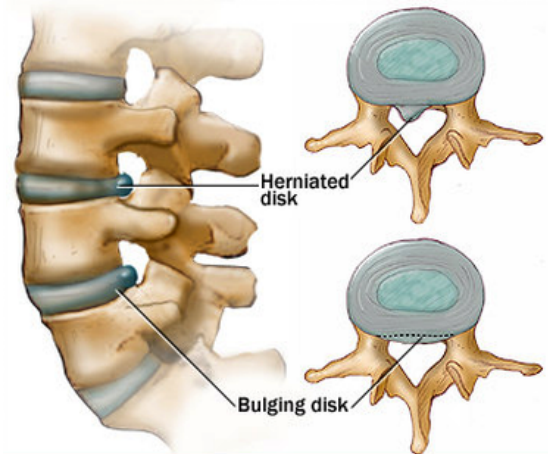


An intervertebral disc serves as a cushion between each of the vertebrae in the spinal column. The discs have a strong outer layer of collagen fiber that provides support (the annulus fibrosus) and a gel-like center that provides the cushioning (the nucleus pulposus).

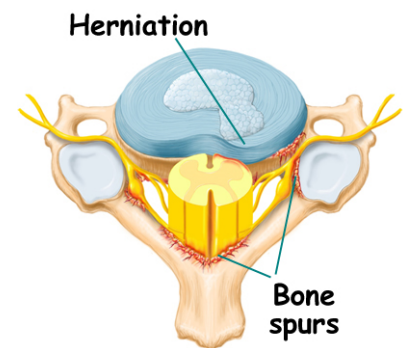
A bulging disc occurs when the nucleus pulposus loses its structural integrity but remains within the annulus fibrosus. A herniated disc occurs when there is a tear in the annulus fibrosus causing the gel-like substance to leak through. The bulged or herniated disc could cause abnormal pressure against the spinal nerve, and a patient may experience a range of symptoms including pain, numbness, tingling, burning, and weakness in certain areas depending on the location of the disc. In some cases, a patient may experience severe pain even in the absence of nerve root compression due to the nucleus pulposus releasing inflammatory chemical mediators.

The lumbar region of the spine is the most common for disc herniation with more than 90% located in the L4-L5 or L5-S1 regions. Although the main causes of a bulging and herniated disc are mechanical stress and physical injury, the disc degeneration has often occurred before hand rendering the disc more susceptible to any extra mechanical overload and more vulnerable to become bulged or herniated.



Cause of Disc Bulging and Herniation - Imbalance of Nutrient Supply and Demand

The nucleus pulposus undergoes biomedical and phenotypic changes during aging and degeneration. For optimal function and survival, disc cells require a sufficient supply of nutrients and adequate removal of metabolic waste. Cells in the nucleus pulposus and the inner annulus fibrosus are often exposed to suboptimal microenvironments with low oxygen tension, limited glucose availability, relative low pH from lactic acid buildup, and high metabolic waste accumulation. Limited oxygen supply creates an avascular environment, ATP production from mitochondrion respiration was inhibited and disc cells predominately rely on glycolysis for energy production, which requires glucose although glucose supply is also limited and produces excessive amount of lactic acid. Low supply of nutrients and a decrease in pH thus affecting the ability of disc cells to synthesize and maintain the disc extracellular matrix and leads to disc degeneration.



One cause of reducing the nutritional supply is the calcification of the cartilaginous endplate, which is acting as a barrier of nutrient transport. Such calcification can be due to a loss of function of the matrix Gla protein caused by under carboxylation of the matrix Gla protein. Carboxylation of the matrix Gla protein in the chondrocyte is a Vitamin K dependent process. Liver produce bile which facilitate Vitamin K absorption. A liver deficiency can cause Vitamin deficiency and lead to under carboxylation of the matrix Gla protein.

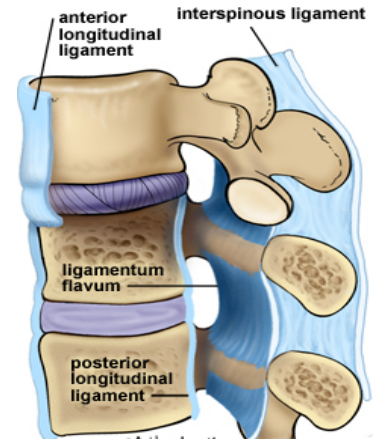
Another factor affecting the nutritional supply is vasoactive drugs such as **Norepinephrine** that obstruct blood supply to the vertebral column or the capillary beds of the endplate. Post-contrast MRI studies of human intervertebral discs found that signal intensity increased inside the disc after administration of vasoactive drugs.

Increased cellular demand can also cause nutrient depletion. An increase in cellular consumption can be caused by cytokines and increased growth factor levels. Moderate levels of growth factors are essential for maintaining a healthy disc. Growth factors, such as basic fibroblast growth factor (bFGF), transforming growth factor (TGF) and insulin-like growth factor (IGF), stimulate the chondrocyte or fibroblast to produce more matrix and inhibit the

production of the matrix metalloproteinases (MMPs). Cytokines, such as interleukin-1 (IL-1), interferon (IFN), and tumor necrosis factor- α (TNF- α) inhibit the synthesis of the matrix and promote the production of MMPs. These cytokines are produced by macrophages which enter the disc in response to injury. Macrophages also secrete superoxide (O₂⁻), which can degrade hyaluronic acid and proteoglycans, causing them to disaggregate, and can inhibit chondrocyte proliferation and synthesis. Upon loss of proteoglycans and an increased permeability of the matrix in degeneration increased levels of growth factors and cytokines infiltrate, affecting cellular metabolism and the balance between nutrient supply and demand causing the disc degeneration.

The effects of depleted nutrients and increased metabolites have a cumulative detrimental effect on survival of cells in the intervertebral disc as well as on the integrity of the disc matrix. The imbalance can fall to critical levels causing the disc degeneration. Such degeneration can reach a level that the disc can become very fragile and easily become herniated or bulged even under a normal load.

The ligaments including the Ligamentum Flavum, the Anterior Longitudinal Ligament and the Posterior Longitudinal Ligament are also important elements of the spine that hold the whole structure together. These ligament also rely on diffusion for nutrient supply. When the disc nutrients are under supply, the ligaments are also affected. Many herniated and bulging disc patients may also have chronic ligament injuries. Patients may still experience pain and muscle spasm in some case after the disc problem have been successfully treated.



Wellness Recommendations

The WHITEE Patch and LC Balancer are recommended to increase the supply of nutrients to the disc to restore the disc structure, reverse disc degeneration, and repair the disc damage due to budging and herniation. The WHITEE Patch contains herbs that operate synergistically to increase local blood flow in order to enhance nutrient supply and cellular activity for disc regeneration. Increasing the nutritional supply to the site of degeneration will accelerate the healing mechanism necessary for recovery. The WHITEE Patch also enhances the lymphatic circulation to remove metabolic waste from necrotic tissue such as lactic acid. The LC Balancer functions to open the smallest blood vessels to enhance whole body microcirculation and accelerate healing. The enhanced microcirculation also improves nutrient absorption from the digestive tract to assist in healing and combat the aging process.

For patients with kidney deficiency, the Xcel is also recommended. The Xcel formula operates to ensure that any additional metabolic waste is efficiently processed out of the blood circulation through improved waste removal in the kidneys. For patients with liver deficiency, the Brown Formula improves liver structure and function to return bile production to normal levels and thus restoring normal Vitamin K metabolism which helps the carboxylation of matrix Gla protein to remove the calcification.

Bulging Disc – 1 Month to 3 Months Program

The wellness recommendation includes the WHITEE Patch and the LC Balancer. A 1 month program (6 WHITEE and 4 LC Balancers) is recommended for mild to moderate conditions. Chiropractic adjustments are encouraged during the program. For severe conditions where the disc is on the verge of a rupture), a continuous 3 months program is required (see herniated disc).

Herniated Disc – 3 Months Program

The wellness recommendation includes the WHITEE Patch and the LC Balancer. A continuous 3 months program with 6 WHITEE and 4 LC Balancers each month is recommended. Patients should notice about 50% reduction of pain after the 1st month. After the 2nd month, patients may experience 75% symptoms reduction. With a continuous 3 months program, patients can achieve a sustained reduction of pain. Patients may feel intermittent pain spikes at the beginning of the program due to a mix of healing mechanism and increased nerve sensation. The pain should subside within 1 week.

Spinal ligament injury – 4-6 weeks

If there is also ligament injury, the wellness recommendation includes the WHITEE Patch, FASTT Patch, and LC Balancer. It is recommended to rotate the use of FASTT and WHITEE Patch.

Usage Information:

WHITEE Patch
FASTT Patch

- Keep the patch on for 48 hours (2 days) and take a 24-hour break before applying the next one
- Avoid using ice, ice will slow and interrupt the healing process.
- A heating pad is helpful to dilate the blood vessels of the muscles.
- Use vegetable oil to remove possible herbal residue on the skin.
- Use Aloe Vera Gel if there's skin irritation or use Bitter Formula.
- Use Oxi-Clean or Biz to remove stains from clothes.

Medium Patches	Large Patches
1 or 2 Discs Cervical Discs Thoracic Discs	More than 2 Discs Lumbar Discs

LC Balancer 1 capsule, 3 times a day

- Patients with pre-existing gastrointestinal sensitivity may experience healing pain such as a stomach ache or loose stool. Symptoms generally subside within 1 week.
- Patients who take high dosages of vitamins and minerals should reduce them to a minimum dose as the LC Balancer improves the absorption and can cause an overdose. Symptoms of vitamins or minerals over dose include agitation, restlessness, metallic taste, flu-like symptoms, feeling of depression, or high blood pressure.

For Additional Metabolic Waste Removal:

Xcel 2 capsules, 3 times a day

For Enhanced Vitamin K Absorption:

Brown 3 capsules, 3 times a day

Case Studies

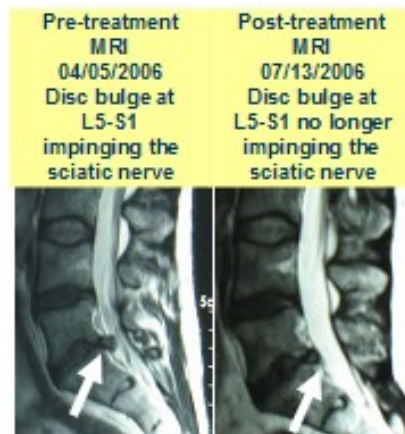
Case 1: Successful Reduction of Bulging Discs

Charles Jewett, D.C., Portsmouth, Ohio

A 52-year-old male came in with 2 central bulging discs at L2-L3 and L5-S1 regions. The patient had severe pain and was unable to stand for longer than 1 hour.

Dr. Jewett recommended the WHITEE patches and LC Balancer. After using the products for only 2 weeks, he was able to go walk around the mall and was able to withstand being upright a lot longer. After 1 month, he felt great improvement in his symptoms and experienced a significant reduction in pain.

After completing 3 months of the program, the MRI results showed that the discs were no longer impinging the nerve.



Case 2: Successful Resolution of a Herniated Disc

Roch Parent, DC, Canada

A male patient, 43 years old, suffered from low back pain due to a herniated disc. Surgery had been performed once at L5/S1. Unfortunately, the patient still complained about neuritis in his hips and legs (mostly on the right side). He had permanent and severe pain (9 out of 10) with spasm.

Dr. Parent applied a combined treatment program composed of herbal remedies (12 large WHITEE patches and 3 bottles of LC Balancer) as well as chiropractic work and rehabilitation exercise (e.g. stretching) for a total length of six weeks. After two sessions per week during the main program the patient continued on preventive maintenance (once a month).

The results turned out great! The pain level was reduced to 1-3 out of 10 (before 9) depending on how long the patient moved around for. He once had a constant pain that was no longer experienced. Due to the increase of local and systemic blood flow from the products, the patient's mobility had increased by 75%. Preventive maintenance once a month has sustained the results ever since.

Case 3: Successful Herniated Disc Resolution

Andrew Lowe, NP, United Kingdom

A 45-year-old women came to me with a herniated disc. She had undergone two back operations and was anxious to avoid a third. She was in constant pain and her consultant had suggested yet another

surgery. We started her on the Wei Laboratories herbal program which included the WHITEE Patches and LC Balancer. After four weeks, she was able to reduce her reliance on painkillers.

Six weeks into the program, she was able to stop using painkillers completely, and she also no longer needed the Wei Laboratories products. Speaking with her afterward she said she was now 98% pain-free and was able to get on without any further solutions.

Case 4: Healing of Bulging Disc Using WHITEE Patches and LC Balancer

Marco Cazares, DC, CA

A 26-year-old female from Spain, presented with acute low back pain radiculitis into lower extremities, and severe limited range of motion in lower back. Patient slept semi-seated with lots of pillows and was under heavy medication for pain and swelling. She was scheduled for surgical intervention for a 9.5 mm disc protrusion with inferior migration into the spinal cord. An MRI study with NCV confirmed the pathology.

Patient postponed surgery to attempt alternate care with spinal decompression with Wei Laboratories WHITEE Patches and LC Balancer offered in my clinic. After thorough evaluation and explanation of treatment options, benefits and risk factors involved, the patient consented to conservative therapy of 6 WHITEE patches and 2 LC Balancers; taken at one teaspoon three times per day for fourteen days and continued use of WHITEE patches for three weeks. Patient also had spinal decompression daily for ten days using Antelgic Track.

Patient stated she had decreased symptoms of pain from 9 out of 10, to 5 out of 10. After two weeks, patient reported decrease of pain from 5 to 3 of 10, with tingling and numbness decreased by 75%. Following four weeks of care, the patient reported pain symptoms at 1 out of 10 with minimal tingling and numbness. The patient regained total range of motion following six weeks of care. The patient reports no back pain with slight tingling in right ankle but she has returned to normal daily activities. Upon returning to her Neurologist, the patient was re-examined and new MRI finding showed a healed disc protrusion. Her Neurologist wondered where the bulging disc went.