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## Health



**A tiny bead 1.5 millimetres in diameter, controlled by a magnetic field via computer, was guided down the artery of a pig 10 centimetres per second.**

### Scientists control tiny object in pig's artery

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CTV.ca News Staff

Forty years ago, an Oscar-winning film called *Fantastic Voyage* told the story of microscopic scientists injected into a man's body in order to save his life.

Billed then as the most amazing science fiction ever conceived and now, it is becoming a reality thanks to researchers in the NanoRobotics Laboratory at Ecole Polytechnique de Montréal.

"It's pretty much the same thing we are doing, but we are not using the same technology -- we didn't have a submarine with a propeller," researcher Sylvain Martle jokingly told CTV News.

The new principle is being hailed as a first in medicinal robotics.

"It is the first time to our knowledge, that anyone has been able to control a device inside the body without touching it," Professor Jean-Baptiste Mathieu said.

A tiny bead 1.5 millimetres in diameter, controlled by a magnetic field via computer, is guided down the artery of a pig 10 centimetres per second.

The entire process is accomplished using magnetic resonance imaging or an MRI machine, common in most hospitals.

Encouraged by the results, staff at the lab is trying to further reduce the size of the bead, so within a few years they can navigate inside even smaller blood vessels.

"As tiny as the bead is, it's not small enough ... the goal is to make things smaller and smaller, so small they can reach any part of the human body," Martle said.

"Here it is 1,500 microns. For us, it is huge; too big to do anything good."

The human body contains nearly 100,000 kilometres of blood vessels. As scientists like Martle reduced the size of the implants, the method could one day be used to deliver treatment to cancerous tumours, blood clots and provide better diagnosis for patients.

*With a report by CTV's Genevieve Beauchemin*

#### VIDEO

- CTV News: Genevieve Beauchemin on breakthrough 1:56

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