



DMS's Jim Weinstein is heading up a massive national study looking at surgical and nonsurgical back treatments.

## Back-surgery papers show SPORT utility

Take it from someone who's had excruciating back pain and opted to have surgery: "I made the right choice." Take it from someone who's had excruciating back pain and opted *not* to have surgery: "I made the right choice."

**Evidence:** Confused? That's not surprising. Back surgery rates vary widely across the United States, and there seems to be little evidence to support how appropriate such surgery is. Until now. Dartmouth researchers recently published two long-awaited papers revealing that patients with severe back pain caused by a herniated disk do improve after getting a lumbar discectomy—the surgical removal of part or all of the disk—but only *slightly* faster and better than people who don't get the surgery.

"The idea that back surgery rates could be different depending on where you lived . . . really caught my attention," says James Weinstein, D.O. He is chair of orthopaedics at DHMC and principal investigator on the Spine Patient Outcomes Research Trial (SPORT), which is exploring the efficacy of treatments for back problems. "We do about 250,000 to 300,000 disk surgery operations a year in the United States. I thought it would

be important for patients to actually know what the treatment outcomes are [of having] surgery versus not having surgery."

SPORT is an 11-state, multicenter, five-year, \$15-million study funded by the National Institutes of Health. The first two SPORT papers, published in the November 22 issue of the *Journal of the American Medical Association*, compare surgical and nonsurgical treatment outcomes for 1,244 patients with herniated disks. They were assigned to randomized and observational groups—760 had surgery; 484 did not. Only patients with an MRI-detectable herniated or ruptured disk in the spine, significant back pain, and severe sciatica could participate in the study. Sciatica is caused when material from the herniated disk puts pressure on and irritates the sciatic nerve, the large nerve that runs from the lower back down the leg.

**Sciatica:** "The interesting thing is that the surgical patients always did better, but the nonsurgical patients did extremely well," says Weinstein. The differences in improvements were small and not statistically significant, except for measures of sciatica severity.

Outcomes measures were based on information that patients reported at every clinic

visit: their pain level, functional level, ability to work, satisfaction with their treatment and care, and how they thought they were doing generally. Patients who had surgery got it within three months of starting the trial. Nonsurgical treatment included physical therapy, medication, and counseling.

"The most important thing that SPORT brings to bear is that patients have choice," says Weinstein. "Given a toss-up situation that's not life threatening, the patient should be empowered with this information to work with their doctor . . . to be knowledgeable about the risks and benefits of surgical or nonsurgical treatment and take their preferences and values into account when making these decisions with their doctor."

Weinstein, who is viewed as being anti-surgery by some, admits that he expected the SPORT trial to reveal no difference between surgical and nonsurgical outcomes. Many of his patients have gotten better without surgery. "I think the important thing about SPORT is that we took an independent look," he says. "I wanted our patients to know what the answer is. I didn't want it to be based on my opinion and my thoughts about treatment for herniated disk. I wanted my patients to know what the best data available—from multiple sites across the country, by very good physicians—are providing. And now we have, I think, the best possible information to share with our patients."

**Random:** Weinstein is grateful that so many people were willing to participate in a randomized trial of this sort. "Patients in SPORT really hurt. They can't walk. Their leg is on fire," he says. "To be willing to randomize in that situation, I think is an incredible credit to people who are involved in SPORT. . . . When you're hurting that bad, you just want to get better."

Two other SPORT papers—one on spinal stenosis, a narrowing of the spaces in the spine; and one on spinal stenosis with degenerative spondylolisthesis, or one or more slipped vertebrae—are expected to be published in 2007. LAURA STEPHENSON CARTER

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