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Wednesday, June 21, 2006

### **ADULT STEM CELLS BEING USED IN SPINAL FUSION AT METHODIST HOSPITAL IN SAN ANTONIO**

#### **Local Surgeon Among the First in Texas to Use New Technology**

Methodist Hospital is the first in Texas to offer a procedure in which highly concentrated stem cells aid spinal fusion surgery. The technology is important because stem cells have the ability to divide and to differentiate into other cell types resulting in a more reliable fusion for the patient. The stem cells are extracted from the patient during the procedure. (Embryonic stem cells are not used.)

Robert Johnson, MD, a San Antonio orthopedic spinal surgeon was one of the first physicians in Texas to use the new technology. He has been using it to treat patients for the last two months. The technology is especially important in healing bones that are difficult to heal. Though the technology is new to the U.S., research conducted on stem cell fusion in France has produced promising results.

The World Research Group considers disorders of the spine as one of the largest public health problems in the U.S. As the population ages, incidents of spinal fractures will likely continue to increase.

#### **THE PROCEDURE**

Lumbar fusion surgery is performed to relieve pain, numbness, tingling and weakness in the back and legs. It also can restore nerve function and stop or prevent abnormal motion in the spine. The procedure involves fusing the vertebrae together.

During the procedure, the surgeon takes a bone graft or donor bone to use in the fusion. The graft is stabilized in the spine with plates and screws. Stem cells are located in the bone marrow. Using a special needle, bone marrow is extracted from the patient's pelvis. Then the bone marrow is placed into a centrifuge that separates the stem cells and concentrates them from five to seven times their normal strength. Approximately eight cc's (cubic centiliters) of mononucleated cells, including stem cells are produced. The stem cells are packed around the bone graft and the spinal column

to promote fusion. Surgeons expect to see immediate results on first patient follow-up as well as a faster fusion.

The technology is distributed by SpineSmith, an Austin, Texas-based company.

### **STORY IDEA**

With advance notice, media may videotape or photograph Dr. Johnson performing the procedure at Methodist Hospital. Media will be able to obtain sound bites during the procedure or can make arrangements to interview Dr. Johnson in between procedures or in his office. The procedure usually takes four to five hours. The harvesting of the stem cells takes about five minutes. With advance notice, media may join the procedure in progress.

If you are interested in developing this story, please phone Shirley Wills at 822-2378 or 365-4488(cell) or JoAnn King, 575-0171 or 325-3294 (cell). For media assistance during the weekend, please phone Methodist Hospital, 575-4000, and ask for the public relations representative on call.