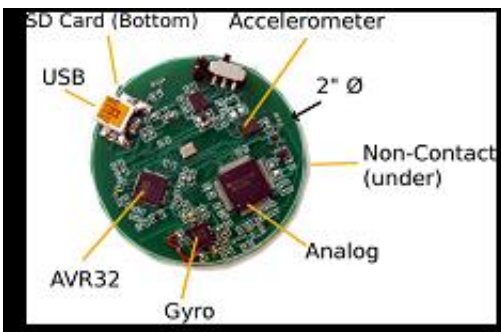


'Life and activity monitor' provides portable, constant recording of vital signs

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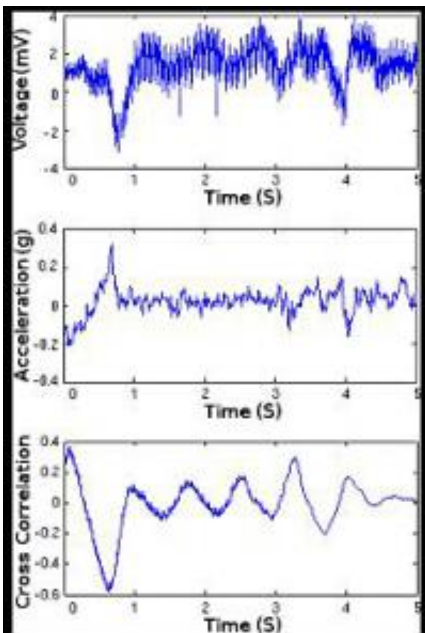
This small device, only about two inches wide, can monitor vital signs while being worn outside the body. (Photo courtesy of Oregon State University)

Researchers have developed a type of wearable, non-invasive electronic device that can monitor vital signs such as heart rate and respiration at the same time it records a person's activity level, opening new opportunities for biomedical research, diagnostics and patient care.

The device is just two inches wide, comfortable, does not have to be in direct contact with the skin and can operate for a week without needing to be recharged. Data can then be downloaded and assessed for whatever medical or research need is being addressed.

The technology has been reported at a professional conference, and research is continuing to make it even smaller and less costly.

"When this technology becomes more miniaturized and so low-cost that it could almost be disposable, it will see more widespread adoption," said Patrick Chiang, an assistant professor of computer engineering at Oregon State University. "It's already been used in one clinical research study on the effects of [micronutrients](#) on aging, and monitoring of this type should have an important future role in medicine."



Vital sign data can be relayed by the small electronic device worn on the body. (Image courtesy of Oregon State University)

Called a "life and activity monitor," the system uses different sensors to detect [heart rate](#), [respiration](#), movement and similar vital signs. It will provide doctors, researchers and clinicians a continuous flow of data over time, reduce the need for more frequent office visits, and ultimately provide better care at lower cost.

The system was developed by scientists and engineers at Oregon State

University and the University of California at San Diego.

Final designs of the technology may be as small as a disposable bandage, researchers say.

Provided by Oregon State University

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