



HEALTH & LIFESTYLE

South Korean Scientists Develop Tattoo Health Device

August 07, 2022

South Korean scientists are working on a health device in the form of a tattoo that could alert users to possible health problems.

Researchers at the Korea Advanced Institute of Science and Technology (KAIST) have developed an electronic ink made of liquid metal and very small tubes of carbon, or carbon nanotubes. The ink works by creating something like an electric circuit on the skin.

When the tattoo is connected to an electrocardiogram device or other **biosensor**, it can send a patient's heart rate and other important health signs to a **monitor**.

Steve Park is the leader of the research project. He said, "In the future, what we hope to do is connect a wireless chip **integrated** with this ink, so that we can communicate, or we can send signal back and forth between our body to an **external** device."

External device monitors could be located anywhere, including in patients' homes.

The electronic ink is much more comfortable for the user than existing biosensors, Park said. He called it "biocompatible," meaning it does not hurt living tissue.

Park added that the ink can be removed with soap.

The ink is non-invasive and made from particles based on gallium, a soft, silvery metal also used in semiconductors and in thermometers. The carbon nanotubes help conduct electricity and keep the tattoo on the skin.

Park said, "When it is **applied** to the skin, even with rubbing the tattoo doesn't come off, which is not possible with just liquid metal."

I'm Ashley Thompson.

Minwoo Park and Daewoung Kim reported on this story for Reuters. John Russell adapted it for VOA Learning English.

Words in This Story

biosensor – n. a device that monitors and transmits information about a life process

monitor – n. a device that shows information or images on a screen

integrate -- v. to combine (two or more things) to form or create something

external -- *adj.* located, seen, or used on the outside or surface of something

apply -- v. to put or spread (something) on a surface, a part of the body, etc.
