

Albanian Shqip  
 Amharic አማርኛ  
 Arabic العربية  
 Bengali বাংলা  
 Bosnian Б/Н/С  
 Bulgarian Български  
 Chinese 中文  
 Croatian Hrvatski

Dari دری  
 English English  
 French Français  
 German Deutsch  
 Greek Ελληνικά  
 Hausa Hausa  
 Hindi हिन्दी  
 Indonesian Bahasa Indonesia

Kiswahili Kiswahili  
 Macedonian Македонски  
 Pashto پښتو  
 Persian فارسی  
 Polish Polski  
 Portuguese Português para África  
 Portuguese Português do Brasil  
 Romanian Română

Russian Русский  
 Serbian Српски/Srpski  
 Spanish Español  
 Turkish Türkçe  
 Ukrainian Українська  
 Urdu اردو

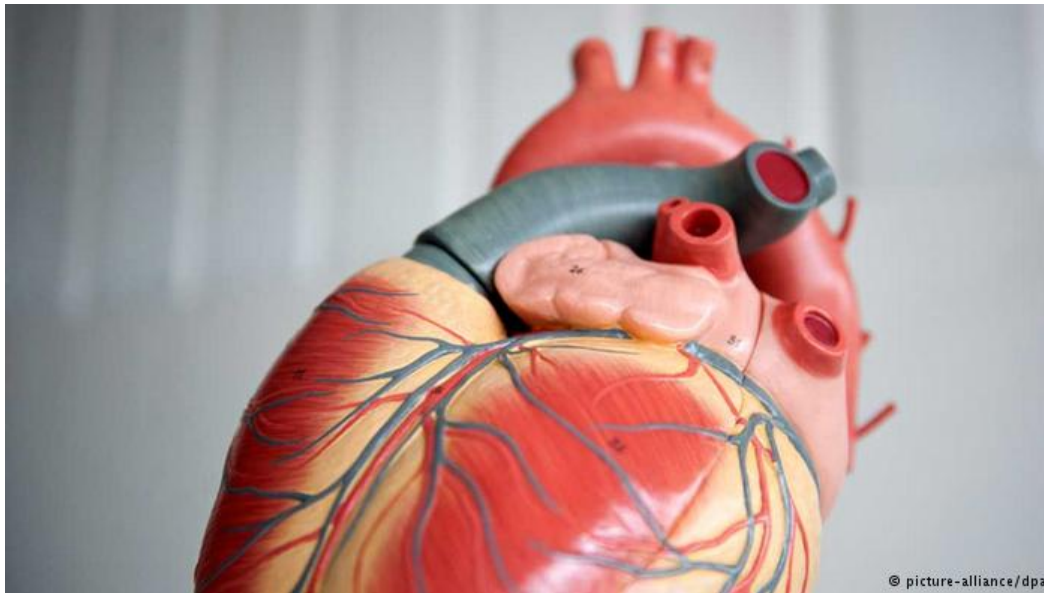


TOP STORIES / SCI-TECH

SCI-TECH

## Indian innovation offers cheap and effective test for heart disease

Image-free and non-invasive technology is being developed in India to help detect cardiovascular disease. If successful, the device could bring affordable healthcare to India where millions die of the disease each year.



Scientists at the Healthcare Technology Innovation Centre (HTIC) in the southern Indian city of Chennai have invented a friendly device that keeps a check on artery stiffness and gives an alert when issues arise.

The ARTSENS [Arterial Stiffness Evaluation for Non-Invasive Screening] device helps prevent cardiovascular diseases which are becoming more prevalent because of factors like unhealthy eating and stress.

Up until now, image-based ultra sonograms have been used to test the elasticity and structure of an artery. Such conventional ultrasound machines are large, expensive and require very skilled operators.



A probe is placed on the patient's neck, over the carotid artery. The arterial stiffness measurement is given within a minute

### How it works

Dr Jayaraj Joseph heads the project at HTIC, he told DW that several factors, including age and lifestyle, can affect human blood vessels and in turn could interrupt the normal function of the heart. An ARTSENS machine, Joseph added, assists in identifying premature vascular abnormalities and could assist in preventing heart disease through early diagnosis and treatment.

“This has got tremendous potential in early detection of possible vascular events in the future,” he adds.

The use of a singular ultrasound probe is another great advantage of the ARTSENS machine, Preejith, an electronic design engineer told DW.

The device, which is about the size of a digital television set top box, has been tested in three different clinical trials. All tests found the Indian machine to be on par with the commonly used imaging system.



Small-scale hospitals around India would be able to use the technology

### Timely detection helpful

In comparison to a standard ultrasound imaging machine, ARTSENS' manufacturers pride themselves on how compact and easily transportable the machine is. The Indian produced prototype costs around 1,200 euros (\$1,663), which is a relatively small investment when you compare it to the 20,000 euros cost of the ultrasound imaging machine.

It will not be long before the device is ready commercially, Mohanasankar Sivaprakasam, head of the HTIC, told DW.

The research team expects their invention will prove very useful within India's public health sector as it will allow for mass patient screenings. In a country like India where more than 2.5 million people die every year because of cardiovascular disease, it will be a boon.