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## Drugs & Devices: Stem Cell Vote

### ***Senate votes on stem cells; Diabetes' link to Alzheimer's; RFID tracks surgery tools.***

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The U.S. Senate started deliberating Monday on one of three bills aimed at embryonic stem cell research. The most contentious of the bills looks to ease restrictions put in place by President George Bush. Although the bill is expected to pass, it is believed that President Bush will veto it.

President Bush announced federal regulations in 2001 that restricted the number of human embryonic stem cell lines available for federally funded research. Any research using stem cell lines created thereafter, or research intended to create new lines, would have to be paid for with nonfederal funds.

The other bills include requiring the National Institutes of Health to back stem cell research that doesn't involve embryonic stem cells, and the banning of "fetal farms," where embryos would be created from a nonhuman uterus or from human pregnancies specifically for research.

#### **Sugar Brain**

Researchers found that people with diabetes face an increased risk of dementia and Alzheimer's disease. The study from Kaiser Permanente's Division of Research in Oakland, California, was presented at the 10th International Conference on Alzheimer's Disease and Related Disorders taking place in Madrid this week.

The researchers studied 22,852 patients with diabetes for eight years to determine if there was a connection between elevated glycosylated hemoglobin, a marker of blood sugar and an increased risk of dementia. The study found that those with very poor blood sugar control were more likely to develop dementia.

Nearly one-third of U.S. adults have diabetes or higher-than-normal blood sugar levels, according to a study from the National Institute of Diabetes and Digestive and Kidney Diseases.

Alzheimer's affects an estimated 4.5 million people in the United States. That number has doubled since 1980, and is expected to exceed 12 million by 2050. But perhaps maintaining proper blood sugar could impact such figures.

#### **Tag That Sponge**

Researchers said Monday that RFID tags could help surgeons keep track of tools and sponges during medical procedures, and therefore keep them out of the body cavity when done.

A preliminary study done at the Stanford University School of Medicine used RFID tags about the size of a penny attached to surgical sponges to locate the sponges in the body before the operation ended.

In the eight surgeries that were part of the study, doctors found all the sponges with the aid of a detection wand. The technology used in the study was developed by Pittsburgh-based startup ClearCount Medical Solutions.

Current procedures for tracking instruments and sponges involve counting before and after the surgery ends.

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Also some hospitals will X-ray patients at the end of a surgery to make sure nothing was left behind.

But errors still occur. "This risk significantly increases in emergencies, with unplanned changes in procedure and with patients that have a higher body-mass index," said Alex Macario, professor of anesthesia at the university, and lead author of the study.

It's not known for sure how many foreign objects are left in the body after surgery but some researchers peg the incidence rate to be one out of every 10,000 surgeries. It is also believed that about two-thirds of all objects left in the body cavity are sponges.

If something is left behind it can add four more days to a hospital stay. And in 2000, it caused 57 U.S. deaths.

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