

# SERUM TIMES

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SERUM MEDICAL BULLETIN

## From the desk of the Editor-in-Chief

Dear Readers/Doctors,

I hope you are well. We are going to complete another year of the publication of Serum Times. In the March issue, we generally discuss India's health sector based on its Annual Budget proposal for this sector. As this is an election year, we postpone it for a future issue after the formation of the new government and its presentation of the full Annual Budget.



Recently antibiotic drug resistance and loopholes in drug testing methods have been a major matter of discussion. It is said that the majority of the drug research is still done mainly on one subset of the world's population which is men of Northern European origin. This means that there are negative drug-gene interactions in other less well-studied populations (The Hindu, 25th January). So, some medicines are suitable for white people but unsuitable for Black, Chinese, or Japanese. We may discuss these matters in the future as this is an important issue for human health.

In this issue, we are going to discuss two stories of interest. The story one covers ASPS. This is advanced sleep phase syndrome - a disruption of the circadian rhythm. Circadian rhythms are the physical, mental, and behavioral changes an organism experiences over 24 hours. ASPS causes the afflicted person to go to sleep several hours earlier (from 6 pm to 9 pm,) and morning wake-up time (2 am to 5 am) than societal norm. This results in fewer work, school, or social conflicts. Various aspects of this syndrome or disorder have been discussed in the first story.

The second story elaborates on a very important revelation from a long-term study of a team of medical researchers in Taiwan. They observed who sit most of the day work, substantially increase the risk of death. This risk increases for those who have cardiovascular. This is true for persons of any age. So, everybody should do work with intermittent sitting. Regular physical exercise can neutralize the problem according to the researchers.

We are in the spring season. So, maintain some restrictions to stay safe from seasonal infections.

With best wishes,

Sanjib Acharya

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## ASPS hampers social life, it can be treated

What is ASPS? Advanced sleep phase syndrome/disorder or ASPS is a disorder in which the timing of sleep and the peak period of alertness are advanced several hours relative to the societal clock and also wake up early by several hours. The persons with ASPS do not report that the syndrome affects their daytime work or school activity. But their evening activities are cut short by the need to sleep much earlier than what is considered the norm. There is an opposite side also that is there is also a delayed sleep phase disorder.

It has social life consequences that affect family and social relationships. At the same time, persons with ASPS should be cautious about driving in the late afternoon and evening because they may be too drowsy. They may also face jobs in the evening or night shifts.

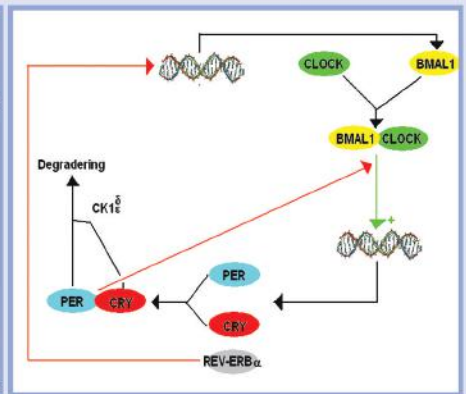
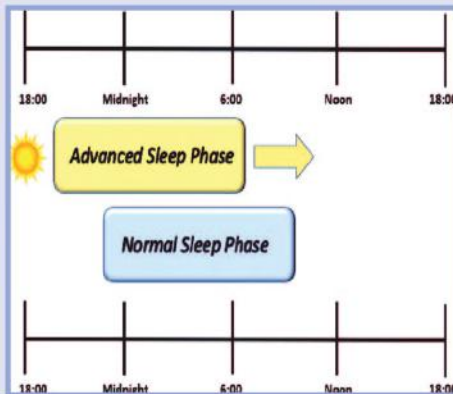
### Symptoms of advanced ASPS

First, has been falling asleep during the late afternoon or early evening. Secondly, waking up very early in the morning and being unable to fall back asleep. Thirdly, falling asleep and waking up earlier than they would prefer.

### Causes of the disorder

The following factors contribute to advancing this. There can be a family history of ASPS. Secondly, age is a factor, it grows with age and older persons suffer more from this. Thirdly, autism spectrum disorder also contributes to ASPS. Fourthly, too much exposure to morning light is also considered as a factor advancing it. Fifthly, environmental factors like work schedules may help in advancing ASPS.

### Its diagnosis



Doctors say that it is important to discuss specific symptoms as symptoms of ASPS are caused by physical or mental health conditions or other sleep disorders. One can track sleep quality and sleep duration with a sleep diary. In that diary bedtime and waking time can also be tracked. In some cases, the sleep study can be performed overnight in a lab.

### Treatment of ASPS

Firstly, one can adjust his life routine according to his or her suitable sleep schedule to accommodate ASPS. An article mentions doctors at times, choose to treat their symptoms with a mix of life style changes, bright light therapy, improved sleep hygiene, and melatonin.

Doctors advise avoiding caffeine stimulants, alcohol, and drugs. Many people with ASPS take these to stimulate themselves to control untimely sleep but actually, this gives opposite results. By light therapy, sleep is controlled by mimicking the power of the sun. this is done to manipulate the circadian rhythm.

Doctors may also prescribe to take melatonin to help regulate sleep-wake cycles.



## Those who sit most of the day working, have an increased risk of death - a recent study observes

A recent study in Taiwan has been surprising for anybody across the world. It observes that those who sit most of the day work substantially increase the risk of death. This has been riskier for those having cardiovascular disease. It is more noticeable because the study had been done on a half-million people. At the same time, the study has also observed good news that those who were active at work or intermittently sitting do not have an increased risk of death. The story of the research has been published in the journal JAMA Network Open.

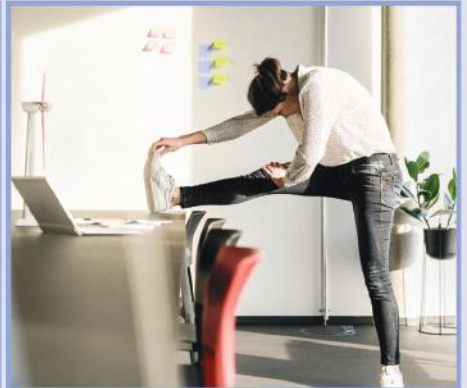
### Methodology of the research

It is reported in Healthline, an online publication, that the researchers studied the data from a biannual health check programme that was done between 1996 and 2017. The data included both men and women who were twenty years old or older. The average age of participation was thirty-nine.

The questionnaire was done to know about their lifestyle, activity levels, and how much sitting per day they did at work. Then researchers categorized participants into three categories based on occupational sitting volume. This means categories were done first, on how much time in the work they spent on 'sitting', 'mostly sitting' or 'highest volume of sitting' per day. The second category was done on 'alternating sitting' and 'non-sitting', intermittently sitting throughout the day and 'mostly non-sitting', and thirdly it was the most active category.

The research team is also able to estimate sitting time and risk of mortality

The research team considered several things like BMI (basal metabolic rate), smoking, drinking, sex, and age the study found that individuals in the 'mostly sitting' category had a 16% increased risk of death and a 34% increased risk of death from cardiovascular disease than those in the 'mostly non-sitting' category.



Which is the most vulnerable section in this case?

The study observes that the increased risk was across subgroups like men and women or younger and older individuals, smokers or non-smokers, etc. That means anyone is vulnerable to the increased risk, setting aside other factors, if time spent on sitting is not decreased. The first author of the research Wayne Gao, Associate Professor, School of Public Health, Taipei Medical University reportedly emphasized the need to reduce prolonged sitting in the workplace and increase daily physical activity to mitigate the risk of increasing death associated with sitting.

Actually, the 'mostly sitting group is the most vulnerable as there is not much difference in the vulnerability of the least amount of sitting and intermittent sitting groups.

That is the most interesting message of the study.

## CSR Activity of SERUM throughout February 2024



Feb 5: Thalassemia Awareness Camp in Barisha High School, Behala



Feb 8: Free Doctors Checkup by Dr. Shekhar Ghosh



Feb 11: Sri Sanjib Acharya at the Blood Donation Camp



Feb 14: Saraswati Puja celebrations at SERUM Auditorium



Feb 18: Sri Sanjib Acharya at the Blood Donation Camp



Feb 18: Sri Sanjib Acharya at the Tin Kanya org. by the Cossipore Seba Welfare Society



Feb 19: SERUM Group conducted Free Thalassemia Carrier Tests



Feb 19: Thalassemia Awareness Prog. at Jadavpur University Science Club

Feb 19: 124th return day of Swami Vivekananda from Chicago



Feb 21: Sri Sanjib Acharya on International Mother Language Day at the Literature & Little Magazine Fair



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