Methods. The lateral dynamic radiographs of 75 normal subjects were analyzed by digitization and computer calculation. The characteristics of intervertebral positions were investigated using flexion radiographs.

The intervertebral differences of angular displacement were less than 7°, and those of translation were less than 0.6mm.
Conclusions: Tumor necrosis factor alpha is substantially expressed in disc material of symptomatic patients (surgical specimens) in comparison to samples taken at autopsy. The expression of tumor necrosis factor alpha in early fetal/infantile nucleus pulposus may indicate “physiologic” tissue disarrangement with closure of the blood vessel canals. The expression of tumor necrosis factor alpha in adult discs, in contrast, is statistically associated with disc degeneration. Its occurrence in adults of more advanced age suggests that tumor necrosis factor alpha is not involved in the initiation of disc degeneration but may be associated with further promotion of degenerative disarrangement and pain induction.
Charlotta A. Schoenburn, MPH, of the U.S. Centers for Disease Control and Prevention recently performed a massive study entitled, “Marital Status and Health: United States, 1999-2002.” In general, married adults reported better health than the unmarried.

The study confirms that back pain is common and varies somewhat by age. Of adults aged 18-44, 25.2% reported back pain over the previous 3 months. Among those aged 45-64, 31.4% complained of back pain. Among those 65 and over, 29.9% suffered back symptoms.
“Overall, after adjusting for age, adults who had never been married (24.7%) were the least likely of all the marital status groups to have had low back pain in the past 3 months.” By contrast, 28.7% of U.S.-born married individuals reported low back pain.

Of the various marital groups, divorced and separated individuals reported the highest levels of back pain. As in many back pain prevalence surveys, being poor or near poor led to a higher back pain burden. Serious psychological distress also appeared to increase the risk of back pain woes.

- Advice to rest in bed is clearly less effective than advice to stay active for patients with acute simple LBP.
- For patients with sciatica, there is moderate-quality evidence that advice to rest in bed has little or no effect on pain and functional status compared to stay-active advice.
- For patients with acute simple LBP, there is high-quality evidence that advice to rest in bed will increase length of sick leave in the first 12 weeks, compared to advice to stay active. For patients with sciatica, advice to rest in bed has little or no effect on the length of sick leave compared to advice to stay active (based on moderate-quality evidence).

• The authors conclude “Aerobic exercise in the amount recommended by consensus public health recommendations was effective in treating mild to moderate MDD.”
Charité Artificial Disc

A STURDY BACKUP
Each Charité disc consists of a sliding polyethylene core sandwiched between two plates made of durable cobalt-chromium alloy.
The United States Plunges Into Disc Replacement: Is This a Quantum Leap Forward to a Step Back?
The Back Letter, Vol.19, No.12, December 2004

In late October 2004, the FDA approved the Depuy Charité III disc for marketing in the United States, based on a pivotal randomized controlled trial comparing disc replacement to anterior interbody fusion with a BAK fusion cage.

“The study showed that 2 years after surgery, patients treated with the artificial disc did no worse than patients treated with intervertebral body fusion”, according to the FDA.

Roughly 26% of the Charité group and 38% of the BAK group failed to achieve any significant pain relief, according to FDA criteria.
Chondroitin Sulfate is Highly Effective to Relieve Low Back Pain

Researchers assess duration of a clinical response and tolerance of structum (Chondroitin Sulfate) in patients with low back pain (LBP). At the end of the first month’s treatment, structum significantly relieved pain intensity, spinal motility, increased exercise tolerance. Excellent and good responses to structum were observed in 71% patients, no response was in 29%.

Muscle Relaxant Drugs Do Not Help Acute Low Back Pain; Recovery is Actually Slower

Use of muscle relaxants was very common among patients with acute low back pain. Muscle relaxant use was not associated with more rapid functional recovery. Muscle relaxant users had somewhat slower recovery from the episode of back pain.

Maintenance Care for the Spine Reduces Low Back Pain, Disability Levels

Based on the results, the researches concluded: “This study appears to confirm previous reports showing that LBP and disability scores are reduced after spinal manipulation. It also shows the positive effects of preventive chiropractic treatment in maintaining functional capacities and reducing the number and intensity of pain episodes after an acute phase of treatment. Maintenance chiropractic care involving spinal manipulation combined with other treatment modalities (exercises, pain management program) should be investigated. Such combined interventions may have a critical influence on pain, disability, and return to work”
Manipulation and Active Care Better Than Active Care Alone for LBP

Results showed that manipulation combined with stay-active care “improved pain measured as pain during the last week and everyday function in acute and subacute cases of low back pain better than stay active treatment only”. Moreover, at 5 and 10 weeks, patients in the experimental group had less pain and lower disability rating indices than members of the reference group.
To conclude that the Charité disc is efficacious in the treatment of chronic low back pain requires a significant leap of faith – faith that degenerative disc disease is a valid disease entity, that isolated single-level discogenic pain can be diagnosed with precision, and that the narrow efficacy standards set by the FDA are sufficiently stringent to protect the interests of the general public.

Neither disc replacement nor fusion with a BAK cage has ever been proven to be superior to conservative care in a randomized controlled trial.

It remains to be seen whether these permanent implants can stand up to 40 years of wear-and-tear in the human body, given the limited follow-up period of outcome studies to date.