



SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Readers/Doctors,

We hope all is well with you and you are happy and healthy. Our festival season is going on, which started from Vishwakarma Puja. In Hindu mythology, Vishwakarma is the architect and divine Engineer of the Universe from before the advent of time. In that sense, He is the architect of the gods. We like to warn against some health problems during the festive season and share some tips on how to be safe during that period.



The monsoon remnants will stay till the end of October. So, please maintain food hygiene and immunity tips. In the festive season, extra caution is needed as festive gatherings act as triggers of many diseases. In many cases, even the infected persons come to enjoy the festivals. So, one should be very cautious about the spread of infection in these gatherings. So, to be safe, it is better to avoid crowds. Food safety has been another point of concern. The food sellers become busy to satisfy more customers and buyers are also likely to enjoy special and a variety of foods throughout the festival season. So, both the quality of food and its making and preservation processes are compromised in many cases.

Snake bites are very big health concern in this season

In Bengal, snake bites have been a great health problem, and their fatality is also high. It is reported that in the last six months in Bengal, as many as 36 persons were victims of snake bites, and out of those, 129 died. The health department says use of mosquito nets while sleeping, cleaning of the surroundings of the houses, and use of torchlight while going out in the dark can lower the incidents. We also request you, particularly to the rural people, to follow the government guidelines about this matter.

In this issue, we have discussed two important stories. Story 1 discusses arrhythmia - a heart-related disease. It happens when one's heart beats faster or slower than it would have been. This occurs when the electrical signals that control the heartbeat are disrupted. The problem of cardiovascular diseases in India surpasses the global average, with a significant rise in both incidence and associated mortality.

Story 2 touches upon new joint research among the population in PR of Korea and the USA about how mental depression can be lowered with the help of eating a potassium and zinc-rich diet. It is known that about 5% of adults around the world live with depression and it is said that it will continue to increase if proper measures are not taken soon.

With hope you are doing well.

Sanjib Acharya

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Arrhythmia - improper occurrence of heartbeat, affects 2 to 5% of people

Story 1

Arrhythmia means a problem with the heartbeats' rate or rhythm. It is normal for one's heart rate to speed up during physical activity and slow down while resting or sleeping. But in some other cases, the heart beats too fast or too slow, which means irregularly. The simple cause of this has been that the electrical signals that control the heartbeat are disrupted. The impact of this health problem may not be very harmful, but it may be very serious if not treated in time. If neglected, arrhythmia can prevent the heart from pumping blood effectively, and in many cases, it can damage organs, which can even lead to death.

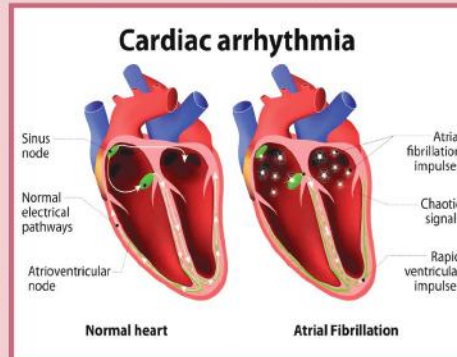
There are several types of Arrhythmias. The heart rate is too slow, fewer than 60 beats per minute. On the other hand, it may be too fast, more than 100 beats per minute. Considering the pattern, it may be inconsistent or erratic. Sometimes heartbeats are too early, which creates a noticeable pause.

Symptoms of arrhythmia

Some common symptoms include 1) fluttering or racing feeling in the chest 2) a fast heartbeat, 3) a slow heartbeat, 4) chest pain, and 5) shortness of breath. But there are other symptoms like anxiety, feeling very tired, light-headedness or dizziness, sweating, and fainting or almost fainting.

Causes of arrhythmia

The reasons behind this have been 1) coronary artery disease may happen if there remains irritable tissue in one's heart that may arise due to genetic or acquired causes. 2) High blood pressure that changes one's heart muscle. 3) Valve disorders. 4) Electrolyte imbalances in one's blood. 5) Injury from a heart attack. 6) The healing process after heart surgery. 6) Other medical conditions. But one has to note that most arrhythmias happen because of an issue with one's heart's arteries, valves, or muscles.



One should be aware of the risk factors like using tobacco products, drinking alcohol, consuming drinks and foods that have caffeine, taking stimulant like cold medicines or herbal supplements, having high blood pressure and a BMI higher than 30, high blood sugar, and sleep apnea.

Diagnosis and test

Tests include checking the heart health, like ECG, blood test to check electrolyte levels, or to know the link for genetic issues, ambulatory monitors, stress test, echocardiogram, cardiac catheterization, electrophysiology study, tilt table test, CT, and heart MRI.

Treatment and management

Doctors prescribe medicines. But a change of lifestyle has immense positive impacts on the patients. Additionally, some therapies, devices, and surgery are also options depending on the conditions of the patients.

A potassium and zinc-rich diet can help reduce mental depression, a new study observes

Story 2

Mental depression has been a growing human health problem. The World Health Organization observation mentions that about 5% of the world's population lives with depression. Earlier studies pointed out that to lower the risk of depression, one has to maintain a healthy life style. These include enough sleep, exercising regularly and following a healthy diet. But a new study has identified some specific minerals, including potassium and zinc, that may help reduce a person's depression.

The research methodology

The study has been conducted by a cross-sectional analysis using health data. The data have been taken from the National Health and Nutrition Examination Survey in Korea (KNHANES) and the United States (NHANES). The research has encompassed more than 22,000 study participants.

The researchers focused especially on seven minerals to examine their impact on depression risk. These had been sodium, potassium, phosphorus, magnesium, iron, zinc and calcium. Both the KNHANES and the NHANES consistently measured to enable a standardized cross-national analysis. The Medical News Today quoted (21st August) Minkook Son, a professor of Physiology at Dong-A University in Republic of Korea, as saying "they are also biologically relevant to brain function, neurotransmission and neuroinflammation, processes implicated in the pathophysiology of depression".

Result of the research

Potassium emerged as a common protective factor against depression in both populations despite differences in dietary habits. It is reported that in the case of examination of Korean participants, in addition to potassium, researchers discovered that higher sodium levels were correlated to reduced depression risk. On the other hand, among the US participants, higher levels of zinc were another mineral linked to lower odds



of developing depression. The reason behind the difference between the two participants, according to Son, has been cultural dietary patterns, primarily food sources of each mineral, and differences in bioavailability likely contribute to these discrepancies.

In the US, zinc intake from animal protein sources may play a more prominent role in neurochemical pathways relevant to depression. In case of Korea, sodium intake is high due to fermented and broth-based dishes, potentially interacting with other nutrients to influence mood, according to Son.

Reason behind the impacts of minerals

Specialists say minerals such as potassium, magnesium, and selenium work with vitamins like D, C, and E to support functions throughout the body, as well as numerous enzymatic reactions. These act as electrolytes to support fluid balance. We thrive when we have sufficient levels of all these working together in the highly complex factory of human body.

CSR Activities & Events of SERUM throughout September, 2025



Sept. 2: Sri Sanjib Acharya at a Thalassaemia Camp at Harnath High School



Sept. 5: Unveiled the replica of SERUM Sharod Samman, 2025 at Press Club, Kolkata & winners of Sharodiya Hoarding Competition were declared



Sept. 17: Vishwakarma Puja Celebration at SERUM Hatibagan



Sept. 20: Annapurna Puja where underprivileged were gifted with Saree



Sept. 21: On Mhalaya, Sri Sanjib Acharya distributed T-shirts to 1,000 idol porters



Sept. 21: SERUM Sharod Baran Team started their visit to different Puja Pandels for evaluation round



Sept. 23: Birthday celebration of Sri Sanjib Acharya at Head Office



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