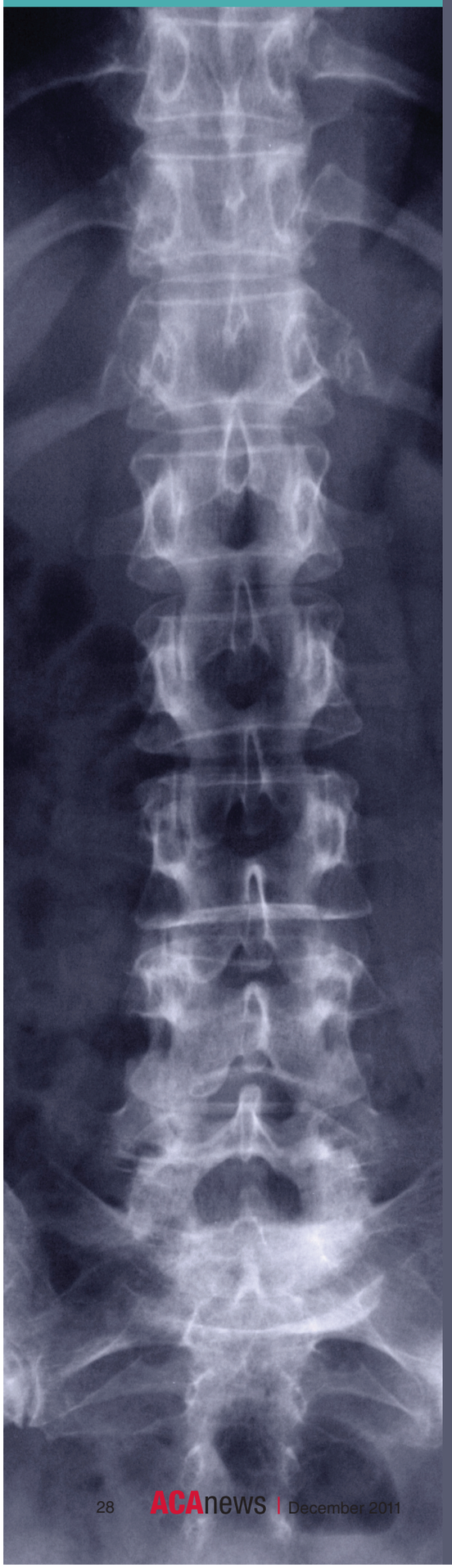

Vertebral Axial Decompression

By Rebecca Jones

Almost two-thirds of American chiropractors—63.7 percent—report that they use a flexion/distraction spinal manipulation technique at least occasionally, according to a 2009 survey done by the National Board of Chiropractic Examiners.

That's a statistic that leaves Dr. James Cox, the doctor who developed the Cox Flexion Distraction and Decompression Chiropractic Spinal Adjustment technique, shaking his head. He's been certifying doctors in the use of his technique since the 1970s, and so far, about 3,000 have taken the required coursework to become certified.

"That tells me there are an enormous number of doctors out there who buy some kind of table that allows them to do this thing called 'decompression,' but as far as I know, they've not been really trained in it, and that bothers me," says Dr. Cox.

Dr. Cox is author of the textbook *Low Back Pain: Mechanism, Diagnosis, and Treatment* (Lippincott, Williams and Wilkins), the seventh edition of which is now being published. The textbook outlines the research, application and clinical outcomes of flexion distraction and decompression spinal adjusting. He notes that federally funded research has identified evidence-based practices—if doctors would only follow them.

Dr. Cox is not alone in his unease. Since a variety of decompression tables hit the market in the 1980s, spinal decompression—sometimes called vertebral axial decompression, or VAX-D—has become a popular adjunct to many chiropractic practices. Thousands of doctors and patients swear by it as a successful, non-surgical alternative to treat lower back pain caused by herniated discs, degenerative disc disease, sciatica, posterior facet syndrome, lumbosacral strain and radiculopathy, among other things.

Trouble is, the jury is still out as to whether the technique—at least as practiced by many DCs—is really effective for all the patients on whom it is used. Some researchers view it as no more than a modern version of old-fashioned lumbar traction therapy, which has been proven to be of limited value.

"I really think the value in the equipment is based on the clinical expertise of the doctor and the actual application of the technology," says Dr. Jim Lehman, associate professor of clinical sciences at the University of Bridgeport College of Chiropractic, who has researched spinal decompression. "If the clinician hasn't made the correct diagnosis or used the proper technique, the treatment won't be successful."

Spinal decompression works like this: Spinal discs are filled with a gelatinous fluid that sometimes leaks out, potentially causing great pain. Decompression therapy, like traction, uses weights to pull the discs slightly apart. This causes negative pressure inside the discs, creating a vacuum that sucks the gelatinous fluid back in.

Decompression Devices

The simplest decompression device may be inversion boots, which allow the

wearer to hang upside down, thus relieving pressure on spinal discs. Obviously, that's not an option for many patients.

Linear decompression tables permit the patient to lie on the table, secured by straps, belts or padded bars. The table then moves underneath the patient, applying traction along the long y-axis of the body.

Multi-function tables permit practitioners to combine decompression with other spinal adjustment techniques. They're more complicated because such tables, in effect, become extensions of the DC's hands, applying both decompression and movement of a joint through a range of motions.

It is the former type of decompression therapy—the kind where patients simply lie on a table—that has drawn the most criticism.

"I consider these to be the least sophisticated units as far as their clinical value, yet they're very expensive," says Dr. Lehman. "Some of these units cost up to $150,000, and even come with built-in televisions. But what the manufacturers sold was mostly a lot of hyperbole."

That hyperbole—including claims of success rates in excess of 90 percent—inevitably led to trouble. To justify the high cost of the decompression tables, doctors were encouraged to charge hefty fees for the treatments, often in the neighborhood of $5,000 or more for a package of 10 to 20 treatments.

Unscrupulous Tactics

Insurers balked at paying such reimbursements. Some doctors wound up going to jail for fraud when they improperly coded insurance claims, and others were disciplined for misleading marketing of the devices. Some manufacturers fell afoul of government regulators for unsubstantiated marketing claims.

Many of these companies are now out of business or have changed their marketing strategies, but the damage has been done. Units sold by these companies are still being used, and the taint of unscrupulous practice lingers.

The lack of hard clinical evidence to corroborate marketing claims is also problematic. The devices may, in fact, do a great deal of good and bring relief to suffering patients. But without the randomized clinical trials to back up those assertions, and to identify specifically the types of conditions most likely to be helped by the therapy, decompression will never become more than a fringe fad in a profession increasingly devoted to evidence-based practices.

Clinical Evidence

Dwain M. Daniel, DC, former professor of research at Parker University in Dallas, now an independent researcher, reports that only one small randomized controlled trial and several lower-level efficacy studies have been performed on spinal decompression therapy, and the quality of these studies is questionable.

"According to current literature, we just don't know which patients do best with this therapy," he says. "I'm sure individual doctors can triage their patients, but in the literature, there's not a great deal of work that's been done in that area."

Jeffrey Hebert, DC, senior lecturer on the faculty of health sciences at Murdoch University in Perth, Australia, has done extensive research in nonsurgical treatments for spinal disorders, and he is even more adamant about the lack of evidence. He blasts manufacturers that tout success rates upwards of 90 percent without the clinical evidence to back up those figures.

"If this approach is as effective as manufacturers claim, why is high-quality research in this area—large, robust, randomized clinical trials—not being done?" he asks. "Many of these manufacturers have been in business for years and years. If they took even a small fraction of the money generated through sales of these tables and put it toward clinical research, I think it would go a long way toward resolving many of these controversies that have surrounded spinal decompression. The burden of evidence sits with the proponents of these therapies, and it's time that they stop making unsupported claims and put their money where their mouths are."

Insurance Reimbursement

Given the lack of randomized clinical trial results, major insurers will not reimburse DCs for decompression therapy as a stand-alone treatment, though they will reimburse if it is used as part of a hands-on chiropractic adjustment. That's what Dr. Cox and makers of some other multi-function tables advocate.

"There's a big difference between chiropractic spinal manipulation done under decompression and someone who just lays on a table and gets stretched," Dr. Cox says. "When you bill someone for that—and some doctors try to get $5,000 out of people for 20 treatments—I don't blame insurance companies for not paying. I wouldn't pay them either."

"Linear decompression devices, in which all patients are treated in the same position, is indistinguishable from historic traction devices, and have predictable lack of results," says Dr. David Cuccia, inventor of ExtenTrac, a multifunction table. "It doesn't surprise me that most patients don't respond to linear distraction. It's placing patients in the proper position, being hands-on while administering treatment, and using unique, evidence-based protocols that makes the difference."

And therein lies the great mystery: What causes the patients who do respond positively to this therapy to get better? Is it the mere fact of decompression, of lowering pressure inside the disc and of the spinal fluid retreating back into the discs where it belongs? Or is it something else the DC did in addition to the decompression?

Dr. Cuccia is convinced it's the latter: "As chiropractors have been saying for 100 years, it's moving the bone, moving the joint," he says. "It's not the lowering of disc pressure that has been proven to make the patient better. It's the other important therapeutic techniques you do while under the effects of decompression that are important. It's the movement of the legs, the pressure applied to the spine, the angles. Imagine the synergy of manipulating the joint with simultaneously applied decompression."

As far as insurance reimbursement is concerned, Dr. Cuccia notes that DCs have always "faced a strong headwind" from both the medical and insurance communities, and that insurers routinely pay for costly medical procedures with no more guarantee of success than spinal decompression offers. "Chiropractors should be careful not to quickly judge decompression, lest they condemn themselves and their humble beginnings first," he says. "I believe with improved decompression technology and the technique of multi-directional decompression, it will help improve the competitiveness of the chiropractic profession, as it needs to adopt new, effective methodologies of treatment." ■