



HEALTH MATTERS

An option for total disc replacement

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The goal is to eliminate the disc that is generating pain while restoring the disc space height and maintaining the range of motion of that particular segment.

According to the National Institutes of Health (NIH), low back pain is second only to colds and flu when it comes to spurring on patients to visit their doctors. It has been estimated that up to 80 percent of the population will suffer from clinically significant low back pain in their lifetime.

Low back pain, which can be acute or chronic, may originate from any number of locations, including the spine, muscles, and nerves. Often the pain may radiate from upper portions of the back, a hernia, or problems in the testicles or ovaries.

Low back pain can result in a range of symptoms, from a tingling sensation to a dull ache to sharp pain. While it is difficult to pin point the exact cause of a person's low back pain, the NIH identifies the following possibilities:

- Small fractures to the spine from osteoporosis.
 - Muscle spasm (very tense muscles that remain contracted).
 - Degeneration of the disks.
 - Poor alignment of the vertebrae.
 - Spinal stenosis (narrowing of the spinal canal).
 - Strain or tears to the muscles or ligaments supporting the back.
 - Spine curvatures such as scoliosis or kyphosis.
 - Other medical conditions like fibromyalgia
- (characterized by widespread pain in joints, muscles, tendons, and other soft tissues).

Sometimes low back pain may be triggered by lifting something too heavy, sitting in certain positions for too long, or standing on your feet for hours. Often a single movement, such as bending over or reaching for something, can cause immediate pain. Regardless of cause, low back pain typically involves spasms of the large, supportive muscles alongside the spine.

The vast majority of low back pain will improve with appropriate non-operative treatments that involve physical therapy, anti-inflammatory medications, chiropractic manipulations, and acupuncture.

Taking steps to help yourself as soon as you feel pain is the best way to help your body heal.

Many people will feel better within one week after the start of back pain. After another four to six weeks, the back pain will likely be completely gone. To get better quickly, the NIH recommends that you follow these steps as soon as you feel pain: Calm your symptoms and reduce inflammation by stopping normal physical activity for the first several days. Apply ice for the first two to three days, followed by heat thereafter. Over-the-counter pain relief treatments are also useful.

While many people mistakenly believe that rest is best for back pain, the truth is that bed rest is NOT recommended for any longer than one to two days.

Should your low back pain require more aggressive non-operative pain management, your physician may recommend specialized injections that alleviate pain as well as deliver medicine to the particular source of the pain.

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Oftentimes, one or more lumbar discs (the cushions between vertebrae) have significant degeneration causing a



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**By Haim D. Blecher, M.D.,
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constellation of symptoms that fail to respond to non-operative management.

The vast majority of operative treatments aimed at addressing the back pain involve some type of a fusion procedure where the degenerated disc is removed and the vertebrae are essentially welded into one. That is currently the gold standard for operative management of degenerative disc disease that has failed non-operative management.

The results have been very good in the appropriately selected patients. Numerous studies report upwards of 80 percent success rates and similar patient satisfaction rates.

Total disc replacement — a relatively new procedure in the United States that has been under FDA investigation for treatment of degenerative disc disease — has made its way into United States FDA trials about four years ago. Total disc replacement has been performed in Europe for over 20 years and it only applies to a certain subpopulation of low back conditions.

Haim D. Blecher, M.D., fellowship-trained spine surgeon at University Medical Center at Princeton, was the primary author of two research projects on the total disc replacement that gained international recognition at the Spine Arthroplasty Society (the premier international disc replacement society) in Vienna this year.

Dr. Blecher explains that the goal of this procedure is to eliminate the disc that is generating pain while restoring the disc space height and maintaining the range of motion of that particular segment.

It is important to maintain the lower back's flexibility and range of motion while reducing the stresses on neighboring segments of the lower back.

Follow-up on the total disc replacement has been promising, notes Dr. Blecher:

“We found that the patients' function and pain improvement are at least the same if not better than the comparative fusion procedures. The disc replacement prosthesis maintains its range of motion, and at three-year follow-up in U.S. trials, there does not appear to be any added stresses on the adjacent discs. It is imperative that the correct localization of the source of the pain is obtained. It is equally important to make sure that appropriate patient selection is undertaken. This procedure offers patients a viable option to the existing fusion treatments.”

Of course, extended follow-up will shed more light regarding the long-term benefits of disc replacement over fusion. One of the disc replacements that was under FDA trials was just approved in October.

A select group of surgeons, including Dr. Blecher, should be able to start offering this to the general public shortly.