

SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Doctors/Readers,

Hope you are all well. We are entering the festival season. We like to convey our best wishes to you in advance. The intensity of the Covid virus has weakened, but regular updates on deaths and infection of Covid related matters keep us worried. Another matter which is quite unrelated to health matters directly also worries many of us. That is scanty rainfall in the eastern parts of India. A large part of UP, Bihar, Jharkhand, Chattisgarh, and more than half of West Bengal has received only a fraction of normal monsoon rainfall, and hence, cultivation has been highly affected in these places. This has an effect on financial matters related to medication and treatments of the people in this region.



India has passed 75 years of Independence. In this long period, it has achieved many things. The list of failures is not short either. Regarding health one can be satisfied, especially, with the performance of eradicating many communicable diseases. The most important has been the increase in life expectancy at birth. In 1947 it was 32 years but in 2022 it climbed to 70.19 years. The world average has been 72.98 years. The infant mortality rate has fallen to 27.695 deaths per 1000 life births. In the 1940s maternal mortality was 2000 per 1 lakh live births.

Considering communicable diseases India has been successful on many fronts. Diseases like malaria, polio, smallpox, leprosy, cholera, and Kala Azhar have been either fully eradicated or reduced to very low levels. For example, World Malaria Report 2021, published by the World Health Organization (WHO), mentioned that among the world's 11 highest malaria burden countries only India's progress is commendable. In 2014 India was declared a Polio free country. Moreover, in 1979 India was declared a smallpox-free country.

But in the case of non-communicable diseases (NCD), the picture is alarming. One WHO report of 2014, pointed out that out of all deaths, about 82% of deaths have been due to NCDs-related diseases.

This is why in this issue we are going to discuss diabetes. It has been a growing problem in India. A few weeks ago, WHO published a report based on a very big survey on diabetes. The research observed that only a change in food habits, reducing carbohydrate portions and increasing protein items in food basket, can control diabetes to a large extent.

Wish you a very happy coming festival season and healthy life.

With best wishes,

Sanjib Acharya

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Diabetes Type 1 can be controlled by changing food content - ICMR observes

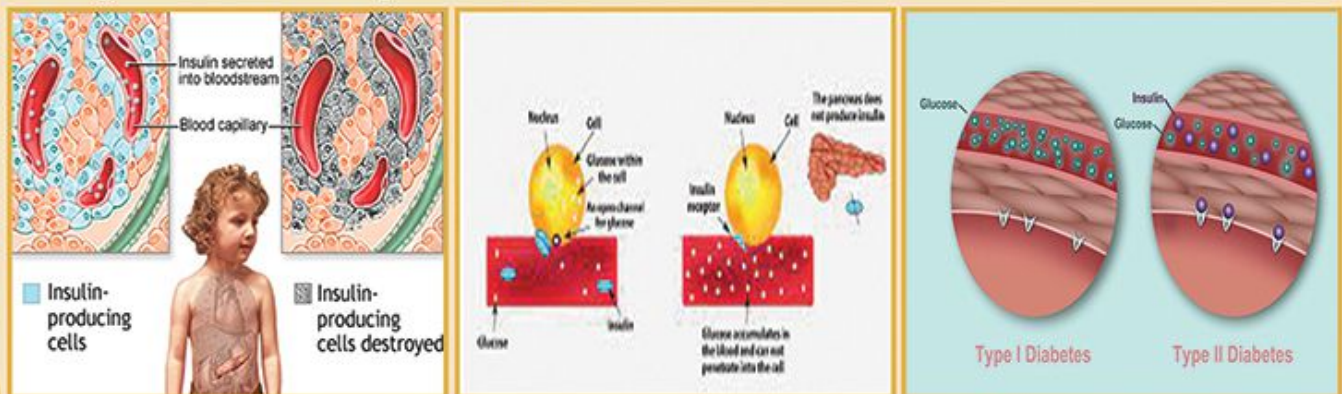
A recent study funded by the Indian Council of Medical Research (ICMR) found that making dietary changes can result in diabetes remission and prevention. The study included responses of as many as 18,090 adult persons. People in the southern and eastern parts of India consume excess carbohydrates, like white rice. The majority of Indians typically have diets that consist of 65 to 70% carbohydrate and little protein.

The ICMR-INDIAB study mentioned above was conducted in 29 states and 2 Union Territories. It has been observed that if the carbohydrate content is reduced to 54 to 57% and protein content is increased to 16 to 20% that would suffice to prevent progression from pre-diabetes to diabetes. The rest 21 to 26% should be fat-intensive food in the diet. When the study report was published many well-known specialists supported the observation and commented in national media in favour of the findings.

What is type 1 diabetes?

It is a condition where one's blood glucose or sugar level is too high because the human body cannot make a hormone called insulin. This happens because the human body attacks the cells in the pancreas that makes the insulin. This means the human body cannot produce any at all. We need insulin to stay alive. Type 2 diabetes is, mainly, lifestyle-related. Here human body does not respond to insulin the way it should.

ICMR guidelines and warnings about Indians



It is reported that Covid 19 has disproportionately affected people with diabetes and they are at higher risk of severe illness and mortality. India is a place of second adult diabetic patients. That means every sixth person in the world is an Indian. The children are growingly exposed to this. More than 1 million children and adolescents in the world have diabetes type 1 ICMR quotes the report of the International Diabetes Federation and mentioned that India has the highest number of diabetes type 1. In the last three decades, it has increased by 150% in India. As a result, the time has come to control the transition from pre-diabetes to diabetes by changing food content and other means. This problem has now a growing problem in mid-income countries also.

Need a physically active life

Adequate physical activity is just like good medicine to control diabetes and maintain a healthy body. Healthy bodies mean maintaining optimal blood pressure, weight, and lipid levels. A proper diet for physical growth and development is to be checked regularly. For mental happiness, social and cultural mixing are also important.

Why about 70% people cannot tolerate or digest milk?

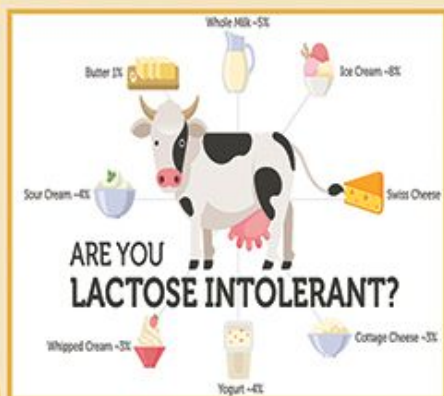
Milk, as food is very popular even today. Our age-old wisdom from the ancient period justifies the importance of drinking milk. A few weeks ago, it is reported (13th August, in the Hindu) about lactose intolerance among the people. That report was based on the latest report on the issue for western countries. There have been similar studies on Indians a few years back. One of them had been by researchers of Sanjoy Gandhi Post Graduate Institute of Medical Sciences (May 15, Times of India, 2015). The study was done on a section of people in Lucknow and Bangaluru. It found that over 74% were lactose mal-absorbers, that is, they cannot digest milk.

Why milk digestion is difficult for those?

Actually, the reason is the inability to the digestion of the sugar portion present in milk, called lactose. Many people have an insufficient amount of an enzyme called lactase. The small intestine produces this enzyme. The enzyme, lactase is responsible for breaking down lactose into two smaller sugars, namely, glucose and galactose. In these two simplified forms, the sugar content is absorbed in the blood. So those persons who have an insufficient amount of lactase enzyme can not tolerate or digest milk.

Who are the most affected sections?

The capacity to absorb milk decreases as age grows. In most cases, the problem starts in the mid-thirties of age. As age grows functional gastrointestinal problems like irritable bowel syndrome (IBS) and



gastro-esophageal reflux disease (GERD) begin to intensify. GERD is a condition in which the stomach contents leak backward from the stomach into the food pipe. That irritates the food pipe and causes heartburn and other symptoms. In India, about 5% and 20% of people suffer from IBH and GERD respectively. Almost 81% of south Indians and 66% of north Indian people are intolerant to milk the study found. Whereas the Europeans are more tolerant than Indians.



CASE PRESENTATION by Dr. Chirasri Goswami (MBBS, MD) Consultant Histopathologist

CASE PROFILE: 60-year-old Sadhvi lady from Bolpur presented with a lower abdominal mass. On laparotomy, testis was found with a tumour & orchidectomy was done. Karyotyping came out as 46XY.

DIAGNOSIS: SERTOLLI CELL ADENOMA (TESTICULAR FEMINISATION SYNDROME).

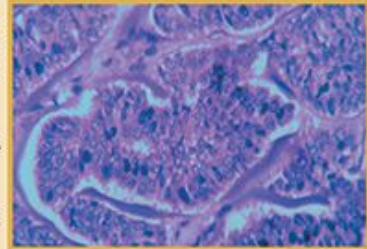
GROSS: On cut section of orchidectomy specimen, a 6cm diameter solid whitish tumour was found.

INCIDENCE: 2-5/lakh persons in which phenotype is female & genotype is 46XY (Karyotypic male).

MICROSCOPIC FINDINGS: Tumour cells were arranged in tubules, nests & cords with surrounding dense fibrous stroma. Tubules are lined by uniform columnar cells with vesicular nuclei. Minimal pleomorphism & only occasional mitosis.

IMMUNOHISTOCHEMISTRY: AMH (Anti Mullerian Hormone) & Inhibin A positive.

PROGNOSIS: Good. Hormone replacement therapy & reconstruction surgery may be necessary.



CSR Activities & Events of SERUM throughout August 2022



Aug 12: A new wing of Varsha - The School for Special Children was officially inaugurated at the Press Club, Kolkata



Aug 11: Members of Amra Mohilara with Sri Sanjib Acharya celebrating Raksha Bandhan



Aug 10: Free Health Checkup by Dr. Shekhar Ghosh at Serum Auditorium



Aug 15: SERUM Group celebrated the 75th year of Independence



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