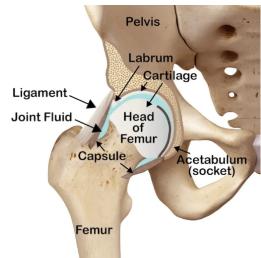


The hip joint is the junction where the hip joins the leg to the trunk of the body. It is the largest ball and socket joint in the body comprised of two bones: the head of the femur or thigh bone which is the 'ball' and the pelvis called the acetabulum which is the 'socket'. The hip joint is designed to withstand repeated motion and wear and tear. Despite its durability, hip pain can occur for a multitude of reasons. Some of these causes include osteoarthritis, injuries in the cartilage, tendon, ligament, or muscle, bursitis, avascular necrosis, Piriformis syndrome, or viral infections.

Osteoarthritis (OA) and Cartilage Injuries: OA is the most common joint disorder and the major cause of disability in the adult population. The pathophysiology of the disease is characterized by progressive loss of articular cartilage, cartilage calcification, osteophyte (bone spur) formation, subchondral bone remodeling, and mild to moderate



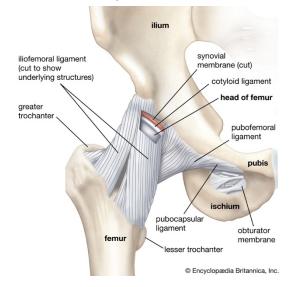
inflammation of the synovial lining. OA can affect any joints of the body and the hip joint is the second most commonly affected large joint besides the knee joint. OA of the hip can cause symptoms of hip pain, tenderness, stiffness, creaking of the joints, and joint deformity. The symptoms can affect one's ability to walk, work, and enjoy life.

Joint trauma, mechanical overload, and overuse due to aging, abnormal biomechanics, or being overweight can cause inflammation of the hip joint which lead to the development and progression of hip osteoarthritis. In osteoarthritis, specific matrix-degrading enzymes are upregulated. The major protagonists of cartilage degradation are the metal-dependent matrix metalloproteinase (MMP), disintegrin, and metalloproteinase with thrombospondin motifs (ADAMTS) families. Damaged cartilage tissue, inflamed synovium, and other injured joint tissues release cytokines, chemokines, alarmins, DAMPs, adipokines, and other mediators into the synovial fluid. These mediators

increase chondrocyte production of matrix metalloproteinases (MMPs) which breaks down the cartilage collagen network and weakens the biomechanical function of the articular cartilage.

<u>Ligaments</u>, tendons, and muscle injuries can also lead to hip pain as they play an important role in the function of the hip. In the hip, the joint capsule is formed by a group of strong ligaments that connect the femoral head to the acetabulum. These ligaments are the main source of stability for the hip. Injury to these ligaments will cause hip pain due to the inflammation of the ligament. Hip ligament sprains can also affect the stability of the hip joint causing pain in the hip joint.

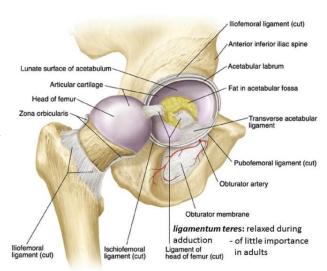
A small ligament connects the very tip of the femoral head to the acetabulum. This ligament, called the ligamentum teres, is a cord like structure that connects the femoral head to the acetabulum. It



doesn't play a role in controlling hip movement like the main hip ligaments. It does, however, have a small artery within the ligament that brings a very small blood supply to part of the femoral head. Injury to the ligamentum teres can cause inflammation with symptoms of severe hip pain. The blood supply from the artery of the ligamentum teres is the main blood supply to the femoral head in children. This artery is commonly disrupted with dislocations.

A long tendon band runs alongside the femur from the hip to the knee, the iliotibial band. It gives a connecting point for several hip muscles to attach to the bone. An overused or tight iliotibial band can cause hip and knee problems, illustrating the interdependence of the ligaments, tendons, and muscles in the hip joint.

The hip flexors are the muscles that works to pull the knee up off the ground. A hip flexor injury can involve one (or more) of the hip flexor muscles being torn. Pain from hip flexor injuries is typically felt in front of the hip/groin area and might also be accompanied by bruising, muscle spasms, and tenderness. Hip flexor injuries often make it difficult to walk normally. Another common contributor to hip flexor injuries is weakness of the supporting muscles. When someone sits for long periods of time every day,

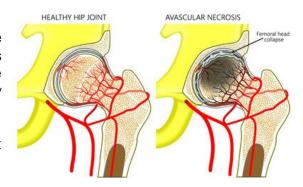


the hip flexor muscles stay contracted for long periods of time, shortening and weakening them, making injuries far more likely. The iliopsoas is a large compound muscle of the inner hip and it is the most commonly injured muscle of the hip. The amount of pain felt and how much functionality is lost depends entirely on how many muscle fibers are torn.

Hip tendonitis is the inflammation of any tendon that's a part of the hip flexors. It is typically accompanied by degeneration. The most common symptom of hip flexor tendonitis is pain that gradually develops over time. Often this pain will decrease after activity as the tendons get more blood and stretch out, though the pain frequently returns worse later.

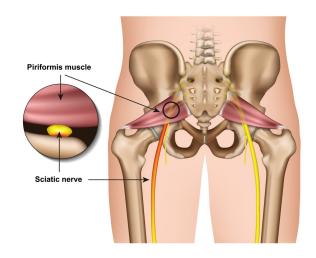
Avascular Necrosis

Avascular necrosis (AVN), otherwise known as osteonecrosis, is the death of bone tissue due to a lack of blood supply, because bone is living tissue that requires a blood supply. In ANV, tiny breaks in the bone can occur in the affected area and the bone can eventually collapse. The most common area where AVN occurs is in the hips. AVN of the hip can cause pain on the groin, thigh, or buttock. However, AVN can occur in the shoulders, knees, hands, and feet as well.



The cause of AVN can vary from a dislocation or a fracture, chronic use of corticosteroids, a common antiinflammatory drug for pain management, excessive alcohol use, damage to the surrounding arteries, or other health
conditions such as piriformis syndrome. A dislocation or fracture that leads to AVN is known as trauma-related AVN.
This type of injury can affect the blood supply to the bone causing ischemia to the femoral head leading to the
osteonecrosis. All other causes of AVN are known as non-traumatic AVN. Chronic corticosteroid use can interfere
with the body's ability to break down fatty substrates. When these substrates collect in the blood vessels it can
make them narrower and therefore reduce the amount of blood supply to femoral head. Similar to anti-inflammatory
drugs or pain killers, excessive alcohol use may also cause fatty substrates to build up in the blood vessels and lead
to a reduced blood supply to the femoral head. Blood clots, damage to the arteries and local inflammation can also
block blood flow to the bones. The cause of AVN may also lead to the development of hip osteoarthritis. Bone on
bone hip osteoarthritis can further aggravate the pain in the hip area making the symptoms of AVN worse. When
osteonecrosis has caused extensive damage to the femur and the bone has begun to collapse causing significant
pain in the hip or knee, a total joint replacement may be recommended.

<u>Piriformis syndrome</u> is a condition when the Piriformis muscle contracts and spasms compressing and irritating the sciatic nerve. This causes sciatic pain along the path of the sciatic nerve descending down the lower thigh and into the leg. Piriformis muscle spasms also compress the superior and inferior gluteal nerve and arteries beneath the muscle. This will cause contractions of other muscles in the buttocks. Symptoms of Piriformis syndrome include hip muscle pain, coldness, tightness, tingling, and numbness in the buttocks. Hip muscle contraction and tightening further compress the femoral artery and its branch, the profunnda femoris, the main artery supplying blood to the hip joint capsule and the femur neck, resulting in restricted blood supply and causing hip joint cartilage degeneration, hip osteoarthritis, and femur neck bone death leading to AVN.



The cause of Piriformis syndrome is prolonged stress. The Piriformis muscle is the most important muscle in the lower body involved in balance, posture and movement. Its contraction moves the body in different directions. Our body's fight-or-flight response to a stressor such as a perceived harmful event, attack, or threat to survival involves tightening of the Piriformis muscle to prepare the body for fight-or-flight. When the stress is prolonged, the Piriformis

muscle remains tight in the contraction mode causing spasms which can eventually lead to Piriformis syndrome. Besides for the Piriformis muscle, the shoulder muscle and the smooth muscle of the stomach also contract and become tight in the fight-or-flight response. This will also cause reduced blood flow to these areas. It is common for hip AVN patients to also have shoulder problems and stomach conditions including acid reflux, GERD, poor digestion, or stomach ulcers.

Bursitis

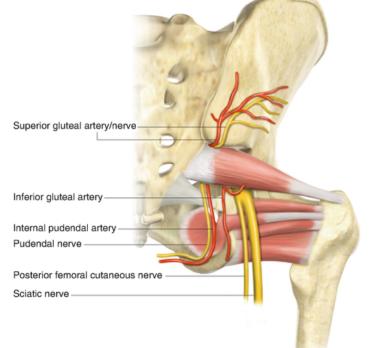
Bursae are sacs filled with an egg-white-like substance called synovial fluid. Bursae typically act as lubricators between bones and other structures, such as muscles or ligaments, but they also reduce friction between tendons, ligaments, and muscles. Within the hip, there are two major bursae, the trochanteric bursa and the ischial bursa. The trochanteric bursa is located on the outside point of the femur while the ischial bursa is a deep bursa located over the ischium and lies between the gluteus maximus and the ischial tuberosity.

Hip bursitis is a condition where one or more of the hip's bursae become inflamed and painful. This pain is typically felt

on the outside of the hip and later radiates down into the thigh. Symptoms of hip bursitis also include joint pain/tenderness. Injured athletes will see swelling and feel warmth around the injured area. The pain is sharp at first, but later dulls and becomes achy. The pain is worst when getting out of a chair or bed, sitting for a long time, or after sleeping on the injured side.

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Bursitis can either be acute or chronic. Acute bursitis is fast, flaring up and going away after mere hours (or in some cases, days). Chronic bursitis is slower and lasts longer—anywhere from a few days to several weeks. It can also return unexpectedly after a few weeks or months without any pain.



Viral Infections

Viral infections are a known cause of joint pain and arthritis. Viral arthritis is usually caused by a viral infection that is already present in a person's body. Many viruses could be responsible for causing viral arthritis and the most common viruses include Parvovirus, alphavirus, rubella, Hepatitis B, C, and Epstein-Barr virus. Inflammatory joint disease can occur from a systemic viral infection that stimulates a widespread immune response throughout the body. COVID-19 patients as well as some patients who received the vaccine, for example, can develop joint inflammation as well as gastrointestinal symptoms due to the immune response. Interleukin-6 (IL-6) and its associated cytokines from the immune response of viral infections can cause muscle and joint pains. Hip pain and stiffness are more frequently occurred among COVID-19 patients and some patients with the vaccine. The immune response to the COVID-19 viral infection or vaccine can cause inflammation of the microcapillaries and affect the nutrient delivery to the hip joint leading to hip pain. The femoral head can be affected due to the bone inflammation. The immune response can also cause muscle pain or tightness. This can lead to a Piriformis type of issue in which the Piriformis muscles become tighten and suppress the arteries limiting blood supply to the femoral head and causing hip pain.

Wellness Recommendation

Osteoarthritis

The WHITEE Patch and LC Balancer are recommended to help repair the joint damage. The WHITEE Patch increases blood flow and lymphatic circulation and helps enhance the chondrocyte's ability to synthesize required collagen and proteoglycans to restore the damaged joint cartilage matrix, eliminate joint pain, and improve its functionality. The WHITEE Patch also helps reduce joint inflammation and matrix metalloproteinase (MMP) activity to reverse joint degeneration. By converting the chondrocyte phenotype to its healthy state, the WHITEE Patch helps reverse the bone-on-bone condition. LC Balancer functions to open the smallest blood vessels to enhance whole body microcirculation and accelerate healing of the hip joint. The enhanced microcirculation also improves nutrient absorption from the digestive tract to assist in healing. Reishi Mushroom, an herb in LC Balancer, has been shown to have a positive effect on blood flow by increasing blood circulation. This helps to further accelerate the mechanisms of the WHITEE Patch.

Patients usually notice an improvement in pain, swelling, stiffness or joint creaking in 8 days for mild or moderate conditions, in 17 days for severe conditions, and in 1 month for bone-on-bone or elderly patients with osteoporosis.

Treatment times range from 2 weeks to 3 months depending on severity. If there is no significant improvement in 1 month, a customized treatment is required. Patients may feel the pain worsening during the first 8 days as healing begins. If the condition is related to aging, symptoms may return and further treatment may be required. If there is also an injury in the tendons, ligaments and surrounding muscles of the joint, the FASTT Patch is required to heal those injuries so that joint balance is well established to avoid excessive mechanical stress to the cartilage matrix.

Ligaments, tendons, and muscle injuries

The FASTT Patch is recommended to help speed up the healing process of ligament, tendon, and muscle injuries by increasing localized blood flow. When blood vessels break due to an injury, it makes it difficult for the nutrients to be delivered that are necessary for repair. By increasing localized blood flow, the FASTT Patch increases the supply of those nutrients allowing the area to heal quickly. The FASTT Patch also increases localized lymphatic circulation, therefore, reducing inflammation and in turn allowing more of those nutrients to enter the injured area. The herbal ingredients of the FASTT Patch also increases localized temperature allowing for the biosynthesis of new collagen for tendon and ligament repair and myofibers for muscle repair almost instantaneously upon application of the FASTT Patch to the injured area. Depending on the severity of the injuries, 1 to 4 weeks of the protocol is recommended for significant improvement.

If there is degeneration with presence of scarring or ground substance build up, it is recommended to rotate the FASTT and WHITEE Patches and use LC Balancer. The WHITEE Patch supports healthy collagen regeneration, ground substance clearance, tendon thickening reduction, and scar and calcification removal. The number of FASTT and WHITEE Patches required may vary depending on the specific condition.

Avascular Necrosis and Piriformis syndrome

The wellness recommendation for AVN includes the WHITEE Patch and LC Balancer. The WHITEE Patch helps to increase local blood flow which brings in the necessary nutrients for joint repair. Through increasing the local blood flow, the affected bone area can be regenerated naturally. The WHITEE Patch also increases local temperature to increase the biosynthesis of components necessary for tissue repair such as osteoblasts and proteoglycans. The herbal ingredients in the WHITEE Patch also increase local lymphatic circulation to reduce inflammation as well as remove any cellular debris. LC Balancer increases systemic microcirculation to enhance nutrient absorption. Patients can experience pain reduction in one week and significant improvement in 1- 3 weeks. A three-month protocol is recommended for sustained results.

If the AVN occurs at the hip joint and patients also have Piriformis syndrome with symptoms of hip muscle pain, coldness, tightness, tingling, and numbness in the buttocks, the wellness recommendation also includes Spring Capsule, Spring Juice, and Formula B in addition to the WHITEE Patch and LC Balancer. Combined, these four GI formulas help to relax stomach contractions and improve blood flow to the stomach while simultaneously helping to relax the Piriformis muscle. Patients with Piriformis syndrome usually develop liver and kidney deficiencies due to the prolonged use of pain killers. Brown and Xcel are recommended to improve liver and kidney health and speed up the hip joint and femur bone regeneration. Patients can experience significant pain reduction in 3 weeks. A three-month protocol is recommended for sustained results. If the patient has severe hip pain with osteonecrosis or avascular necrosis, the hip pain may worsen during the GI protocol due to the enhanced blood flow and recovery of the nerve sensations.

Bursitis

The wellness recommendation for bursitis includes the FASTT Patch. The herbal ingredients in the FASTT Patch decrease synovial lining inflammation of the bursae through increasing local lymphatic circulation. The FASTT Patch also helps speed up the recovery of the bursae and surrounding soft tissues such as muscles and ligaments through increasing local blood flow as well as local temperature to increase metabolic reactions. Bursitis in acute condition can be healed in 8-17 days with the use of 3 - 6 FASTT Patches. Young patients require 3 FASTT Patches and older patients typically require 6 FASTT Patches. Bursitis lasting for 3 months or more may require LC Balancer with the FASTT Patch to enhance microcirculation and speed up the healing.

If the patient suffers from chronic bursitis with a buildup of fibrotic tissue, the wellness recommendation includes both the FASTT Patch and the WHITEE Patch as well as LC Balancer. The WHITEE Patch breaks down scarring and fibrotic tissue while the FASTT Patch works on healing the soft tissue and reducing inflammation. LC Balancer increases systemic microcirculation to decrease healing time through increasing nutrient absorption. Patients should experience symptom improvement in the first week and one month of treatment is recommended for significant and sustained results.

Viral Infections

The wellness recommendation for hip pain brought on by a viral infection includes Peuria, Pterin, and Dandelion. Peuria helps to remove viruses within the bone tissue and helps reduce bone inflammation caused by the immune response. Pterin removes viruses within the microcapillaries and reduces microcapillary inflammation caused by the immune response. To relieve the inflammation of the blood vessels is especially important to allow for proper nutrient deposition. Dandelion removes viruses from the muscles and reduces inflammation of the muscles including the Piriformis muscle that restricts blood flow to the femoral head. By relieving the muscle tightness, proper blood circulation can be regained and hip pain symptoms can be relieved. Patients should experience symptom improvement in the first week and 1-3 months of treatment is recommended for significant and sustained results.

Protocol Summary

Cause of Hip Pain	Product Recommendation
Osteoarthritis	WHITEE Patch, LC Balancer
Ligament, Tendon, Muscle Injury	FASTT Patch
	If degeneration is present: rotate FASTT and WHITEE
	Patches, LC Balancer
Avascular Necrosis	WHITEE Patch, LC Balancer
	If patient also has Piriformis syndrome: Spring Capsule
	SJ, and Formula B in addition to the WHITEE
	Patch and LC Balancer
	If patient has long term use of painkillers: Add in Brown
	and Xcel
Bursitis	FASTT Patch
	For chronic bursitis: rotate FASTT and WHITEE
	Patches, LC Balancer
Viral Infection	Peuria, Pterin, Dandelion

Patch Placement for Hip

- 1. Find the location of the sharpest pain by palpating the hip area to indicate the most severely injured or affected point of the hip and apply the WHITEE Patch to that area.
- 2. If there is no clear pain spot or if the location is uncertain, apply the WHITEE Patch between the great trochanter of the femur and the coccyx (tailbone), 1/3 the distance from the great trochanter protrusion, across the buttocks (Figure 1 One).
- 3. If the patient is overweight, then place the WHITEE Patch in the front of the hip at the thigh-groin junction across the femoral head and acetabulum joint (Figure 2 Two). This placement will ensure the herbs are being absorbed at an optimal level.

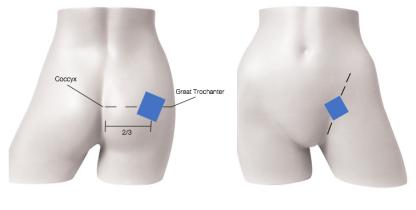


Figure 1 Figure 2

Selected Case Studies

Case 1: Resolution of Severe Hip Pain, Acid Reflux and Stomach Ulcers Brian Hess, DC, VA

A 55-year-old active male came to me complaining of bilateral hip pain, which started about five years previous. His hobbies included surfing and dancing and he dearly loves the outdoor Florida lifestyle. He had tried a lot of different therapies without very much success and was concerned he would have to give up dancing because of restricted mobility and pain. He was very much interested in the prevention of hip replacement in future years.

During the consultation, he also reported having low energy, felt stiff all over and had a history of acid reflux, stomach ulcers and periodic stomach pain. Upon examination, it was discovered that he had severe bilateral hip tightness with noticeable limitation of mobility and his hips felt cold to the touch with hardening of the hips and surrounding muscle tissue.

I told him his prognosis was very good if he followed my protocol which included Wei Laboratories GI Formulas which include Spring Capsule, SJ, Pearl, and Formula B, WHITEE Patch, and LC Balancer. He expressed interest in getting started right away and so began his treatment. At his follow-up consultation two weeks later, he reported an immediate increase in energy upon starting the therapy.

The first week into the treatment his hips felt a little more painful, especially at night. By the second week the hip pain had subsided and he felt that he was moving better. He was told to continue his treatment protocol and return two weeks later. At week three his Tango instructor commented on his improved flexibility.

John has continued to improve and at his recent visit reports that the pain in his hips is gone and he can now do a 180-degree contra-body twist in his dance class. He also has had much more energy and his digestive symptoms have all been resolved. He sleeps better now than he has for many years. Results have been sustained.

Case 2: Hip Replacement Surgery Prevented

Ronald Mullen, AL, FL

A 57-year-old male reported pain starting in the left hip about five years ago. The pain came on gradually with periodic sharp sensations experienced mostly at night while in bed. The pain has gotten worse over the years and is now severe. A scan revealed advanced osteoarthritis of the left hip joint. He was interested in prevention of a hip replacement.

Examination revealed stiffness, tightness of the hip joint, and hardening of the surrounding hip muscles. The hip joint also felt colder to the touch than the other hip joint indicating restriction of circulation through the affected tissue.

The recommendation included Wei Lab's herbal formulas including Spring, SJ, Pearl, and Formula B which address the cold stomach and resolves the blood circulation restrictions with the WHITEE Patch and LC Balancer which helps repair the hip joint damage.

The patient reported easing of pain within the first week. By the second week there was much improvement in energy and the hip pain felt sharper and more intense. Starting with week three, the hip pain began to resolve and continued to get better each week until the pain was completely gone. There is now much more flexibility in both hip joints and the patient is extremely happy to (1) get rid of the pain (2) avoid hip replacement surgery in the future.

Conclusion: The patient progressed from severe left hip osteoarthritis, hip pain, and hip tightness to full resolution of symptoms. He has also experienced more circulation through both hips thus preventing possible pathology in the other hip and prevention of hip replacement as the arthritis progressed.

Case 3: Address Hip Osteoarthritis and Piriformis Syndrome

Ronald Mullen, AL, FL

A male patient in his mid-seventies had severe restriction of mobility through both hip joints. He reports bilateral hip pain with radiation down the lateral thighs to the knee, the right side being most affected. He reported a left side hip replacement five years ago due to severe osteoarthritis in the joint. Unfortunately, he continued to experience pain even after the operation. The osteoarthritis in the right hip had continued to progress and the hip was extremely painful.

Upon examination, there was severe hip tightness with hardening of the muscle and connective tissue surrounding the hip joint involving the piriformis muscles bilaterally creating Piriformis Syndrome. The patient was very concerned about the pain and the progression of osteoarthritis on the right side and wanted to prevent another hip replacement.

The recommendation included Wei Lab's herbal formulas including Spring, SJ, Pearl, and Formula B which address the cold stomach and resolves the blood circulation restrictions with the WHITEE Patch and LC Balancer which helps repair the hip joint damage.

Therapy was started and he noticed easing of symptoms within the first week. His left side (with the hip replacement) was responding especially well with much more mobility and much less pain. Two weeks into therapy, he was able to walk much easier with significantly less pain and stiffness.

Conclusion: The patient is now just starting the third week of treatment and is progressing very well. He is expected to continue to progress in the following weeks and his overall prognosis is excellent with continued therapy.

Case 4: Pain-Free of a Hip Labral Tear and Hip Osteoarthritis Patient Jennifer Foster, DC, FL

A 48-year-old female patient with hip osteoarthritis also suffered from a labral tear in her hip. She absolutely did not want surgery. The patient also had very flat feet. She is a teacher and instructor for cycling class. She has to get on and off a bike a lot, which really hurts her hips. She was so badly in pain that she became inactive. By her 3rd visit, Jennifer recommended the WHITEE Patches developed by Wei Laboratories. Jennifer placed orthotics, applied the patches and adjusted her. Jennifer also gave her LC Balancer from Wei Laboratories. The patches and orthotics really helped and she is now completely back to her everyday life with no pain. The patient did just 1 round of patches and was so successful that she recommended her brother, her father, father in law and a bunch of friends! She would not have been able to help her without the patches.

Case 5: Hip Osteoarthritis Patient Pain-Free with use of WHITEE Patches and LC Balancer Charles Newby, DC, MI (December 2021)

A female patient in her early 60s was diagnosed with severe osteoarthritis and experienced pain in both hips. Her left hip was significantly more painful and severe than the right hip. The OA was so painful in her hips she had a hard time walking. Her doctors were recommending a hip replacement and the patient had a future appointment scheduled for replacing her left hip. She had already gone through a knee replacement surgery with little success and wanted to avoid the replacement surgery for her hip.

Her chiropractor, Dr. Charles Newby recommended the WHITEE patches and LC Balancer from Wei Labs to increase blood flow, lymphatic circulation, reduce joint inflammation and reverse joint degeneration. This protocol was recommended for both hips at the same time to avoid her from favoring one hip over the other.

The WHITEE patches and LC Balancer were recommended for a continuous 3 months and after the first month, the patient was feeling 75%-80% less pain in both hips. The patient continued the protocol along with seeing her chiropractor on a regular basis for adjustments, exercises, and also was taking bone/cartilage supplements. After three months, the patient is experiencing little to no pain in both hips and was able to cancel her hip replacement surgery.