# **Finding Relief for Chronic Joint Pain**



Despite what many patients who suffer from chronic joint pain have been told, invasive surgery, and addictive painkillers, may not be your only option for treatment. Our comprehensive multidisciplinary treatment approach is unparalleled. We have helped hundreds of patients find relief from pain and get back to an active lifestyle.

At Sound Pain Solutions, we have helped patients avoid knee, hip, ankle, shoulder, elbow, and wrist surgery. Our treatment procedures are provided or directed by naturopathic, physicians, nurse practitioners, and chiropractic doctors with advanced training and certification. All our treatments are drug-free, and non-surgical.

# Our treatment plans may include:

Concentrated cell therapy- PRP/Wharton's Jelly to activate soft-tissue repair.

<u>Laser therapy</u>- to reduce inflammation and encourage regeneration.

<u>Joint decompression-</u> to pump inflammatory byproducts out of joints.

Bioelectrical therapy- to reduce pain and swelling.

<u>Chiropractic treatment-</u> to improve joint mobility.

<u>Infrared light therapy-</u> to improve circulation.

<u>Skilled manual therapy-</u> to restore stability and mobility.

Functional rehabilitation- to regain strength and endurance.

### **Concentrated Cell Therapy**

Thankfully, your body is designed to repair and heal itself. The initiation of the healing process begins with the body sending messages that damage has occurred, and repair is needed. Concentrated cell therapies like platelet rich plasma (PRP) and Wharton's jelly can activate and enhance the healing process.



#### How is PRP treatment performed?

Platelet rich plasma, treatment involves drawing a small volume of blood, (approximately 6 cc) processing it in a centrifuge to remove red blood cells and concentrate platelets in the plasma, then injecting it into the damaged tissue.

#### How does PRP work?

Platelets come from bone marrow and circulate throughout the bloodstream in a non-activated form. You may be familiar with the role of platelets in stopping bleeding. When injury has occurred, platelets come together, forming a clot to stop the bleeding. Similarly, when they detect damaged tissue, like a joint that is chronically inflamed, platelets become activated. They release growth factors and signaling molecules that initiate tissue repair and reduce pain.

#### How safe is PRP?

PRP is autologous, which means that the patient is both the donor and the recipient. Since it uses components of your own blood there is no risk of an allergic reaction, and side effects are uncommon. Additionally, we use a "closed system" for additional safety.

#### What is Wharton's jelly?

Wharton's jelly is the gelatinous connective tissue in the umbilical cord that protects the blood vessels that connect mother and baby.

#### How do Wharton's jelly injections work?

Wharton's jelly is rich in growth factors, cytokines, hyaluronic acid, extracellular vesicles, and exosomes that promote repair of damaged tissues. These chemical messengers occur in higher concentrations in Wharton's

jelly, than other biologic sources. The quantity and diversity of these growth factors is thought to be key in reducing inflammation and pain and augmenting healing of musculoskeletal injuries. (Study available upon request)

#### How safe is Wharton's jelly treatment?

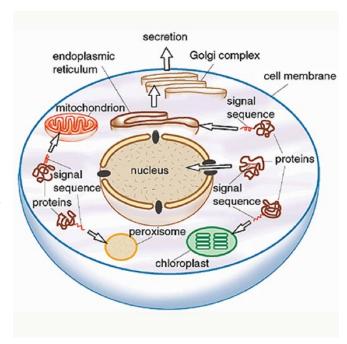
Because Wharton's jelly is a component of the lifeline between mother and baby, (umbilical cord) it is exceptionally safe. It is classified as "immune privileged" meaning there is a very low probability of it eliciting an inflammatory immune response.

### How is Wharton's jelly processed?

Our Wharton's jelly product is processed from donated, non-embryonic human tissue from full-term, C-section deliveries in accordance with the FDA. It is regulated as a human cell, tissue, or cellular or tissue-based product (HCT/P) under 21 CRF part 1271, and section 316 of the public health service act. Our Wharton's jelly supplier upholds the highest safety measures which exceed those required by AATB (the American Association of tissue banks) and the FDA.

### **Non-invasive Laser Therapy**

Unlike lasers used in surgeries, we do not use lasers to make incisions, we use them to heal. The human body can absorb very specific frequencies and wavelengths of light. Similar to the way plants absorb sunlight and perform photosynthesis to produce energy for growth, our bodies can absorb near infrared light and convert it into ATP. ATP (Adenosine Triphosphate) is the "energy currency" of human cells. Therefore, higher levels of ATP increase the fuel available for cellular function. As a result, it can increase the rate of regeneration. In our experience, high dose laser therapy allows us to use more powerful therapies



so we can get faster results. The fact that laser therapy reduces inflammation and pain so that you feel better in the meantime, is a fantastic secondary benefit.

#### **Non-Surgical Decompression**

Although decompression therapy is best known for treating back and neck problems due to herniated or degenerated discs, it also can also be highly effective for chronic joint pain conditions. Knee and hip pain can benefit from non-surgical decompression therapy. These joints are similar, they are classified as synovial. That means they are encapsulated by



ligaments and filled with synovial fluid. With non-surgical decompression therapy, the ligaments are gently stretched, this creates negative pressure inside the joint. By progressively increasing and decreasing the force by 50%-75%, a pumping effect is produced. This pumping action works to draw water and nutrients into the joint and remove inflammatory chemicals. This in turn can reduce swelling and pain and improve joint motion to speed the healing process. Our decompression machines are FDA cleared and can be turned off by the patient if they gave any discomfort. For most patients, decompression is so comfortable and relaxing, they can take a nap during their treatment.

### **Bioelectrical Therapy**

The NeoGEN machine by RST Sanexas uses communication level digital technology. It is not like standard TENS or muscle stimulation electrotherapies. The unit's microprocessors continually vary the wave frequency, amplitude, polarity, and can pulse the signal up to 20,000 times per second. Additionally, for some patients, injections of anesthetics like lidocaine or vitamin supplements are used to enhance treatment effectiveness. This advanced therapy is described as electric cell



signaling treatment because it activates second messenger signaling (cyclic AMP) resulting in accelerated healing, reducing pain, and restoring function. The revolutionary bioelectrical therapy and supplemental injections are performed by trained, licensed medical providers.

#### How does it work?

Studies have shown that electro-medical treatment can reduce pain and restore function through the following mechanisms:

#### Reduction of pain by:

- 1. Sustained nerve depolarization resulting in a nerve block.
- 2. Blocking pain signal transmission at the spinal cord via competition.

#### Acceleration of cell repair by:

- 1. Increased levels of cAMP
- 2. Improved cell membrane stabilization/repair.
- 3. Reduction of inflammation/edema.
- 4. pH normalization.
- 5. Increased circulation.

#### What does that science mean for your symptoms?

In a pilot study on reduction of opioid use, patients suffering with chronic back, joint and nerve pain reported marked reduction in pain. Patients received an average of 23.4 treatments. They reported a reduction of opioid use by an average of 67%, with 50% being able to stop their opioid use all together!

# **Chiropractic Adjustments/Joint Mobilization**

If you hear "chiropractic adjustment" and you picture a doctor forcing a dislocated shoulder back into place, you're not alone. However, we want to set your mind at ease; we don't do that. We never use forceful manipulation for chronic joint problems. By using gentle joint mobilization, low force instruments, or table adjustments, these therapies should be virtually pain free. If a treatment causes pain, we don't use it!

To understand the value of joint adjustments and mobilization it's important to understand why they're needed. Often, when a joint is injured or degenerates, scare tissue forms in the muscles and



ligaments around the joint. These are called periarticular adhesions. This scar tissue can limit motion and alter

loading patterns, creating further degeneration and pain. Adjustments and mobilization can stretch and release these adhesions.

As one of the most effective therapies in our treatment toolbox, adjustment and mobilization can address impairments and pain that no other treatment can.

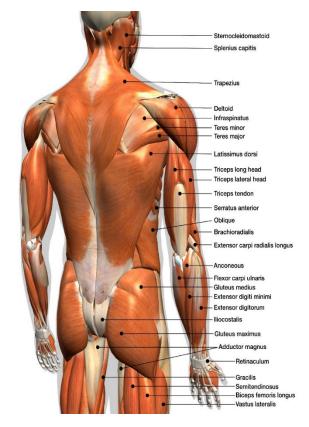
# **Infrared Light Therapy**

In the study of nerve physiology, there are two components that are essential for the healing of nerves: fuel and activation. Glucose and oxygen serve as fuel for our nerves, and exercise is activation. Infrared light therapy helps feed the nerves and muscles by improving circulation. Research shows that infrared therapy increases the production of nitric oxide. This in turn can accelerate the repair of blood vessels and nerves. Studies using infrared thermography demonstrate an improvement in circulation for 2 to 3 hours following treatment. Infrared therapy is typically applied using specialized pads to surround the joint. Infrared therapy is an entirely pain free treatment. The only thing a patient feels is a warm, relaxing sensation. This makes infrared therapy an enjoyable, effective treatment for many of our chronic joint pain patients.



## **Skilled Manual Therapy**

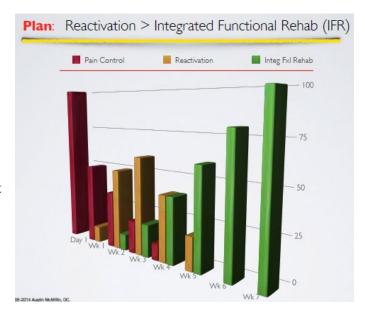
When an injury occurs, our body goes into a "protective mode" to limit further damage. However, if the muscle contraction persists after the injury has healed, it can allow an acute injury to progress into a chronic and degenerative condition. The same process can occur because of repetitive use disorders or from chronic postural stress. Regardless of the root cause, the solution is the same: joint motion and stability must be restored. That is where skilled manual therapy comes in. Trigenics is one of the manual therapy technics we use. Trigenics® looks like massage therapy combined with exercise, however, it is not massage. It is a powerful functional neurologic treatment that retrains the way the nervous system controls muscles associated with a joint. Often, it can reduce pain,



improve motion, and restore strength and stability. For many of our patients, the results are immediate and dramatic.

# Physical Rehabilitation

The final component of our comprehensive treatment program is physical rehabilitation. With chronic pain, muscles become weak and less responsive. To address this, we use light, specific exercises. The term for this is reactivation. In the diagram to the right, reactivation is demonstrated by the "gold columns." The objective in the reactivation phase is to get the muscle to contract, not to build endurance. At this stage, although pain has been reduced, the tissues are not healed. If a patient tries to do too much, it can flare up their symptoms.



Once the muscles are reactivated, the patient should progress to more advanced exercises known as integrated functional rehabilitation. This phase is demonstrated by the "green columns" in the diagram. Initially, functional exercises are used to retrain proper joint motion and create stability. Once relatively normal joint motion is possible, the patient can progress into force-control training. The objective in this phase is to be able to cope with real world, dynamic environments, and ultimately to build endurance, so the patient can safely return to normal healthy activities.

#### **Results That Last**

The breadth and depth of the treatments we offer is key to our high rate of success. As you saw in the preceding description, the scope of treatments we offer is unparalleled. This allows us to select treatments and tailor programs to meet each patient's individual needs. Helping you get relief is always our first priority. Ultimately, we want to help you regain as much of your ability to do life as possible and maintain it so you can enjoy an active lifestyle.

#### Drug- free, Non-surgical Solutions for Chronic Joint Pain

Thank you for taking time to learn about our treatment approach. If you are suffering from persistent knee, hip, shoulder, wrist, or other joint pain, call us at 425 774-2411 and schedule a complimentary consultation. We will evaluate your condition and let you know whether or not you are a candidate for our safe, effective treatment. Your consultation is free of charge and could be the first step to dramatically improving the quality of your life. We look forward to helping you find a solution for your chronic joint pain.

