



# JOINT PAIN?

Think Advanced  
Regenerative  
Therapy

No Pain. No Surgery.  
Get Back to Living...  
**FAST**



## What Is Regenerative Medicine?

"Regenerative Medicine" may sound foreign, but the science supporting its use in decreasing inflammation and promoting healing has been around for decades. Cutting edge regenerative therapies continue to gain momentum in the treatment of joint and muscle pain related to injury and age-related degenerative change.

Treatment of these symptoms – previously limited to steroid injections, painful physical therapy, and surgeries with long recovery times – now have treatment options with NO surgery, NO medication, and NO downtime. New advancements in stem cell therapies – officially referred to as 'human cell and tissue products' (HCT/P) – are changing the way we heal our bodies.

Stem cells provide your body with the repair machinery needed to regenerate damaged parts. Something gets broken? No worries. Stem cells tell your body how to fix it. They adjust the environment and direct repair pathways to be optimal for healing and regeneration.

As we age, so do our stem cells – one of many challenges our bodies face over time. Strategically introducing stem cells or HCT/P into our aging bodies has the potential to encourage older cells to behave more like younger cells. They drive the engine responsible for our body to repair, regenerate, and regulate healthy immune system function. Advanced regenerative therapies are associated with improvements in osteoarthritis, tendon and ligament injuries, autoimmune disease, neurological conditions, traumatic brain injuries, spinal cord damage, heart failure, pain syndromes, infections, and inflammation.

**Everyone Can Benefit From  
Regenerative Therapy**

# Where Does Regenerative Tissue Come From

## Stem Cells (HCT/P)

HCT/P comes from ADULT tissue only. Stem cells can be classified in many different ways, but generally speaking, they are either from embryonic or adult origin. The stem cells you had as an unborn child were embryonic. These are never used for regenerative purposes. They don't work, and they come with a long list of legal and ethical concerns. Thankfully, we never need to discuss these. Embryonic stem cells are significantly different from adult stem cells and simply will not do what is needed from a healing standpoint.

The cells used for regenerative purposes come from ADULT tissue. There are two kinds of adult stem cells; hematopoietic stem cells (HSCs) and mesenchymal stem cells (MSCs). HSCs develop into our blood cells and are used largely for bone marrow transplantation. MSCs develop into everything else and can be used for regenerative purposes. MSCs come from two places: Adults, or the placental tissue adults came from many moons ago.

Some adult MSCs are called 'autologous' MSCs - meaning cells that came from you. As an adult, MSCs can be found in small numbers all over the place, but in largest concentrations from bone marrow and adipose tissue (fat cells). This tissue has been used for regenerative purposes but it poses some limitations and legalities that make this option less attractive.

MSCs derived from someone else are called 'allogeneic'. These come from umbilical cord tissue, also known as Wharton's jelly. Even though placental tissue is only one day old, MSCs derived here are considered to be of adult origin. HSCs need to be 'matched' to their donor to prevent rejection. This is critical for bone marrow transplantation. MSCs, however, are unique in that they do NOT need to be matched to their donor. Because of a lack of surface proteins, MSCs go unrecognized by the immune system. This allows us to use tissue from any healthy donor for anyone else with no concerns for rejection.

Umbilical cord MSCs are taken from donated tissue that is normally discarded after birth. This tissue undergoes an extensive screening process to ensure safety and sterility - only about 1 in 100 samples are accepted for use.



Hormone Replacement . Sexual Health . Testosterone Replacement . Detoxification  
Autoimmune Disease . Gut Disorders . Adrenal & Thyroid Balancing . Chronic Fatigue & Pain  
Memory Loss . Weight loss . Atherosclerosis . Metabolic Disorders . Peptides . Injury Management  
Health Optimization & Biohacking . Advanced Regenerative Medicine Therapies

# What Can Regenerative Therapies Be Used For?

Advanced regenerative therapies are very effective in promoting healing.

***Advanced regenerative therapies provide a safe, non-surgical option for healing knees, hips, shoulders, and other joints*** commonly injured on the job – with NO downtime.

The benefits of foregoing traditional surgeries include ***reduced costs, faster recovery, and an extremely favorable success rate*** in treating the problem.



## Cost Comparison: Surgery vs. Regenerative Therapy

PROCEDURE	CONVENTIONAL COSTS *	HCT/P COSTS	SAVINGS WITH HCT/P	CUSTOMER SATISFACTION WITH CONVENTIONAL SURGICAL INTERVENTION
Knee Replacement	\$45,000-\$70,000 (Avg. \$57,000)	\$5,000-\$9,000 (Avg. \$7,000)	\$50,500	22% of surgical knee replacement patients are extremely satisfied, leaving 78% with less than optimal results
Hip Replacement	\$32,000-\$45,000 (Avg. \$40,000)	\$5,000-\$9,000 (Avg. \$7,000)	\$32,000	90% initial success rate. After 15 years, 80% functioning well. This leaves 25% of patients with failed surgeries and/or needing a second hip replacement.
Rotator Cuff Surgery	\$7,000-\$25,000 (Avg. \$16,000)	\$5,000-\$9,000 (Avg. \$7,000)	\$9,000	< 50% post surgical full recovery rate

\*Estimates do not include hidden costs related to surgical complications, lost work revenue, post procedure pain, and poor surgical outcomes.

<https://www.verywellhealth.com/considering-hip-replacement-surgery-2549565>

<https://www.ncbi.nlm.nih.gov/pubmed>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6503460/>

## Learn More About Dr. Lindgren



I believe we can prevent and reverse many of the leading causes of chronic disease if we treat patients as one integrated system with scientifically-proven dietary changes, natural supplementation, and restoration of healthy hormones.

Kristen Lindgren  
MD, ABAARM, FAARFM



**Call Our Office To  
Schedule A Consult  
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My journey to this place was anything but linear. It took years of working in the conventional medical system before it became clear to me that what I was practicing as a physician wasn't a solution for wellness, it was a practice of fixing numbers with pharmaceuticals. This problem needed this drug. That problem needed that drug. No physician will tell you that they dedicated their entire professional career to become a drug dealer, but that is what I felt I had become.

For the vast majority of patients, bandaging the same illness with the same medication doesn't fix the problem. What patients need today - what we as people need today - is a guide to wellness. I will tell you that wellness isn't about having perfect numbers or taking the right pharmaceuticals.

Wellness is a way of life - a way of life that focuses on nutrition, hormone optimization, stress reduction, immune system support, detoxification, and neurotransmitter balance. I am confident in telling you that wellness is absolutely attainable. Together, I would love to guide you along the path that will take you from where you are now, to the place where you can be the best you can possibly be.

Fellowship trained in functional medicine and certified by both the American Academy of Anti-Aging, Restorative, and Functional Medicine and the American Board of Family Medicine, I offer a holistic approach to my patients by focusing on optimization of each organ system. I specialize in treating female and male hormone imbalances, thyroid disorders, adrenal dysfunction, fatigue and pain syndromes, weight loss, and autoimmunity.

Functional medicine is individualized health care. If our goal is wellness, the one-size-fits-all paradigm simply does not work. Patients deserve customization of the health care.

This is my focus and my passion.