

Why the penis is a barometer of men's health

— and we need to wake up to its warnings

By David Robson | BBC

Erectile dysfunction can be an early warning of a heart attack, stroke, diabetes and dementia. It's time that patients and doctors alike started taking notice, according to researchers.

How to read this document: Difficult English words are followed by a small Urdu meaning and an English synonym in brackets, then the sentence continues normally.

You could describe erectile dysfunction as a silent epidemic. According to multiple surveys, it afflicts more than half of adult men over 40. Few, however, are willing to discuss the issue with the people they love.

If the topic does come up in conversation, it's often seen as the subject of banter – rather than an early warning sign of impending آئے، اور (approaching) illness. Yet, according to reams of new research, the penis is often a barometer ہیکانہ (indicator) of a man's overall health, with erectile dysfunction acting as a harbinger پیش خبر (precursor) of many serious conditions, including diabetes, heart attack, stroke and dementia.

It is a “canary in the coalmine”, according to sexologist Emmanuele Jannini at the University of Rome Tor Vergata, who recently edited a scholarly علمی (academic) book reviewing the evidence to date. With better screening معائنہ (testing) for erectile dysfunction, doctors could therefore diagnose some serious threats to men's health before they have progressed too far.

But many men's reluctance ہچکچاہٹ (hesitation) to talk about their sexual health means that they are missing these valuable opportunities.

Here's what you need to know about this extremely common complaint and the reasons it should ring alarm bells for your doctor.

Plumbing problems

Like many medical conditions, the precise prevalence پھیلاؤ (occurrence) of erectile dysfunction depends on how you define and measure it. As a result, studies report its global prevalence among adult men spanning

from just 3% to 76.5% – a huge range. But one of the largest and most nuanced (detailed) surveys examined around 1200 subjects using detailed questionnaires and found that 39% of men aged 40 regularly experienced some level of impotence نامردی (dysfunction), rising to 67% at age 70.

Men with erectile dysfunction were 59% more likely to suffer coronary heart disease, and 34% more likely to have a stroke

In many ways, erectile dysfunction is a plumbing نکاری نظام (piping system) problem.

Along the length of the penis run two spongy اسفنجی (porous) structures called the corpora cavernosa, which are typically flaccid ڈھیلا (limp). When a man becomes aroused براہیجنتہ (excited), the brain sends signals to relax the muscles around the penis's arteries, creating an influx آمد (inflow) of blood into both of those cylinders. As they expand, the corpora cavernosa start stretching, and they compress دباؤ (squeeze) the veins ushering blood outside the penis, trapping it inside.

Like a balloon filling with air, the organ expands and stiffens. Anything that reduces the build-up of blood through the penis's pipes will impair کمزور کرنا (weaken) a man's capacity to achieve or maintain that erection.

The issue is often psychological. A stress response involving adrenaline ایڈرینالین (stress hormone) and cortisol کورٹیسول (stress hormone) can lead our blood vessels to contract سکڑنا (shrink), preventing the corpora cavernosa from stiffening. Heightened levels of stress can also interfere with the production of testosterone, which can reduce libido جنسی خواہش (sex drive) and dampen کم کرنا (reduce) arousal. (Importantly, people with glandular غدد سے متعلق (hormonal) conditions like hypogonadism غدد کی کمی (hormone deficiency) also have reduced production of testosterone, so this can play a role.)

That's not to mention that stress often comes with a general state of mental distraction توجہ ہٹنا (diversion) that may make it hard to stay focused on sex.

There would have been a good reason for this in our evolution: if stress halts arousal, it ensures the body preserves its resources for survival in moments of danger. “If the environment is risky, it's important not to reproduce,” says Jannini.

In the modern world, however, there are many non-life-threatening reasons we experience stress, so this protective mechanism might be called into action more often than necessary.

Heart and brain issues

In many cases, erectile dysfunction may also reflect far broader health problems. For one, it can arise from atherosclerosis شریانوں کا سخت ہونا (artery hardening) – a condition in which blood vessels harden and narrow, leading to a major risk of heart disease. Since the penis's arteries are among the smallest in the body, they are often the first to fail, so cases of erectile dysfunction can act as a harbinger for this type of heart failure.

Analysing data from 154,794 individuals, one recent paper found that men with erectile dysfunction were 59% more likely to suffer coronary قلب کی شریانوں سے متعلق (cardiac) heart disease, and 34% more likely to have a stroke.

“A good measure of vascular عروقی (blood-vessel related) health is having a good erection,” says Michael Carroll, an expert in reproductive science at Manchester Metropolitan University in the UK, and author of the forthcoming آئندہ آنے والی (upcoming) book Your Nuts: The Science of How They Work and What It Means For Your Fertility, which is set for publication this summer.

There is even some tentative غیر یقینی (preliminary) evidence that poor penile health acts as a harbinger of cognitive decline, with one Taiwanese study finding that men who had been diagnosed with erectile dysfunction were 68% more likely to develop dementia over a seven-year follow-up. Like the penis, our brains are also dependent on a good blood supply to deliver fuel and clear away toxic waste.

The link with diabetes

Monitoring erectile dysfunction may be especially important for people at risk of diabetes, which can damage the circulatory گردش خون سے متعلق (blood-flow related) and nervous systems through various mechanisms. For example, the spikes in blood sugar – which are common when the condition is badly managed – can lead to excess glucose گلوکوز (blood sugar) sticking to proteins in vessel walls. This can cause the blood vessels to lose their elasticity لچک (flexibility) – a process called glycation گلیکیشن (sugar-protein bonding). Like atherosclerosis, this reduces the efficient flow of blood to the parts of the body where it is needed most, and delicate vessels in the penis are often the first to be affected.

“The link between diabetes and erectile dysfunction is very strong,” says Bogdan Vlacho, a researcher at the Sant Pau Research Institute in Barcelona, in Spain. “Men with type two diabetes are about three times more likely to develop erectile dysfunction than those without diabetes.”

In a recent review of the evidence, Vlacho also finds that people with diabetes and erectile dysfunction are considerably more likely to develop “peripheral neuropathy” – nerve damage to the hands and feet – than those with diabetes alone. They are also in greater danger of retinopathy آنکھ کے پردے کی بیماری (eye disease), which can lead to blindness, and impaired متاثرہ (damaged) wound healing, which can sometimes lead to amputation عضو کا کاٹا جانا (limb removal).

Yet, screening for erectile dysfunction among diabetic patients is not standard practice. “There is evidence that health care professionals don't talk with patients about this issue,” says Santiago Martinez, an endocrinologist **غدد کے امراض کا ماہر (hormone specialist)** at the University of Barcelona, in Spain, who co-authored the review of studies.

Potential therapies

A survey conducted by The Urology Foundation in the UK found that over half of the men with erectile dysfunction refrained **بازر ہے (abstained)** from seeking medical help because of shame and anxiety surrounding the condition, and 20% even said they'd rather not drink beer for a month rather than see a healthcare professional about their discomfort.

But all men experiencing erectile dysfunction should seek help, according to Carroll. You may get relief for a considerable source of unhappiness and stress in its own right, while also beginning a valuable discussion about your overall physical health – one that may be lifesaving. “Addressing the problem early is key,” he says.

After all, erectile dysfunction is not an incurable condition. Drugs like Viagra (sildenafil) dilate **پھیلاؤ (widen)** blood vessels in the penis – but some anecdotal **غیر مصدقہ (unverified)** evidence suggests that patients who have been taking these pills to improve their sex lives also have improved cardiovascular **دل اور خون کی تالیوں سے متعلق (heart-related)** outcomes, including a reduced risk of heart failure – though this has not been proven in clinical trials yet. (Viagra was originally developed as a cardiovascular treatment for patients with high blood pressure before researchers noticed its now famous side-effect).

These drugs may even lower the chances of developing dementia, according to a study that analysed over 885,000 patients and found that it reduced the risk of developing Alzheimer's disease by two-fold.

At the very least, if you bring up your erectile dysfunction with a doctor, they can screen you for common risk factors for heart disease like hypertension **بلند فشار خون (high blood pressure)** and atherosclerosis, and advise you on issues such as obesity **موٹاپا (overweight)** that might be contributing to poor cardiovascular health. In some cases, simple measures like dietary change and exercise may help. For those with diabetes, managing blood sugar levels will be essential.

Martinez and Vlachou, though, emphasise that research is still nascent **ابتدائی (emerging)** on the effects of these therapies for erectile dysfunction, and whether they can also dampen the risk of other complications.

Plus, disentangling **الٹھن سلجھانا (untangling)** the causes of erectile dysfunction may require some serious work, since it can also arise from habits like porn addiction and from mental health issues surrounding sexual desire. “If the man has diabetes or cardiovascular disease, that is usually easier to link and treat,” Carroll

says. “However, if there are lifestyle factors, such as drinking and smoking, mixed with psychological or behavioural aspects, like over-usage of porn – it may be more difficult to address. Often these men may not want to divulge (راز افشاکرنا) (reveal) their activities.”

The lost bone

Besides these findings' obvious importance for our healthcare today, Jannini has been contemplating the potential evolutionary implications that the penis is such a barometer of holistic (مشمومی) (comprehensive) health.

As a species, humans are rather unusual in relying on their blood flow to achieve a firm penis. Most other primates, including our closest relatives, chimpanzees, have a retractable (در کھینچی جاسکتا ہے) (withdrawable) bone called the baculum (عضو تناسل کی ہڈی) (penile bone), which is released during arousal to support their erection and keep the plumbing active and stiff. As a result, their sex life is not as intimately tied to their overall health as that of the average human male.

Why would the human male, then, have evolved to lose the baculum and gain the increased potential for sexual dysfunction and vulnerability? This is a fact that has puzzled many evolutionary biologists. Jannini, however, suspects that human males evolved to lose their penis bone to help our female ancestors identify who would make the fittest mates and who would pass on the best genes to their offspring.

“It is very strange that we lost the most important bone for reproduction, because our reaction is so unpredictable,” Jannini says. “But it means it is the perfect biomarker (جینیاتی نشان) (biological indicator) for chronic diseases.”

Summary

Erectile dysfunction affects more than half of men over 40, yet most avoid discussing it — even though researchers now see it as an early warning sign for far more serious problems. Because the penis relies on healthy blood vessels to function, erectile dysfunction can be one of the first visible signs of atherosclerosis, making men with the condition significantly more likely to suffer coronary heart disease, stroke, and even dementia. The link with diabetes is especially strong: high blood sugar can damage blood vessels and nerves throughout the body, with the delicate vessels of the penis often affected first, well before more dangerous complications like neuropathy, retinopathy or amputation appear. Despite this, shame and embarrassment stop many men from seeking help, and many doctors still do not routinely screen for it. Experts argue that raising the issue early with a doctor could prompt useful checks for heart disease, diabetes and related risk factors, potentially catching serious illness sooner. Intriguingly, researchers also suggest an evolutionary reason humans lost the bone that helps other primates achieve

erections automatically — possibly so that a healthy erection could serve as an honest signal of a man's overall fitness as a mate.

Word Bank (in order of appearance)

barometer — پیمانہ — indicator

impending — آنے والا — approaching

harbinger — پیش نبر — precursor

scholarly — علمی — academic

screening — معائنہ — testing

reluctance — ہچکچاہٹ — hesitation

prevalence — پھیلناؤ — occurrence

nuanced — باریک بین — detailed

impotence — نامردی — dysfunction

coronary — قلب کی شریانوں سے متعلق — cardiac

plumbing — ناکاری نظام — piping system

spongy — اسفنجی — porous

flaccid — ڈھیلا — limp

aroused — پرائیگیٹ — excited

influx — آمد — inflow

compress — دہانا — squeeze

impair — کمزور کرنا — weaken

adrenaline — ایڈرینالین — stress hormone

cortisol — کورٹیسول — stress hormone

contract — سکڑنا — shrink

libido — جنسی خواہش — sex drive

dampen — کم کرنا — reduce

glandular — غدود سے متعلق — hormonal

hypogonadism — غدود کی کمی — hormone deficiency

distraction — توجہ ہٹانا — diversion

atherosclerosis — شریانوں کا سخت ہونا — artery hardening

vascular — عروقی — blood-vessel related

forthcoming — آئندہ آنے والی — upcoming

tentative — غیر یقینی — preliminary

circulatory — گردش خون سے متعلق — blood-flow related

glucose — گلوکوز — blood sugar

elasticity — لچک — flexibility

glycation — گلائیکیشن — sugar-protein bonding

retinopathy — آنکھ کے پردے کی بیماری — eye disease

impaired — متاثرہ — damaged

amputation — عضو کا کاٹا جانا — limb removal

endocrinologist — غدود کے امراض کا ماہر — hormone specialist

refrained — باز رہے — abstained

anecdotal — غیر مصدقہ — unverified

dilate — پھیلانا — widen

cardiovascular — دل اور خون کی نالیوں سے متعلق — heart-related

hypertension — بلند فشار خون — high blood pressure

obesity — موٹاپا — overweight

nascent — ابتدائی — emerging

disentangling — الجھن سلجھانا — untangling

divulge — راز افشا کرنا — reveal

baculum — عضو تناسل کی ہڈی — penile bone

retractable — اندر کھینچی جاسکتے والی — withdrawable

holistic — مجموعی — comprehensive

biomarker — حیاتیاتی نشان — biological indicator