Next Gen Wearable: Electronic Skin

An ultra-thin, lightweight electronic skin was developed by Japan researchers allowing for the remote monitoring of vital signs.

You might also like: A new study from the University of Toronto presents the results of implementing a multidisciplinary, family medicine-led remote monitoring programme for outpatients with COVID-19. Learn more

Wearable devices keep getting lighter and smarter. One of the frontrunners is electronic skin currently being developed by researchers in Japan led by Takao Someya, a professor at the University of Tokyo's Graduate School of Engineering.

According to CNN Business, the device have been created with the ageing Japan population in mind. These groups benefit from the constant remote monitoring of their vital signs, and the e-skin would measure those and the values would be displayed in a highly visible and easy-to-understand way.

The electronic skin is made of polyvinyl alcohol covered with a layer of gold. This wearable sensor is attached to an individual's chest with water spray and can be worn for a week at a time. It can measure signs such as heartbeat and electric impulses from muscle movement. Through a wireless transmitter the data is stored on a device (e.g. a smartphone) or in the cloud and can be remotely accessed by a doctor. It can potentially be used for monitoring chronic diseases like diabetes, or identify an illness symptoms early on.

In addition, the researchers are developing an LED display that would be worn on the back of the person's hand to show the values, which can be a convenient format for those who have difficulties using a smartphone.

The device is yet to be assessed at clinical trials, but the researchers are already working on manufacturing processes. According to Prof Someya, e-skin being light, stretchable and durable, will soon replace today's wearables such as watches and glasses especially considering the upcoming adoption of the 5G communication standard across the world.

Source: CNN Business

Image credit: University of Tokyo

Published on : Fri, 23 Apr 2021