

A wristband to keep your heart safe

IIT-Gn Develops Device To Accurately Measure BP

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Ahmedabad: About 15% to 17% of total heart attacks in India are related to high blood pressure (BP). In such a scenario, Indian Institute of Technology, Gandhinagar (IIT-Gn) has developed a mechanism to accurately measure a patient's BP. The institute has secured patent for the invention.

The device is in the form of a wristband that can non-invasively measure a patient's diastolic and systolic BP. Presently, devices that measure BP only count systolic reading. Devices that measure diastole predict with the help of models dependent on body weight, body mass index and age. Such readings are frequently marked by errors. Some foreign-made devices that can measure multiple physiological parameters are quite expensive.

The new device has been developed by Prof Uttama Lahiri and electrical engineering students Dhaval Solanki and Poojan Oza. Prof Lahiri said: "The device also has an

NEWSICLE

TRACKING HEART'S HEALTH

RISK FACTORS

Some controllable risk factors include high BP, diabetes, smoking, obesity, stress, high cholesterol and alcohol



arm-pressure cuff and pulse plethysmogram-based sensor. The sensor is used for measuring blood pulsation at the fingertip. For BP measurement, it has a cuff that has to be positioned on the upper arm about one inch above the tennis point."

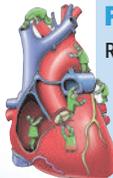
She said the machine can also measure pulse rate, hemoglobin, saturation of pe-

Coronary Artery Disease Is A Major Killer. Every Day, 18 Amdavadis Are Admitted To City Hospitals With Cardiac Problems. An Average 152 People Died Of Heart Disease Every Day In Gujarat Between July 2009 And August 2010

BROKEN HEART

Severe emotional stress can lead to extreme heart muscle pumping function also known as stress cardiomyopathy or takotsubo cardiomyopathy

INDIA HAS 1.9 CR PATIENTS WITH HEART FAILURE AND 1.5 MILLION NEW CASES ADDED PER YEAR



SYMPTOMS

Chest pain, stomach ache with vomiting, heavy sweating, strange feeling in the chest, breathlessness, fast heart beat, light-headedness

PILL PERIL

Risk is more in women on hormonal pills and it doubles if she is a smoker. Using birth control pills can also increase the risk of heart disease



HOW TO REDUCE RISK

Adopt a healthy lifestyle, eat plenty of fruits and vegetables, less red meat, less ghee and butter, walk at least five days a week

UNHEALTHY FOOD

Red meat, deep fried food, junk food, bakery products, butter, ghee

HEALTHY DIET

Fruits, vegetables, olive oil, nuts, whole grains, chicken without skin, egg white, flax seeds



ripheral oxygen and perfusion index. Change in perfusion index helps doctors decide anesthesia and pain measurement. The wristband has an LCD screen and some vital light displays that automatically change colour in an emergency. It shows red for emergency, green for normal and yellow and orange for precautionary steps.

Senior cardiologist Dr Sameer Dani said: "This device can be a novelty if it measures high BP with precision. Also, wearing a wristband is much more convenient." He said: "If all Indians with high BP are recognized and treated, we'll have 30% less heart attacks and strokes. High BP, if ignored, can lead to heart attack and even paralysis."

