anaphylaxis. Secondly, one can be tested for allergies with skin tests or blood tests to help determine what triggered.

Scientists Found an Association between Physical Activity in Midlife and Alzheimer's

Story 2

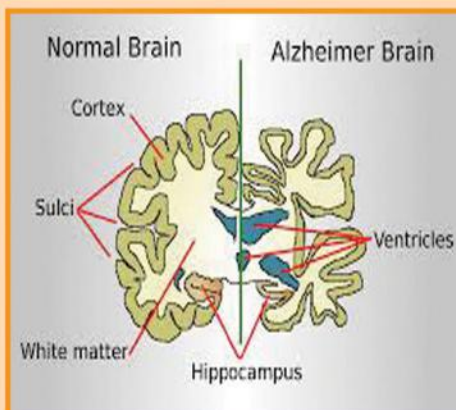
A recent study by Spanish scientists has observed that there has been an association between physical activity levels in middle age and Alzheimer's disease risk. But the idea immediately does not seem highly revealing, as in many earlier studies, links were established between several diseases and physical activities. These include even Alzheimer's disease and many mental health problems like dementia. The new study is important because it has pinpointed that increased physical activity levels during middle age are associated with reduced amounts of Alzheimer's disease. This is known to have been published in *Alzheimer's & Dementia*, a journal of the Alzheimer's Association.

Why does it happen in this way, as found in the new study?

The scientists have found that increasing activity levels during middle age, that is, ages 45 to 65, are associated with lower concentrations of the protein beta-amyloid in the brain. This element is a known biomarker for Alzheimer's disease in the brain.

Why were middle age chosen?

Experts like Eider Arenaza Urquiza, assistant researcher professor at the Barcelona Institute for Global Health (IS Global) and member of this research team of reportedly told Medical News Today, "Midlife is a critical period during which Alzheimer's disease pathologies begin to accumulate in the brain". She also told, "Over the last decade, research has shown that Alzheimer's-related changes can occur silently for up to two decades before any clinical symptoms appear. This represents a crucial window of opportunity for prevention and early intervention". Arenaza-Urquiza added that many modified risk factors began to exert their influence during that stage of life.



Research methodology

The researchers collected 337 participants of the ALFA+ longitudinal cohort. This is a part of the ALFA (Alzheimer's and Families) study. The participants were between the ages of 45 and 65. The participants were asked to record their physical activity via questionnaires at baseline and at their follow-up visit. The purpose was to look for correlations between participants' exercise levels and Alzheimer's-related pathologies in their brains. The participants were classified into five different groups based on their adherence to the WHO's recommended activity levels, that is, whether they followed the WHO's guidelines, or followed at the beginning but later did not follow, or at the beginning did not follow but followed later, or remained sedentary.

Result of the study

Researchers found that participants who had increased their physical activity to meet WHO-recommended levels, had lower amounts of protein beta-amyloid in the brain than those who remained sedentary or reduced their physical activity.



CSR Activities & Events of **SERUM** throughout May, 2025



May 2: Sri Sanjib Acharya received Bengal British Icon Awards, 2025 in London, at the House of Lords, British Parliament



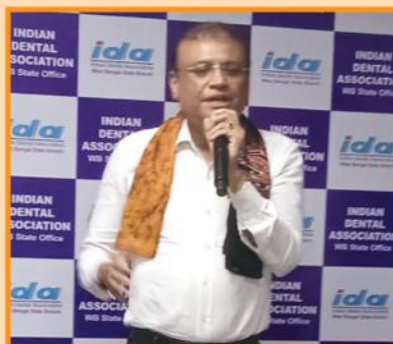
May 8: World Thalassaemia Day awareness & celebration



May 11: Sri Sanjib Acharya at the Blood Donation Camp organized by Baghbazar Krirapremi at Rajballav Para



May 18: Sri Sanjib Acharya at the Voluntary Blood Donation & Health Checkup Camp organized by Thanthania Swami Vivekananda Sporting Club



May 27: Sri Sanjib Acharya at the blood donation camp organised by Indian Dental Association, West Bengal State Branch at IDA State Office, RTC House, Moulali



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