



SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Readers/Doctors,

We are going to complete the year 2024 and enter the New Year shortly. We hope you are well, and let us hope that 2025 is a happy and healthy year. We convey some health messages to you almost in each issue. This issue is not an exception.



The growing problem of diabetes in India has been a severe health concern. From around 20 crores in 1990, the number of people with diabetes has increased four times to 80 crores globally in 2022. The global diabetes prevalence in adults rose from 7% to 14% between 1990 and 2022, according to data released by the Lancet on November 13.

India has the highest number of people with diabetes, at 21.2 crores followed by China at 14.4 crores. India also topped the list of countries with 13.3 crores people over the age of 30 years with untreated diabetes.

So, we request you to examine your blood sugar regularly, twice a year if possible. At the same time try to control the consumption of unhealthy food, particularly, high-calorie foods, rich in carbohydrates and saturated fats. Please avoid a sedentary lifestyle and engage in physical activity. Enough pieces of evidence have been found about the negative role of tobacco. The risk factor of diabetes is decreased by 30 to 40% for those who do not smoke. Regular physical work and walking can be good for you. We may discuss the matter in detail in the future.

Story 1 of the issue will discuss albinism, a rare disease. It is a genetic condition that affects the amount of melanin in one's body. This causes a lack of pigment in skin, hair, and eyes and causes visual impairment. It can be controlled but not fully treated. One can read the story 1 for detailed discussion.

Story 2 discusses recent research that observed that the neuromuscular sensory system declines faster than the strength of the body amongst us - an important and remarkable finding of medical science.

Wish you happy and healthy days.

With best wishes.

Sanjib Acharya

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Albinism: Treatment can help but cannot be fully cured

Story 1

Albinism or achromasia is not a very common disease. In India, not more than 1 lakh cases are recorded per year. People with albinism have pale skin, eyes too sensitive to the sun, and vision problems. In most cases, hair is light blonde, brown, or reddish. The disease is basically a lack of melanin production. Melanin is a natural substance in the body that gives colour to hair, skin, and the iris of the eyes.

Main cause of albinism

It is a disorder in which a person inherits the gene from one's father or mother, i.e., it is caused by a genetic mutation usually passed from parent to child. Having just one of the genes (being a carrier) does not give one albinism. Most parents of children with albinism do not have any symptoms.

Symptoms of albinism

There are many forms of albinism associated with symptoms like - crossed eyes, light sensitivity, rapid eye movements, vision problems, or functional blindness.

How to diagnose albinism?

As it is a genetic disorder genetic testing offers the most accurate way to diagnose the specific type of albinism. If someone has a family history of albinism or for certain groups of people who are known to get the disease, this testing must be helpful. Again, concerned doctors may also diagnose the disease based on the appearance of one's skin, hair, and eyes. Eye doctors can perform an electroretinogram - a test that can reveal vision problems related to this disease.



Treatment

As it is a genetic problem it cannot be treated fully. But in this situation, the target should be to relieve the symptoms. The treatment mainly involved protecting skin and eyes from the sun. How can this be done? It is suggested to avoid the sun to reduce sunburn risk. Patients are also suggested to use sunscreen and cover up completely with clothing when exposed to the sun. For many people, doctors suggest using sunscreen with a high sun protection factor. Again, it is also suggested to wear sunglasses (ultraviolet protected) to help relieve light sensitivity. Glasses are often prescribed to correct vision problems and eye position. If required eye muscle surgery is also recommended to correct abnormal eye movement.

Some social problems

In India people with albinism face discrimination, bullying, and other challenges. This is due to a lack of awareness amongst people about the health problem. They often face difficulty in getting a proper education, job, and marriage. Sometimes they may be left out of society.

The ability to balance on one leg indicates neuromuscular aging - new research observes

Story 2

Recent research has observed that a person's ability to balance on one leg may be a reliable of neuromuscular aging. The study was led by scientists at the Mayo Clinic, Rochester, USA. It is known that movements and balance change as one grows older and older. Why does it happen? It happens due to a decline in sensory systems, like eyesight, hearing, and neuromuscular aging.

The perspective

Our longevity depends on the improvement of healthcare facilities as well as the standard of living. This can be understood by life expectancy at birth, i.e., how many years a baby is expected to live in normal conditions. In the World as a whole, it has been about 62 years, according to a WHO estimate in 2021. There has been a practical difference between life expectancy and healthy life expectancy. The extra years of life are not always healthy. For example, the Centers for Disease Control and Prevention of the USA, states that the life expectancy in the USA has been 77.5 years but healthy life expectancy fell between 2000 and 2019, from 65.8 to 63.9 years. The rate of neuromuscular aging varies greatly. The biological age that evaluates the function of aging individuals depends on genetics and environment, and can differ widely from chronological age.

The research methodology

The researchers chose 40 healthy people aged 50 years and older. This is a small cross-sectional sample study. Out of this, 50% were less than 65 years old and the rest were older than 65. The researchers recorded participants' age, height, wage, activity levels, and limb dominance before a series of measurements. What did they note?



First, the grip (upper extremity) and knee (lower extremity) strength on the dominant side. Secondly, 30 seconds standing balances- two legs with open eyes and two legs with closed eyes and again dominant and non-dominant single leg with eyes open. Thirdly, noticed gait during level walking. Last but not least, the ability to maintain balance during movements. This was meant for level walking trials.

Result of the study

The result observed was - both grip strength and knee strength were higher in men than women. However, in both men and women, strength declined at the same rate of 3.7% per decade. Notably, there were no age-related differences in gait and dynamic stability.

- The greatest decline in balance was observed
- The researchers noticed movement during bipedal standing balances increased markedly with age, by 6.3% per decade for eyes open and 10.4% per decade for eyes closed. This means that balance declines with age. The main message of the study - neuromuscular sensory system declines faster than strength of the body for human beings.



CSR Activities & Events of SERUM throughout November, 2024

Annual General Meeting, 2024



Nov 17: Nadia, Kolkata, South & North 24 pgs



Nov 23: Nadia & Part Murshidabad



Nov 23: Burdwan & Birbhum



Nov 24: Jharkhand



Nov 24: Bankura, Purulia & Asansol



Nov 24: Burdwan, Burdwan Industrial & Asansol



Nov 1: Sri Sanjib Acharya at the Tarachand Dutta Street Student Welfare Association Kali Puja



Nov 3: Bhog Prasad distribution of Sarbojanin Sri Sri Kali Puja organized by Amra Sobai



Nov 9: Sri Sanjib Acharya visited Shree Shree Jagadhatri Puja



Nov 9: Sri Sanjib Acharya at Jagadhatri Puja organized by Hari Ghosh Street Pallybasi Brinda along with Varsha's Students



Nov 19: Promotion of Mega Rally and Blood Donation organised by Serum Thalassemia Prevention Federation on World Aid's Day



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