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Wireless System Tracks Esophageal Reflux

More 'comfortable' tool could allow doctors better testing than catheters now used

WEDNESDAY, June 20 (HealthDay News) -- A wireless monitoring system that uses electrical impulses to track esophageal reflux has been developed by U.S. researchers.

The researchers say the system may offer an easier, more comfortable method of following normal eating, drinking and other activities that may play a role in acid reflux. It was developed by doctors at the University of Texas Southwestern Medical Center at Dallas and engineers at UT Arlington.

The new system combines radio frequency identification (RFID) -- used in stores to track inventory and in identification chips in pets -- and impedance monitoring, which tracks reflux through electrical impulses.

A small, flexible RFID chip about 2 centimeters square (a bit larger than a dime) is affixed to the patient's esophagus. The chip tests for electrical impulses that signal acidic or nonacidic fluid in the esophagus and transmits that information to a wireless sensor worn around the patient's neck.

Details about this system, which is still in the test phase, were presented in late May at the Digestive Disease Week conference in Washington, D.C.

Currently, testing for gastroesophageal reflux involves insertion of a flexible catheter through the nose and down into the esophagus.

"The procedure is very uncomfortable, and, because of the catheter, you can't eat or drink the way you normally would. The test results can be biased, because you change the way you eat," Dr. Shou Jiang Tang, assistant professor of internal medicine at UT Southwestern, said in a prepared statement.

He was one of the developers of the new monitoring system.

About 19 million people in the United States have gastroesophageal reflux disease (GERD), says the American College of Gastroenterology. GERD occurs when a muscle at the end of the esophagus doesn't close properly. This allows stomach contents, including acid, to move up into esophagus and irritate it.

More information

The American College of Gastroenterology has more about **GERD**.

-- Robert Preidt

SOURCE: UT Southwestern, news release, May 29, 2007

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