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## **Can Herniated Discs Reduce in Size or Resorb?**

By David BenEliyahu

In the past, it was believed that once a patient acquired a herniated disc, it was permanent. However, recent research with MRI and CT outcome studies has documented that this is fallacy. Herniated discs in the cervical and lumbar spine have been shown to not only reduce in size after a period of conservative care, but in many cases regress and disappear upon reimaging.

Numerous medical studies and some chiropractic studies have been performed and published. In recent studies by Mochida et al., both cervical (CDH) and lumbar (LDH) disc herniations were studied in pre- and post-MR imaging conditions. In CDH cases, they demonstrated that in 40% of the time, there was a reduction in size or regression. In LDH cases, they demonstrated about a 60% reduction or regression in the size of the herniation. They also found that the larger the extrusion or sequestration, the better the rate of regression. They concluded that disc regression or resorption depended upon size, location and the phase of the injury. Discs tended to reduce in size early on after onset, and more so in the lateral or sequestered type of herniation than smaller or subligamentous herniations. It is interesting to note that most patients in Mochida's study did well clinically with conservative care regardless of the MRI outcome.

In a different study, Mochida found that there is a large percentage of macrophages in excised herniated disc material, as well as evidence of neovascularization. As such, the reduction in size is most likely due to phagocytic or macrophagic digestion, since the body attacks the disc fragment as a foreign protein, much like any other antigen. Immunohistochemistry studies are being conducted at this time to elucidate the pathophysiology of disc herniation and regression.

In a similar study of LDH outcome by Bozzao et al., 63% of the patients treated nonsurgically with epidurals, medication, etc., demonstrated disc resorption upon repeat imaging. In a prospective study of patients with LDH, Ellenberg et al. documented that patients with CT evidence of herniated discs and EMG evidence of radiculopathy had a 78% rate of disc reduction. Matsubara found in a similar study that medical

care involving medication, physiotherapy, traction and epidural steroid injections resulted in disc regression in 60% of the cases. In another prospective study, Bush et al. showed disc regression in 12 of the 13 cases studied. The period of care averaged six months, with a range of 2-12 months for good clinical and anatomical MRI outcome.

In one of the few chiropractic care MRI studies, I published a prospective case series of 27 patients with either CDH or LDH. I obtained pre- and post-chiropractic care MRIs and found that in 63% of the cases, there was either a reduction in size, or the disc herniation resorbed completely. I also found that 80% of the cases had good clinical outcomes, and 78% of the patients returned to their preinjury occupations. Chiropractic care was shown to be amenable to the clinical management of the disc herniation not only on a clinical level, but on an anatomical level as well. In a study by Cassidy et al. on the effects of side posture manipulation on CT-documented herniated discs, the authors found that 13 of 14 patients had good clinical results. Of those, about half had a decrease in the size of the herniation on repeat CT followups.

### **Case Report**

In a recent case that I treated, a 48-year-old female patient presented with acute low back and associated leg/extremity pain into the foot. She had evidence of radiculopathy with diminished sensation at the L4/5 dermatomes, and positive root tension signs with a positive straight leg raise at 35 degrees on the left and 45 degrees on the right. DTRs were within normal limits, and there was no significant motor weakness. An MRI of the lumbar spine revealed a large focal disc herniation centrally and to the left.

The patient began treatment on a three times per week schedule and was treated with lumbar flexion/distraction, interferential current and microcurrent delivered by pads and probes. Microcurrent therapy was combined with regular interferential therapy and helped reduce pain and increase circulation to enhance the healing process. Microcurrent was then delivered to the LS spine and lower extremity by probes, stimulating the acupuncture points of the bladder meridian as well as stimulation along the affected dermatome.

The microcurrent therapy helped afford the patient pain management and reduced the healing period. The patient improved significantly with the above mode of care, and repeat MRI imaging showed a reduction in the size of the herniation.

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