

3-D bionic humans? Printed pressure sensors open door to artificial limbs that feel

Wearable technology may soon be at your fingertips — literally. Researchers have developed a pressure sensor that can be 3-D printed directly on your hand. The device, sensitive enough to feel a beating pulse, is made from soft, stretchy silicone that conforms to the curves of your fingertip.

Someday, that could mean technology evocative of the cyborgs and bionic humans of science fiction. In the nearer term, 3-D printed gadgets on and in the body could aid medical treatment, health monitoring and surgery.

This 3-D printing approach, [detailed](#) [May 5] in the journal *Advanced Materials*, could produce gadgets without the cleanrooms and fancy equipment needed to make most devices today, McAlpine said. And as 3-D printers become cheaper and smaller, they might even become the Swiss army knives of the future.

Conventional 3-D printing uses liquid plastic — too hot when malleable and too stiff after cooling to work with the body. In recent years, though, researchers have also explored using other kinds of “ink” to 3-D print everything from [batteries](#) to biological [tissues](#).

What’s unique about the new tactile sensor, McAlpine said, is the combination of soft, stretchable silicone-based ink that firms up at room temperature, and the ability to print on the complex, curved surface of an artificial hand.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [3-D Printing the Way to Bionic Humans](#)