

Headline: Startup Quanttus Shows Just How Hard It Is to Accurately Track Health on Your Wrist

Sub-headline: Wearable health-monitoring devices are getting more advanced, but can modern-day technology really measure our health?

Over the past couple of years, a number of activity trackers and smart watches that promise to track data (e.g. steps, sleep, heart rate, and calorie intake) have been released. Thanks to paradigm-shifting technology, the world is now one step closer into making our healthcare system a predictive, rather than a reactive, one.

Pic: <https://d267cvn3rvuq91.cloudfront.net/i/images/fitness.trackersx299.jpg?sw=1180>

Boston-based medical technology startup Quanttus aims to invent a gadget that help doctors diagnose ailments, and eventually, even predict adjacent health problems or detect them before they become serious. The hope is that through the tracking of vital information, the gadget would be able to help people monitor existing health illnesses and show them how their lifestyle affects their health.

The solution is a sensor-packed wearable than can measure blood pressure. Right now, the prototype being used in the trials looks like a digital watch with no face. The wristband tracks vital signs using a ballistocardiogram, which measures tiny movements of the body caused by our heartbeat. And the optical sensor on the wristband's back shines light onto your wrist determines your heart rate by measuring the selective light absorption. As a result, respiration and blood pressure signals are extracted from the data.

However, capturing reliable signals at the wrist is proving to be such a challenge when you take into account factors like the noise of motion artifacts, varying skin tones, and temperature. Tattoos can pose a problem, too, as the ink can block light from reaching the sensor. Results may also be less than accurate during certain exercises. For example, activities like tennis and kickboxing won't yield results as accurate as rhythmic ones like running or biking.

It takes time and millions of dollars to build a wearable device for real-time physiological monitoring. Extensive testing and prototyping, not to mention problem-solving, are need to make sure that the device can stand up to the requirements of daily wear. But if Quanttus can conquer these obstacles, being able to measure biological signals like blood pressure and skin conductivity can definitely pave the way to a better healthcare system.

Sources:

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