

South Korean Researchers Develop Nanotech Tattoos as Health Monitoring Devices



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Researchers in South Korea are developing a new health monitoring device in the form of an e-tattoo that can automatically alert the wearer to potential health problems.

The team at the Korea Advanced Institute of Science and Technology ([KAIST](#)) have created an electronic tattoo ink made of liquid metal and carbon nanotubes that effectively functions as a bioelectrode.

The device could be used to send a readout of the wearer's vital signs if connected to biosensors, including for instance an electrocardiogram.

Alongside heart rates it could be used to read glucose or lactate levels for people with diabetes or sepsis.

But the researchers plan to do away with the biosensors and design the e-tattoo as a fully self-contained device.

"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," said the project leader Professor Steve Park.

The e-tattoo ink is non-invasive and doesn't require a needle to be implanted beneath the skin like a traditional tattoo.

It is made from particles based on gallium, a soft, silvery metal also used in semiconductors and thermometers, while the platinum-decorated carbon nanotubes help conduct electricity while also improving the durability of the tattoo itself.

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

Read the [original article](#) on Sky News.