

Gestational diabetes linked to lower cognitive scores in mothers and higher developmental risks for children

A major new review of global research suggests that gestational diabetes during pregnancy may affect brain health in both mothers and their children. The findings were presented at the European Association for the Study of Diabetes (EASD) Annual Meeting in Vienna.

Researchers analysed results from 48 observational studies covering more than 9 million pregnancies across 20 countries, making this the most comprehensive review of its kind. Gestational diabetes, which affects around 14% of pregnancies worldwide, is becoming increasingly common, particularly among older mothers, those living with obesity, people with a family history of diabetes, and non-white women.

The analysis found that mothers who experienced gestational diabetes scored slightly lower on tests of cognitive function during pregnancy compared with those who did not. More notably, children exposed to gestational diabetes in the womb showed lower average IQ scores, reduced verbal abilities, and a higher risk of developmental delays.

The study also found that these children were 36% more likely to develop ADHD and had a 56% higher risk of autism spectrum disorder. However, no clear differences were seen in overall brain structure or general intelligence scores.

Although the exact causes are not fully understood, researchers believe factors such as internal biological stress, reduced oxygen supply, and altered insulin levels during pregnancy may influence early brain development.

The authors stressed that early screening and careful management of gestational diabetes are crucial and said further long-term studies are needed to better understand the lasting effects on children as they grow.

Source: The Lancet



DR MUHAMMAD MAHTAB HOSSAIN MAZED

Winter in Bangladesh is no longer as predictable as it used to be. In the past, winter meant a light morning fog, some sunshine in the afternoon, and intense cold at night. However, in recent years, it has been observed that in many areas, sunlight is absent even after 12 noon. The main reason behind this change is climate change. Climate experts have stated that dust particles, gas emissions, and irregular increases in humidity are the primary causes of dense fog. It can cause long-term respiratory problems in children and the elderly. Additionally, fog and haze reduce visibility and increase the risk of accidents.

Risks from fog and reduced daylight

Vitamin D from sunlight is essential for bone health, immune function, and mental well-being. Reduced daylight can cause vitamin D deficiency, putting children, pregnant women, and the elderly at risk. Dense fog and low sunlight increase the chances of colds, coughs, and pneumonia among children. Among the elderly, asthma, blood pressure fluctuations, and joint pain are more likely to occur. The healthcare system in both urban and rural areas is affected, with rural regions being particularly vulnerable due to limited access to medical services.

Without sunlight during the day, the body's natural warmth decreases. This poses a significant challenge for labourers such as farmers, construction workers, fishermen, and daily wage earners. Dense fog and low temperatures slow down work, affecting daily income and the economy.

Students are also affected. On their way to school, children face risks due to fog and low light. Without proper winter clothing, they are more susceptible to respiratory infections, colds, coughs, and pneumonia. Industrial and business activities are also impacted. Reduced daylight and cold temperatures lower work efficiency, which can affect business income as well as the national economy.

Winter health risks are no longer just an individual concern; they pose a significant challenge for families and society as a whole.

Mental health and the effects of fog

Dense fog and low light negatively affect mental health:

- Fatigue and lethargy
- Low mood and reduced concentration
- Decreased participation in social activities
- Prolonged exposure to low light and fog can increase depression, anxiety, and stress.

Health awareness and preventive measures

- Wear warm clothing: sufficient

clothes, socks, and gloves during the day and night.

- Warm beverages and balanced nutrition: soups, milk, tea, and fruits
- Adequate sleep and rest: boost immunity
- Maintain a clean and warm environment: keep living spaces warm and dust-free. Monitor children and the elderly: seek medical attention promptly for illness or respiratory problems.
- Limit prolonged outdoor exposure on foggy or cold days.
- Light exercise and walking: helps maintain proper blood circulation

Social and government responsibility

- Addressing winter health risks requires social and governmental initiatives:
- Distribution of winter clothing and health awareness programmes
- Protection of children and the elderly
- Expansion of patient welfare centres and healthcare facilities
- Collaboration between government and non-government organisations can further enhance impact.

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When AIs collaborate, accuracy in medicine improves

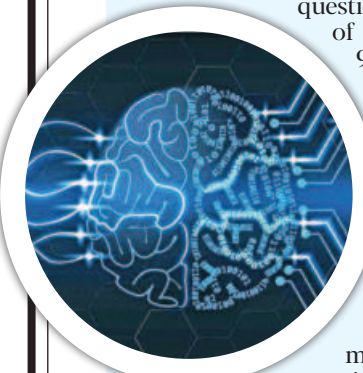
The growing use of Artificial intelligence (AI) in healthcare has raised questions about how trustworthy these systems really are. According to a new study published in the journal PLOS Medicine, researchers have found that AI systems work more accurately when they “think together” rather than alone.

The study tested a group, or “council”, of five AI models based on GPT-4 on 325 publicly available questions from the three stages of the US Medical Licensing Examination (USMLE). These exams cover everything from basic medical science to clinical decision-making. When working together, the AI council answered questions correctly 97% of the time for Step 1, 93% for Step 2, and 94% for Step 3, outperforming a single AI model.

Normally, AI systems can give different answers to the same question, and some responses may be wrong or made up. Instead of seeing this variability as a weakness, the researchers designed a system where the AIs discuss their answers, compare reasoning, and reconsider their choices when they disagree. A facilitator program guides this discussion and asks the group to try again until they reach a shared answer.

When the AIs initially disagreed, the discussion process led to the correct answer 83% of the time, and even fixed more than half of the mistakes that a simple majority vote would have missed.

The researchers believe this shows that collaboration helps AI self-correct, making it more reliable. While this approach has not yet been tested in real hospitals, it could one day lead to safer and more trustworthy AI tools for healthcare, education, and other fields where accuracy really matters.



Precision, compassion and progress: How modern oncology is redefining cancer care

STAR HEALTH REPORT

Cancer care is undergoing a quiet but profound transformation, driven by technology, better understanding of disease biology, and a growing emphasis on quality of life. During their recent visit to Dhaka, two senior oncologists from Singapore's National Cancer Centre (NCCS)—Clin Asst Prof Li Youquan, Radiation Oncologist, and Clin Asst Prof Johan Chan, Medical Oncologist, shared insights that challenge many long-held fears and misconceptions surrounding cancer treatment.

Both specialists pointed to a steady rise in genitourinary cancers, particularly prostate cancer, across Asia. Professor Li explained that this trend is largely driven by ageing populations and increasing life expectancy. Prostate cancer, often slow-growing and symptom-free in its early stages, is frequently detected incidentally through prostate-specific antigen (PSA) testing or digital rectal examination. However, screening remains controversial. “It is not just about detecting cancer,”



he noted, “but deciding what to do with borderline results and avoiding unnecessary anxiety or treatment.”

Radiation therapy, often feared for its side effects, has evolved dramatically. According to Professor Li, modern radiation oncology now relies on advanced imaging, artificial intelligence, and precision planning to target tumours while sparing healthy tissue. Techniques that once took days can now be completed in minutes, with adaptive, real-time planning allowing treatment to be

adjusted daily. While cutting-edge options such as proton therapy remain expensive, he expressed optimism that innovation and automation will gradually reduce costs and improve accessibility.

Professor Chan addressed another persistent concern—the stigma surrounding chemotherapy. “What people imagine from television or past experiences is very different from today's reality,” he said. Improved anti-nausea drugs, outpatient-based regimens, and newer targeted therapies mean many

patients can receive treatment and return home the same day. In prostate and bladder cancers, oral hormonal agents and immunotherapy have further reduced reliance on traditional chemotherapy.

He also emphasised the importance of awareness and self-examination, particularly for testicular cancer, which often affects men in their 20s to 40s and is highly curable when detected early. Lifestyle risks, including smoking and emerging habits like vaping, remain a concern. “If you do not know what you are inhaling, it is safest not to inhale it at all,” he cautioned.

Both oncologists stressed that when cure is no longer possible, early integration of palliative care is essential. Focusing on symptom control, dignity and patient preferences, they agreed, can significantly improve quality of life.

Their message was clear: cancer care today is not only about longer survival, but about smarter, kinder, and more individualised treatment—an evolution from fear to informed hope.

Millions left behind: Global push to make health care affordable by 2030



Since 2000, most countries have made progress in expanding health service coverage and reducing the financial burden of health care, according to the Universal Health Coverage (UHC) Global Monitoring Report 2025 from the World Health Organisation (WHO) and the World Bank. Health service coverage rose steadily, while fewer people experienced financial hardship from out-of-pocket (OOP) costs.

However, the poorest populations continue to face the greatest challenges. Globally, 4.6 billion people still lack access to essential services, and 2.1 billion experience financial hardship, including 1.6 billion pushed further into poverty. High medicine costs remain a major driver, especially for those living in poverty, who spend a median of 60% of their OOP expenses on medicines.

Progress has slowed since 2015, with only a third of countries improving in both coverage and financial protection. Gains have been strongest in infectious disease programmes, while improvements in reproductive, maternal, newborn, and child health have been modest. Inequalities persist, with women, rural populations, and people with less education disproportionately affected.

Actions leading to 2030

Achieving UHC by 2030 is central to realising the human right to health. With five years remaining on the Sustainable Development Goals (SDG) agenda, urgent action is needed. The report calls for six key measures:

- Ensure essential health care is free at the point of care for vulnerable populations.
- Expand public investment in health systems.
- Address high out-of-pocket spending on medicines.
- Accelerate access to essential noncommunicable disease (NCD) services.
- Strengthen primary health care to promote equity and efficiency.
- Adopt multisectoral approaches, recognising that health determinants extend beyond the health sector.

These steps are essential to close gaps, reduce inequalities, and ensure that everyone can access the care they need without financial hardship by 2030.

Source: World Health Organisation

Your eyes blink in time with the music!

Music influences the human body in ways that go far beyond enjoyment and conscious movement. Our eyes naturally blink in time with a steady musical beat, revealing a hidden connection between hearing and involuntary movement.

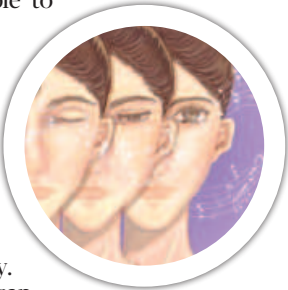
Researchers from the Chinese Academy of Sciences studied over 100 participants while they listened to Western classical music with an even tempo. Without being instructed to move, participants' spontaneous eye blinks synchronised with the rhythm, and their brain activity aligned with the beat as well. This process is linked to auditory-motor synchronisation, the brain mechanism that allows people to move in time with sound.

To rule out familiarity with the music, the researchers played the songs backwards and also used simple rhythmic tones. In both cases, blinking still matched the beat, showing that the effect was driven by rhythm rather than melody or memory.

The synchronisation disappeared when participants were asked to focus on an unrelated visual task, such as watching for a red dot on a screen. This suggests that attention to the music is required, even if people are not consciously aware of the response.

This insight could one day help improve music-based therapies and provide simple ways to study attention and brain health. By revealing how deeply music affects the brain, the findings may support new approaches to healthcare, therapy, and everyday wellbeing.

Source: PLOS Biology



CPAP therapy offers hope for people with diabetes and sleep apnoea

STAR HEALTH DESK

People with type 2 diabetes (T2D) who also have obstructive sleep apnoea (OSA) face serious health risks, including higher chances of heart problems, stroke, and premature death. A new study presented at the European Association for the Study of Diabetes (EASD) suggests that treating sleep apnoea with CPAP (continuous positive airway pressure) could significantly improve survival in these individuals.

Obstructive sleep apnoea occurs when the airway repeatedly collapses during sleep, causing the person to briefly wake up to breathe. This leads to disrupted sleep and lower oxygen levels, which can affect the heart, brain, and metabolism. Many people with T2D may also suffer from undiagnosed OSA, meaning they may not realise the additional health risks the condition brings.

When left untreated, sleep apnoea can worsen diabetes and increase the likelihood of complications. CPAP machines work by delivering pressurised air through a mask, helping keep the airway open during sleep and ensuring the body gets proper rest and oxygen.



The study reveals that using CPAP can reduce the risk of severe health problems and death in people with both T2D and OSA. While prior research has often focused on short-term effects, this new study sheds light on the long-term benefits of treating sleep apnoea as a part of diabetes care. This means that by addressing sleep apnoea, people with T2D can see improvements in both their overall health and life expectancy.

Experts emphasise that sleep health is intrinsically linked to overall health, especially for people with chronic conditions like diabetes. Treating OSA is not just about improving sleep quality; it may also protect heart health, improve metabolism, and help reduce the risks of cardiovascular disease and other diabetes-related

complications. By improving sleep quality through treatments like CPAP, people with T2D can experience better control over their condition and potentially lower the risk of developing severe complications.

The findings also highlight the importance of early diagnosis and screening for sleep apnoea in individuals with diabetes. Many people with T2D may not be aware they also suffer from OSA, making it essential for doctors and patients to recognise and address this connection. Simple, effective treatments like CPAP, when paired with good diabetes management and lifestyle changes, can make a meaningful difference in quality of life and long-term survival.

In conclusion, this research underscores the value of holistic diabetes treatment. Addressing sleep apnoea not only improves sleep but also enhances heart health, metabolism, and overall well-being. With better screening, early detection, and treatment options like CPAP, people living with both T2D and OSA can look forward to improved health outcomes and an overall better quality of life.