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Skin-like wearable device monitors health 24/7

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Scientists at the Northwestern University and University of Illinois have developed a new wearable device that can monitor specific properties of the heart and the skin. The devices is a wearabale skin friendly technology that can be worn 24/7 for around-the-clock health monitoring.

The wireless technology used thousands of tiny liquid crystals on a flexible substrate, to sense heat and monitor cardiovascular issues and alterations in skin hydration levels. The device measures the transient temperature change at the skin's surface to determine blood flow rate, which is of direct relevance to cardiovascular health and changes in moisture levels on the skin.

Mr Yonggang Huang, senior researcher, said, "Through this device we have demonstrated the relevance of technology to basic medicine. The device is an array of up to 3,600 liquid crystals with 3,600 temperature points, each half a millimeter square, laid out on a thin, soft and stretchable substrate. This provides a sub-millimeter spatial resolution, comparable to the infrared technology currently used in hospitals."

Mr Huang added that the device also had a wireless heating system that could be used to determine the thermal properties of the skin. He further stated that though the technology was tested, a few additional safety tests were needed before the device could put into use.

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