



Smart wristband

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## SMART WRISTBAND MONITORS BLOOD CELL COUNT

 SPORT & FITNESS

### **This smart wristband has a biosensor that can count particles in the bloodstream.**

Springwise has closely followed the growing trend of wearables in the health and fitness industry. From a [sports bra](#) that responds to the wearer's movements to [smart socks](#) to treat chronic venous disease, wearable tech has made huge strides for people's well-being. Now engineers from [Rutgers University](#) have developed the next step forward in health trackers.

Their [new design](#) features a biosensor that can count particles, such as blood cells. Current wearables only measure a handful of physical data, like heart rate and activity levels. This wristband includes a flexible circuit board and a biosensor thinner than a single human hair. Blood samples are obtained through a simple pinprick. The incorporation of this technology into such models would allow for fast, portable blood test results.

This could be a big breakthrough in wearable health. Lead author Abbas Furniturewalla said, "The ability for a wearable device to monitor the counts of different cells in our bloodstream would take personal health monitoring to the next level." Blood cell counts can help diagnose a variety of illnesses or conditions, like leukaemia or internal bleeding. In both these cases, early diagnosis could mean the difference between life and death.

The hope for technology such as this is to allow patients to monitor their own health data at home. The wristband has a micro-controller and Bluetooth module to digitize and transmit data. This means

it can share information wirelessly with smartphones, so patients could send data to medical staff remotely.

Not only is this technology advantageous for internal health matters, but also the external. Being able to count particles could also allow the band to monitor the amount of pollutants in the air around a user. With pollution an ever-increasing problem, particularly in urban areas, being able to ascertain the safety of the air we're breathing could mean advances for those with respiratory problems.

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