Health (Https://Timesofindia.Indiatimes.Com/Toi-Plus/Health-114042946)

Should children be screened for heart disease? Doctors weigh in

Doctors say the seeds of heart disease are often sown in childhood. Smart, timely screening can help spot the danger. In the light of a worrying number of young Indians dying of sudden heart attacks, is it a preventive step that could save lives?

Labanya Maitra | TIMESOFINDIA.COM

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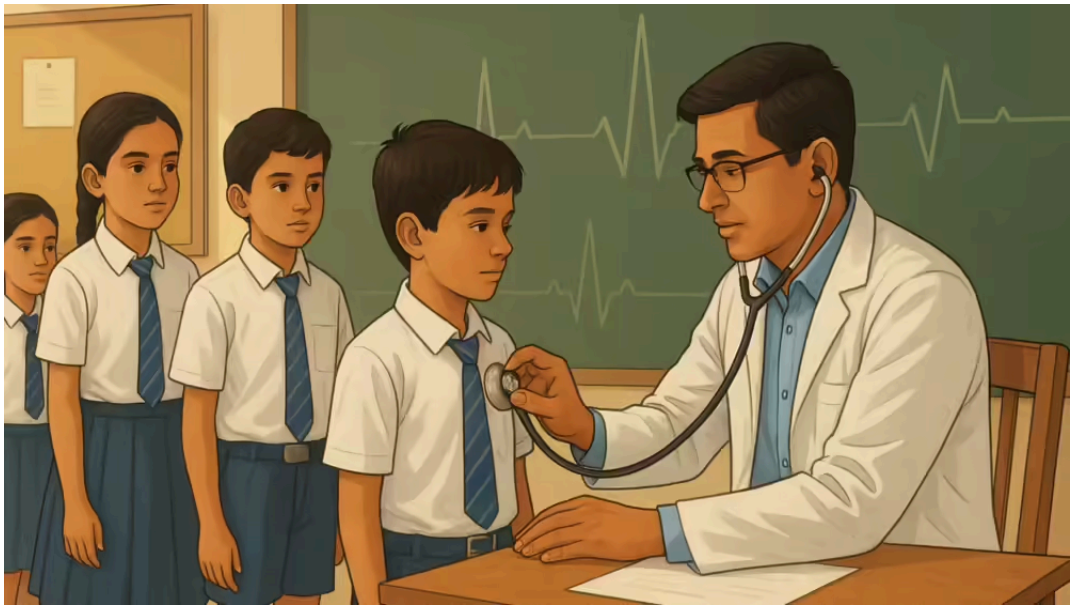


In India, we tend to think of heart disease as an old person's problem. But the headlines keep jolting us out of this long-held belief — teenagers collapsing on sports fields, young professionals dying suddenly in gyms, college students found unresponsive after a night of dancing. Each tragedy raises the same haunting question: could it have been prevented?

Doctors now believe that to prevent heart disease from striking in the 20s, we need to start acting in pre-teens and early teens. What they are recommending is screening children when they are 10 and then again when they turn 15.

This, the doctors believe, can prevent heart diseases linked to genetics and also poor lifestyle choices among children that are rendering them vulnerable to cardio-vascular ailments in their 20s and 30s.

A teenager's sudden collapse on a football field is usually the result of a hidden rhythm disorder or structural defect, while the 25-year-old who dies at the gym is

far more likely to have had a heart attack caused by premature blockages. Both conditions, however, trace their roots to childhood.

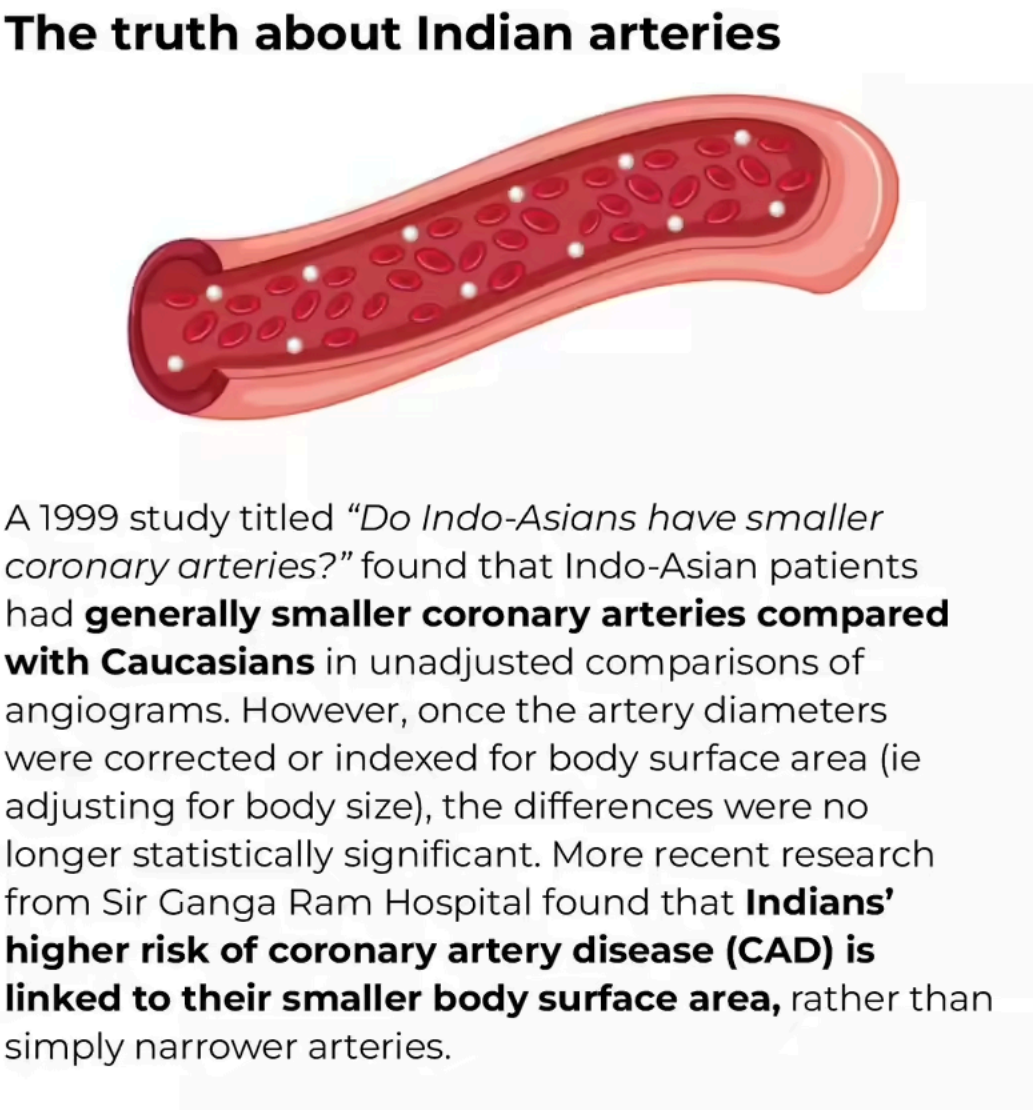
At what age should screening begin?

Doctors agree broadly that the window for first checks opens around 8–10 years of age.

Dr Balbir Singh, chairman of cardiology at Max Healthcare, believes schools should be central to this effort. “It should be a school health program wherein a child, before starting any physical activity or physical exercise, should have an ECG. These are the rules followed in many countries abroad.”

Dr Shivi Saxena, paediatrician at PGI Chandigarh, recommends a slightly broader baseline. “Owing to the prevalence of childhood obesity, we should start screening children in their early teens, maybe around 10 or 11 years old, for increased lipid profile, BP monitoring, blood sugar, and any signs of insulin resistance. An ECG or echocardiogram can be done if we find anything abnormal in any of these tests, or if there are symptoms like excessive sweating, shortness of breath, or any family history.”

Dr Vikas Kohli, a senior paediatric cardiologist, bats for a two-step approach. “Kids should be screened at 10 years of age with a physical exam and ECG. Then at 15, when they are into sports that require intense physical exertion or becoming sedentary and obese, they should be screened again — including a lipid profile. That is when the first cholesterol deposits in arteries begin, and in Indians, with our smaller artery size, blockages can develop earlier.”



In some cases, however, cholesterol deposits can be present even at birth, explains Dr (Prof) Tarun Kumar, director and head at Delhi's Medanta Moolchand Heart Center, especially if pregnant mothers are smokers or diabetic. "Even small cholesterol deposits can rupture and lead to the formation of thrombus (blood clot) and lead to a heart attack. Factors like unhealthy diet, sudden severe exercise, unnecessary supplements like steroids, smoking, uncontrolled hypertension, and uncontrolled diabetes can further cause a high state of inflammation in the body and rupture cholesterol deposits."

In children who are born healthy, these deposits can start in the teenage years depending on dietary patterns, and lifestyles, he adds.

Know the difference

Heart attack (myocardial infarction)

Cause: Blockage in blood flow to the heart muscle (circulatory issue)

Trigger: Plaque buildup in coronary arteries, leading to reduced oxygen supply

Symptoms: Chest pain, discomfort, shortness of breath, may occur gradually

Response window: Offers a crucial time window to rush the patient to hospital

Commonality: Well-understood and widely recognised in medical literature

Cardiac arrest

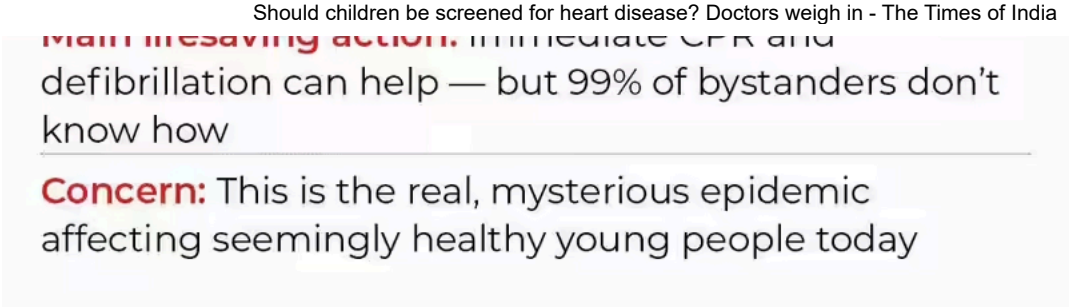
Cause: Sudden electrical malfunction in the heart, causing it to stop beating

Trigger: Can happen even without blocked arteries or prior symptoms

Symptoms: Person collapses suddenly, stops breathing, unresponsive

Response window: Extremely narrow — can lead to death within minutes

Main lifesaving action: Immediate CPR and

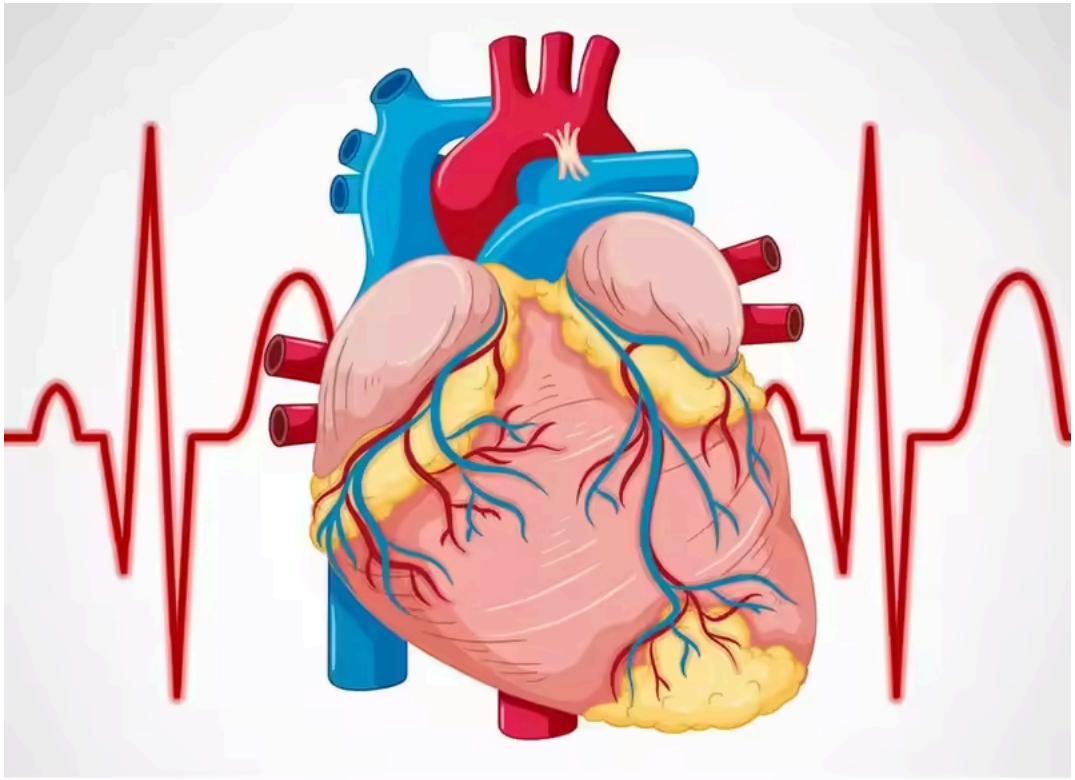


So, what are the risk factors?

The real challenge is knowing which children to prioritise. Here, the doctors are unanimous: family history is the strongest red flag.

"Sudden cardiac death happens in children because of cardiomyopathy, ventricular arrhythmias and other rare genetic cardiac disorders," says Dr Kumar. "If they have a family history of cardiomyopathy and sudden cardiac deaths, they can start getting screened at 5–7 years of age. They should get an ECG and echocardiogram. And as they grow older, they should get their lipid profiles, and other specific tests like a cardiac MRI."

After wobbly electric currents, Dr Saxena emphasises, the second big culprit is lifestyle. "Children as young as 6 or 7 years of age are now overweight and obese. Students in Class X and XII start smoking, vaping and drinking. Vaping is worse than smoking. Those who are going to gyms take supplements without consulting a doctor. All these factors contribute to deteriorating heart health."



High-risk groups: Who should be extra cautious

Doctors urge anyone with the following conditions to be vigilant about subtle symptoms:

- Hypertension or diabetes
- High cholesterol or obesity
- Smoking or regular alcohol use
- High stress, poor sleep, sedentary lifestyle
- Family history of early heart disease
- Post-menopausal women without hormone therapy

Dr Kohli warns that indulgent parents could be jeopardizing their child's health. "The first deposition of cholesterol in the body and in arteries starts at 15 years of age. We are not doing our teenagers any favours by being nice parents and allowing them to eat processed food and junk food. Carbohydrates are the real killer in Indian households."

He also points to risks parents often overlook. "There is something parents don't know and the kids don't tell their parents. And that is the history of vaping and smoking. Nicotine pouches like 'Zyn' are becoming common, completely hidden from view. Add to that steroids and supplements handed out casually in gyms — it is a dangerous cocktail."

"Typically, if there are multiple risk factors such as heavy smoking, obesity, or very high cholesterol, then young people are predisposed to heart blockage," adds Dr Singh. "Ninety per cent of the time when I get a patient of a young age with an acute heart attack, it is a smoker."

Tests that can catch heart trouble early

If symptoms persist, doctors recommend starting with:

ECG (electrocardiogram)

2D Echocardiogram

Troponin I (to detect microscopic heart muscle injury)

Treadmill or stress test

For more detailed imaging:

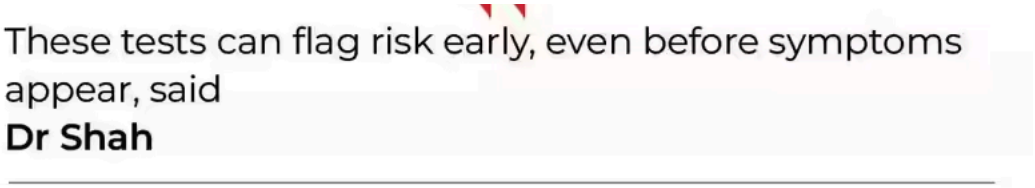
- CT Coronary Angiogram — excellent for low-risk individuals
- Conventional Angiography — preferred for high-risk patients

Another very useful screening test is the coronary calcium score...A low score — near zero or under 100 — is highly predictive of low heart attack risk in the coming years

Dr Ruchit Shah, Interventional Cardiologist

Key predictive blood markers

- High-sensitivity CRP — indicates inflammation
- Lipoprotein(a) — especially relevant for those with family history
- NT-proBNP — useful when breathlessness is present



But there is no need to panic

Doctors are careful to temper panic with perspective.

Dr Singh stresses that it is very rare to have a heart disease because of blockage in people younger than 20 years old, although it can happen.

Dr Saxena too frames screening as a tool of reassurance. “If we can get a baseline of these tests at 9 or 10 years of age and then give them a strict regimen of dietary changes, including exercise, and decreasing screen time, then later on, any possible cardiac arrests or mortalities in their early 20s and 30s can be prevented.”

Dr Kohli, who warns most starkly about lifestyle risks, says, “The easy way to screen is an ECG and physical exam at 10 years, and then again at 15 with lipid profile. From those, select the kids who need to be evaluated further.”

Yes. However, a one-size-fits-all annual battery of tests for every child may not be realistic or necessary. But an ECG in schools around age 8–10, a physical and lipid screening around 15, and targeted tests for those with strong family histories could save lives.

These tests act as early warning bells. They can open conversations about lifestyle, diet, exercise, and habits like vaping or unmonitored consumption of supplements. These conversations may matter as much as the tests themselves.

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Some first food items should be totally banned. These foods are not suitable for Indian environment.

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