

# WHY ARE WE LOSING IT?

Findings from a study have sparked concerns about male reproductive health and fertility.

Experts discuss reasons behind the decline, what it means, and measures that can be taken

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In the largest study of its kind, researchers have found that sperm counts have fallen by more than 50% in the past 46 years globally, including in India, and that the decline is only accelerating with time. The findings, published last week in the journal Human Reproduction Update, show a significant decline after the year 2000 — a trend that the medical community calls alarming for multiple reasons. While the implications are being felt evidently in terms of fertility, experts warn this could also have serious ramifications for men's overall health and well-being.

## THE REASONS

Researchers say multiple factors could be at play — including prenatal exposure to environmental chemicals and poor health behaviours in adulthood. "Environmental factors include exposure to pollutants, toxins in the air, radiation hazards from mobiles, laptops, plasticisers in plastics or pesticides in our food," says Dr Aman Gupta, additional director, Urology, Fortis Hospital Vasant Kunj. Shedding light on the kind of lifestyle choices that impact sperm count, Dr Rajiv Kumar Sethia, associate director and head, Urology, Asian Hospital, says, "Sedentary lifestyle, smoking, alcohol, junk food, endocrine disruptors, chronic illnesses and their medications, anabolic steroid use, etc — all impact sperm health."

## WHY THIS MATTERS

The implications of a global decline in sperm count and concentration are wide. The study notes that while sperm concentration above the 40 million per ml threshold does not imply a higher probability of conception, fertility could be impacted if sperm concentration falls below this level.

This impact is being felt by doctors in their daily practice, too. Dr Manish Kumar Choudhary, HOD,

Declining fertility could have serious ramifications for men's overall well-being  
PHOTOS: SHUTTERSTOCK (FOR REPRESENTATIONAL PURPOSE ONLY)

Urology, Marengo QRG Hospital, Faridabad, confirms this when he says, "We are seeing an increasing number of patients with low sperm counts and infertility coming to clinics for treatment." While these concerns have commonly

been observed in men over 40, things are now changing, informs Dr Sayed Zaffar, urologist at Masina Hospital, Mumbai. He says, "I now see that the number of younger males coming with this concern is really high. It is worrisome."

Fertility, however, is only one aspect of it. Dr Choudhary adds that since sperm count is

considered a marker of men's overall health, a decline is correlated with worsening overall health and an increased future risk of morbidity.

There is plenty of research to back this up, says Dr Sethia. "Studies have shown that low sperm count is associated with an increased risk of testicular cancer, decreased lifespan and chronic illness," he adds.

The researchers of the study also observed that decline in sperm count and concentration is "consistent with the adverse trends in testicular cancer, hormonal disruption and genital birth defects".

The risk is especially higher for men with comorbidities such as diabetes, immunodeficiency, alcoholic liver disease, hypertensive nephropathy, etc. "These groups need to be more aware in this regard," says Dr Rajeev Sood, director and HOD, Urology, Uro-oncology, Andrology and

Robotics, Sanar International Hospitals.

## WHAT CAN BE DONE

While environmental and genetic factors may not be in one's control, lifestyle choices that are known to help with sperm health can be adopted. Dr Sood explains, "The modifiable factors include maintaining a healthy BMI, regular exercise (at least 3 times a week), getting adequate sleep, avoidance of hypertension and diabetes, limiting intake of salt and sugar, quitting nicotine, moderating alcohol consumption and preventing STDs."

Mental health requires an equal amount of focus. "Stress levels also activate the sympathetic nervous system, resulting in the inhibition of haemoglobin access and hormonal decline,"

says Dr Sood. This is why a good work-life balance, taking up meditation and yoga, or seeking professional help is recommended to keep mental health in shape.

## What to eat

**Eggs:** Eggs are packed with protein. They also protect the sperm from free radical damage and improve motility.

**Spinach:** It is an excellent source of folic acid, which helps in healthy development of sperms and reducing abnormal sperms in semen.

**Bananas:** Vitamins A, B1, and C in bananas help the body produce healthier sperm cells. They also contain bromelain, a rare enzyme that prevents inflammation and boosts sperm quality and count.

**Dark chocolate:** Loaded with an amino acid named L-arginine HCl, dark chocolate is proven to contribute to higher sperm counts and volume.

**Walnuts:** Healthy fat is required for the production of the cell membrane for sperm cells, and omega-3 fatty acids in walnuts promote blood flow to the testicles.

**Pumpkin seeds:** Phytosterols in them boost testosterone production, while omega-3 fatty acids improve blood circulation and semen volume.

**Zinc-rich foods:** Foods such as barley, beans and red meat are rich in zinc, aiding in increased higher sperm count. Deficiency of zinc can even lead to a decrease in sperm motility.

**Pomegranates:** They boost sperm count and semen quality, and are full of antioxidants that fight free radicals.

**Tomatoes:** Tomatoes contain vitamin C and a substantial amount of lycopene, a powerful antioxidant beneficial for male fertility.

Inputs by Diksha Dayal, HOD, Nutrition and Dietetics, Sanar International Hospitals

## THE BIG NUMBERS

- The researchers collected data from over 57,000 men from 53 countries, including India.
- The study notes sperm count has fallen by 62.3% between 1973 and 2018.
- Average sperm concentration has fallen by 51.6 percent (101.2 million per millilitre to 49 million per millilitre) during this period.
- This decline has accelerated over time. The pace of decline increased from 1.2% each year since 1972, to 2.6% each year since 2000.

## #theburningquestion

### What food to avoid in winter to control cholesterol levels?

Winter is the time when your cholesterol level may fluctuate, mainly because one's body needs calories to warm up, which makes one want to eat more, resulting in the fluctuations. Here are some suggestions to keep cholesterol levels in check:

**Butter and ghee:** Despite the fact that desi ghee contains a lot of saturated fats, eating too much of it can cause your cholesterol levels to rise. Similarly, stay away from processed butter, which may be high in sodium and trans fat and can raise cholesterol and blood pressure levels.

**Sweet winter treats:** Eating halwa, kheer, gur gazak and chikki during the winter may seem like a normal ritual, but these, however, are unhealthy foods that are high in calories, cholesterol, and added sugars. Obesity and other medical conditions may result from the combination of these ingredients. So, make an effort to limit your intake.

**Processed meats:** Processed meat is meat that has been preserved by methods such as curing, salting, canning or drying. Sausages, for example, are high in cholesterol. They raise LDL cholesterol levels in the body, increasing the risk of heart disease.

**Fried foods:** You may think it's a good idea to indulge in deep-fried snacks like pakoras, fries, etc. during the winter, but the fact that these foods are high in trans fats is a cause for concern. These fats raise your body's bad cholesterol and may increase your risk of heart disease, diabetes and obesity.

Dr Archana Batra, nutritionist, certified diabetes educator and physiotherapist



## #inbrief



### Walking keeps dementia at bay?

A study suggests that both human and canine brains stand to benefit from walking. People who averaged 9,800 steps a day were half as likely to develop dementia as sedentary people. Even those taking only about 3,800 steps a day were 25% less likely to develop dementia. Walking at about 112 steps per minute cut short the risk of dementia even further, the study suggested.



### Bruce Lee died of drinking too much water?

Several theories about Bruce Lee's death have been proposed including assassination by Chinese gangsters. But Lee may have died from drinking too much water, according to a study reported by Sky News. The autopsy showed that he died from cerebral oedema, then was thought to be a reaction to a painkiller he had taken. It is now suggested that the oedema may have been brought on by hyponatraemia, a form of kidney function triggered by overconsumption of water.

### Cancer causing harmful chemicals in sanitary pads?

A new study has found that cancer-causing contaminants are found in sanitary pads sold across India. This is alarming, considering that almost three in every four teenage women in India use sanitary napkins. Conducted by an

NGO that's part of the International Pollutants Elimination Network, the study tested ten brands of pads (organic and inorganic), and found traces of phthalates and volatile organic compounds (VOCs) in all samples.



PHOTO: ANDY WONG/AP



### WHO to identify pandemic-causing viruses

The World Health Organisation has announced that it is working on a list of pathogens likely to cause future pandemics. These pathogens will be studied as a countermeasure to potential pandemics. The list includes Covid-19, Ebola virus, Marburg virus, Middle East Respiratory syndrome, Nipah virus, and Disease X.

### Covid-19 cases on rise in China again

As per the National Health Commission of China, the country has reported 26,824 fresh Covid-19 infections and two deaths of Covid-19 patients in Beijing. China is still enforcing severe Covid-19 restrictions to eliminate transmissions, including mass testing, quarantines, neighbourhood lockdowns and border restrictions. Earlier this month, the government had announced that the country would ease its stringent Covid-19 policies and scrap quarantine requirements.

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