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US engineers create sensor for monitoring health conditions

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The sensor emits a small electrical charge when pressure is applied against it.



A group of engineers at the University of Connecticut have created a biodegradable pressure sensor that could help doctors monitor chronic lung disease, swelling of the brain, and other medical conditions before dissolving harmlessly in a patient's body.

The sensor emits a small electrical charge when pressure is applied against it and thus could be used to provide electrical stimulation for tissue regeneration. Other potential applications include monitoring patients with glaucoma, heart disease, and bladder cancer.

The small, flexible sensor is made of medically safe materials already approved by the U.S. Food and Drug Administration for use in surgical sutures, bone grafts, and medical implants. It is designed to replace existing implantable pressure sensors that have potentially toxic components.

The research group is investigating ways to extend the sensor's functional lifetime. The lab's ultimate goal is to develop a sensor system that is completely biodegradable within the human body. The team has already filed for a patent for the new sensor.