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European scientists develop scanner for heart disease diagnosis

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Employing Laser Doppler Vibrometry (LDV), a technique using photonics technology, the device can pick up vital information about the status of the heart using light, in a fast and inexpensive way.



With worldwide cardiovascular deaths at an all-time high, European scientists have developed a new handheld scanner that can read your heart's vital signs like a supermarket barcode reader can scan items at the checkout, allowing a General Practitioner to diagnose even preclinical patients for the early onset of a disease.

Cardiovascular diseases (CVDs) can be identified using a number of medical tools, including cardiac biomarkers, cardiac catheterization, chest x-ray, electrocardiogram (ECG), Holter monitoring, and cardiac MRI.

However, because they are complicated or expensive, routine early forecasting of CVD is impossible in large populations at present.

Employing Laser Doppler Vibrometry (LDV), a technique using photonics technology, the device can pick up vital information about the status of the heart using light, in a fast and inexpensive way.

Using the Doppler shift of the reflected light, the scanner builds up a vibration map of the chest and heart area, which can highlight the tell tale signs of CVD, such as plaque build-up, arterial stiffness, arterial stenosis or heart dyssyncrony.

Although there are a number of vibration sensors that exist for this purpose, LDV is non-invasive and provides a much higher degree of accuracy in a fraction of the time.