



## Brace Yourself: An Old Remedy For Back Pain Makes Comeback

With growing evidence that most medical procedures for back pain are largely ineffective, patients are finding relief from a surprisingly simple treatment.

The back brace, re-engineered to make it more comfortable and effective, is making a comeback. A handful of new braces have been introduced in the past several months, with more expected this year. The braces are designed to ease the pressure on spinal disks that are often the source of lower-back pain.

The new braces are a far cry from the heavy and restrictive back braces on offer a decade ago. The old models were designed to restrict movement and immobilize the back. Not only were the braces impractical to wear, they often led to severe weakening of abdominal muscles, creating a slew of new health problems.

The new models are made of lighter-weight, flexible materials. Instead of immobilizing the back, the new braces are designed to "unload" the pressure on a disk while still allowing patients to maintain a normal range of movement.

Such innovation is helping spur renewed interest in braces. Physicians are becoming increasingly disillusioned with current treatments for the 20 million people affected by back pain each year in the U.S. Injection treatments, disk-heating procedures and even invasive back fusion surgery have posted disappointing results in clinical studies as well as the real world. Although the procedures are still a good option for certain patients, doctors increasingly believe many more patients could benefit from trying less-invasive options, like braces, first.



**The Disc Unloader** shifts back support to the abdominal muscles.

"Because we have a lot of 'failed-back syndrome' and people who don't do well, you really want to exhaust nonoperative treatments," says Daniel Lee, orthopedic spine surgeon in Las Vegas.

While the back braces aren't a cure-all either, the devices do provide patients with temporary relief from often debilitating back pain, allowing many patients to return to work and family duties. The respite from pain helps interrupt pain signals and allows patients to begin physical therapy and muscle-strengthening exercises.

Nicholas Pellegrino, a 72-year-old semi-retired mortgage banker, began wearing a new brace just over a week ago. Before the treatment, the Lynbrook, N.Y., man found it difficult to even take a few steps. "On a scale of one to 10 for pain, I was a 10," says Mr. Pellegrino. "After the brace, I'm about a four. It's difficult to put it into words, I feel so much better."

The brace used by Mr. Pellegrino, the Disc Unloader from Corflex of Manchester, N.H., wraps around the abdomen and is cinched tight using Velcro straps. The two-pound brace eases the

pressure on the disks by shifting the burden of back support to the abdomen. The brace has been shown to reduce disk pressure by 41%. Mr. Pellegrino says wearing the snug brace isn't entirely comfortable and makes him look about 10 pounds heavier, but it's a small price to pay to ease his back pain.

The Unloader brace and others like it generally are worn for a few hours at a time, depending on how much relief is needed. They are available only by prescription, because long-term use can still lead to some weakening of the abdominal muscles. Patients must do daily abdominal strengthening exercises. Mr. Pellegrino has begun pedaling a stationary recumbent bike to boost his strength.

Doctors say that in addition to providing short-term pain relief, use of the braces can help break the psychological cycle of back pain, which often leads to depression and inactivity, which in turn, exacerbates the back problem.



While the **Orthotrac** shifts the burden to the hips.

"It's a crutch to reduce the pain and to get people into sound exercise regimens," says Vijay Vad, sports-medicine specialist at Hospital for Special Surgery in Manhattan who designed the Corflex brace and receives royalties from sales.

The Orthotrac Pneumatic Vest, made by **Orthofix International** of Huntersville, N.C., also "unloads" pressure from the disk. But instead of shifting back support to the abdomen, the Orthotrac device introduced last year transfers the weight to the hips. The vest, which weighs about five pounds, uses an inflation device to push "lifters" up against the rib cage and down against the pelvis. It sounds odd, but the gentle pressure is likened to a tight belt, and patients say it's mild compared with the discomfort of back pain.

According to early clinical trial results presented to the North American Spine Society in December, patients using the Orthotrac device reported significant pain relief compared with an older-style brace.

"The vest is a device that allows a person to become more active around the house and even at work," says John J. Triano, co-director of conservative medicine at the Texas Back Institute in Plano who is leading the trial. "One of the problems with back pain is that people become afraid to move."

Typically, a patient is a candidate for the new braces if the pain is caused by pressure on spinal disks -- the kind of pain that is usually relieved by lying down or by the weightless effect of water in a swimming pool. Patients with other types of back pain or who can't stand up straight because of the pain, may not be good candidates for braces, which typically are covered by insurance.

Benedetta Riccardo, a 46-year-old retired baker from Utica, N.Y., has suffered for three years from herniated disks. In June, she began wearing the Orthotrac device. She's not entirely pain-free, but no longer needs pain pills. She concedes the device is a bit awkward, but worth it. "At least I can pick up my grandchildren, which I couldn't do before," says Ms. Riccardo. "I can walk a little bit. I can go shopping, which I couldn't do before. I can do normal things."