

Swallow a pill and let your doc tour your insides

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Researchers at Brigham and Women's Hospital (BWH) have successfully tested a controllable endoscopic capsule, inspired by science fiction, that has the ability to "swim" through the body and could provide clinicians with unprecedented control when photographing the inside of the human body.

tank of water.

Provided by Brigham and Women's Hospital

The capsule is designed to be swallowed like a pill and can be equipped with a camera. Once inside the patient's digestive track, a doctor can "steer" the capsule through the body using an MRI machine, photograph specific areas of interest, and view those pictures wirelessly.

With current endoscopic capsule technology, the capsule tumbles randomly through the digestive track and clinicians have no control over what areas of the body are being photographed. The ability to steer a capsule, aim a camera, and take pictures of specific areas of concern is a major leap forward with the potential for broad medical implications.

"Our goal is to develop this capsule so that it could be used to deliver images in real time, and allow clinicians to make a diagnosis during a single procedure with little discomfort or risk to the patient," said Noby Hata, a researcher in the Department of [Radiology](#) at BWH and leader of the development team for the endoscopic capsule. "Ideally, in the future we would be able to utilize this technology deliver drugs or other treatments, such as [laser surgery](#), directly to tumors or injuries within the digestive track."

BWH researchers Hata and his colleague, Peter Jakab, have successfully tested a prototype of their capsule in an [MRI machine](#) and proved that the capsule can be manipulated to "swim" through a tank of water. The next step in their research is to successfully test the capsule inside a [human body](#). There is no reason to believe the capsule would move differently in a human than it does in a

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