

DMR Study

Decompression, Mobilization, & Rehabilitation

Purpose:

To study the effects of a non-surgical treatment program of Decompression, Mobilization, and Rehabilitation (DMR) for disc herniations and bulges as well as vertebra slippage conditions. Treatment is *focused on restoring patient mobility, alignment, and stability.*

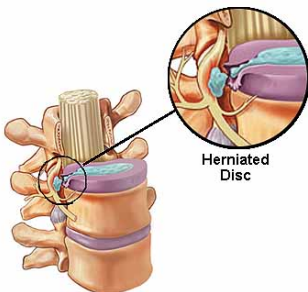
What Conditions does it Treat?

The DMR protocol is aimed at those patients diagnosed with a disc lesion, such as a herniation or bulge, or those patients with diagnosed slippage of a vertebral, or listhesis.

A disc is like a jelly doughnut, the outside layers are fairly solid, the center, however, is filled with a more fluid-like substance called the nucleus pulposus. This nucleus is under a great deal of pressure to allow smooth motion between each of the spinal vertebra. When the outer fibers of the disc become weakened, it causes a deformity to the shape of the disc. A **disc bulge** is a generalized expansion of the borders of the disc, like squeezing the jelly doughnut so it becomes flatter and wider. This type of condition is very common and usually not symptomatic in most patients.



The second condition is called a **disc herniation**. This condition is caused by an actual tear in the outer fibers of the disc, allowing the nucleus (jelly center) to leak out. Most commonly the nucleus will leak out into the spinal canal, where your spinal chord is located, or to the side, where the nerves exit the spinal chord. Nerve tissue is highly sensitive to changes in the tissues surrounding it. The herniated disc material (nucleus) can cause irritation of the nervous tissue as well as physically pressing on it and flattening the nerves or the chord. This kind of nerve irritation or damage can cause symptoms such as numbness, tingling, burning sensations, or muscle weakness in the arms or legs. This condition is often the result of an injury, most commonly following heavy lifting or bending and twisting. A disc herniation often results in tremendous back pain or neck pain due to the injury and irritation to the spinal chord and nerves.



The final condition is called a **listhesis**, which simply means slippage. This is a condition in which the vertebra slips forward or backwards, out of alignment with the rest of the vertebra. This will put traction on many structures, including the disc. If the degree of slippage is great enough, it can even put pressure on the spinal chord and narrow the exit for nerves out of the spinal chord. This can cause similar symptoms as the disc herniation or be completely symptom free.



What is Included in Treatment?

Treatment includes chiropractic adjustments to improve spinal mobility and alignment. Physical Therapy sessions including mechanical spinal decompression along with adjunctive therapies including electrical muscle stimulation, cryotherapy, cold laser therapy, stretches, and strengthening exercises will be focused on restoring stability to the spine. Nutritional supplements will also be included to enhance tissue healing and repair.



The DMR protocol is to be completed over a 10 week period. During this time participants will have three appointments per week for the first four weeks, which will then decrease to twice per week over the following six weeks.

What Results can be Expected?



Every person is different and so is their body and condition. There are no guaranteed results in health care, because each person is unique. The DMR protocol however is easily tailored to meet each individual's needs and help each of them to attain the best results possible.

Each patient is evaluated via MRI before and after treatment. They are also asked to complete a short, 11 question survey regarding how the pain of their condition is limiting their daily function. This survey is called the Oswestry Disability Index (ODI) and scores range from 0% (no disability) to 100% (completely incapacitated).

The preliminary study looked at 25 patients, who presented with low back pain. Of these patients, **100% reported a decrease in ODI scores**, indicating restored function. On average, their degree of **function increased by 50%**. In addition 72% of patients had a reduction in the number of conditions present, as seen on MRI.



Some of the patients presented right away or within 8 weeks after injury (acute), while others had had pain for a long time, 9 weeks to 10 years (chronic). Of those patients who came in for treatment **within 8 weeks of injury, 100% had a decrease in the size of their disc herniations**. On average their disc herniations decreased by 52.5%, which means that the herniated nucleus was no longer pressing and irritating their nerves. This dramatic improvement was also exhibited by a **67.9% increase in function**, as demonstrated by ODI.



Of those patients that came in for treatment after having **symptoms for a long period of time, 100% saw an improvement** in ODI scores. On average, these patients experienced a **45.2% increase in function**. The MRIs also showed that 26.67% of these patients had a decrease in the size of their disc herniations.

Conclusions

The DMR protocol has demonstrated a **high degree of efficacy** in restoration of function following treatment of disc herniations, disc bulges, and vertebral listhesis. The study currently shows that the treatment is **most effective when completed soon after injury**, though patients with *chronic conditions also show an increase in function* following treatment, it is to a lesser degree.



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