

Technology That Will Soon Be Ready-To-Wear

Voice-over 1:

A person's sweat can reveal a lot about their state of health. That's why researchers at the Biotex project in Dublin want to develop ways of analysing perspiration. Their latest prototype has in-built bio-chemical sensors that record data such as the saltiness, the acidity and the temperature of sweat. The results are sent wirelessly to a computer.

Deirdre Morris (Biochemical Engineer):

What we do is we take a piece of fabric, and in that fabric we define a fluidic channel, which you can see here. Along that channel we place a pH sensor, conductivity sensor, sodium sensor and temperature sensor.

The composition of sweat changes as it ages, so it is important to get it as it is excreted by the body. And this is quite difficult. So what we have done in this system is by defining this channel and placing this absorbent at the end of the channel we can be continuously pulling fresh sweat through the system and analysing it as the person exercises. And it's not been possible to do this before.

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The sports industry would be among the first to gain from wearable technology, like smart shoes or T-shirts equipped with sensors. Studying sweat is not meant to replace traditional methods like blood tests, but rather to complement them.

Deirdre Morris (Biochemical Engineer):

This is more person-friendly. People don't like to give blood, a lot of people they get nervous, they feel faint. In the future we hope to develop this system into a T-shirt, which will integrate others sensors besides what we see here. So we will have a full physiological picture of a person as they train or exercise.

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The technology could soon be used as a weapon in the battle against sports doping, or a tool for physios and trainers to keep an eye on how their athletes are performing. Either way, it's good news for sport.

Niall Moyna (Professor in Sports Sciences):

We are really at the first generation of sensors. I think it'll revolutionise how we prepare our sports team how we manage our sport teams. We will be able to individually track players and players who are having decrements in performance, we will be able to assess that at a much earlier stage in the game and be able to make appropriate changes and to put people in the appropriate positions on the field because of our ability to track real time.

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