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MIT engineers develop inflatable pill for the stomach

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The inflatable pill is embedded with a sensor that continuously tracks the stomachâ??s temperature for up to 30 days.



A team of engineers at the Massachusetts Institute of Technology, US has designed an ingestible, Jell-O-like pill that, upon reaching the stomach, quickly swells to the size of a soft, squishy ping-pong ball big enough to stay in the stomach for an extended period of time.

The inflatable pill is embedded with a sensor that continuously tracks the stomach's temperature for up to 30 days. If the pill needs to be removed from the stomach, a patient can drink a solution of calcium that triggers the pill to quickly shrink to its original size and pass safely out of the body.

The new pill is made from two types of hydrogels — mixtures of polymers and water that resemble the consistency of Jell-O. The combination enables the pill to quickly swell in the stomach while remaining impervious to the stomach's churning acidic environment.

Down the road, the researchers envision the pill may safely deliver a number of different sensors to the stomach to monitor, for instance, pH levels, or signs of certain bacteria or viruses. Tiny cameras may also be embedded into the pills to image the progress of tumors or ulcers, over the course of several weeks. The researchers believe that the pill might also be used as a safer, more comfortable alternative to the gastric balloon diet, a form of diet control in which a balloon is threaded through a patient's esophagus and into the stomach, using an endoscope.