EVERYTHING YOU NEED TO KNOW ABOUT

STEM CELLS

Step by-Step Guide

BestLife™ MED SPAS

www.BestLifeMedSpas.com

FIRST CHAPTER

What are Stem Cells

Stem cells are essentially the building blocks of life. They are cells which have the potential to differentiate (change) into many different types of cells within the body. They are also actively involved in repairing, regenerating, and rebuilding damaged or absent tissue in the body that has been affected by disease, infection, or injury.

Receptors on stem cells allow them to migrate to areas that need healing and effect change in that area. They also secrete chemicals which activate and attract your body's native stem cells to initiate tissue regeneration. Regardless of how tissue regeneration occurs, there are numerous studies and an enormous amount of scientific evidence that show the amazing reparative potential of these cells.

When we introduce stem cells as a therapy, a number of amazing events begin to take place. One, they seek out damaged tissue. Two, they secrete exosomes and other cytokines that stimulate the body to begin healing. Three, they communicate with local cells to learn what damage has taken place, and go to work repairing tissue. Of course the science is far more complicated, but for pragmatic purposes, this is the natural order.

Because stem cells have the ability to become other tissue, the uses are ever-increasing. Everyday new research is showing just how many diseases can be treated using stem cells.

CHAPTER TWO

Where do Stem Cells come from?

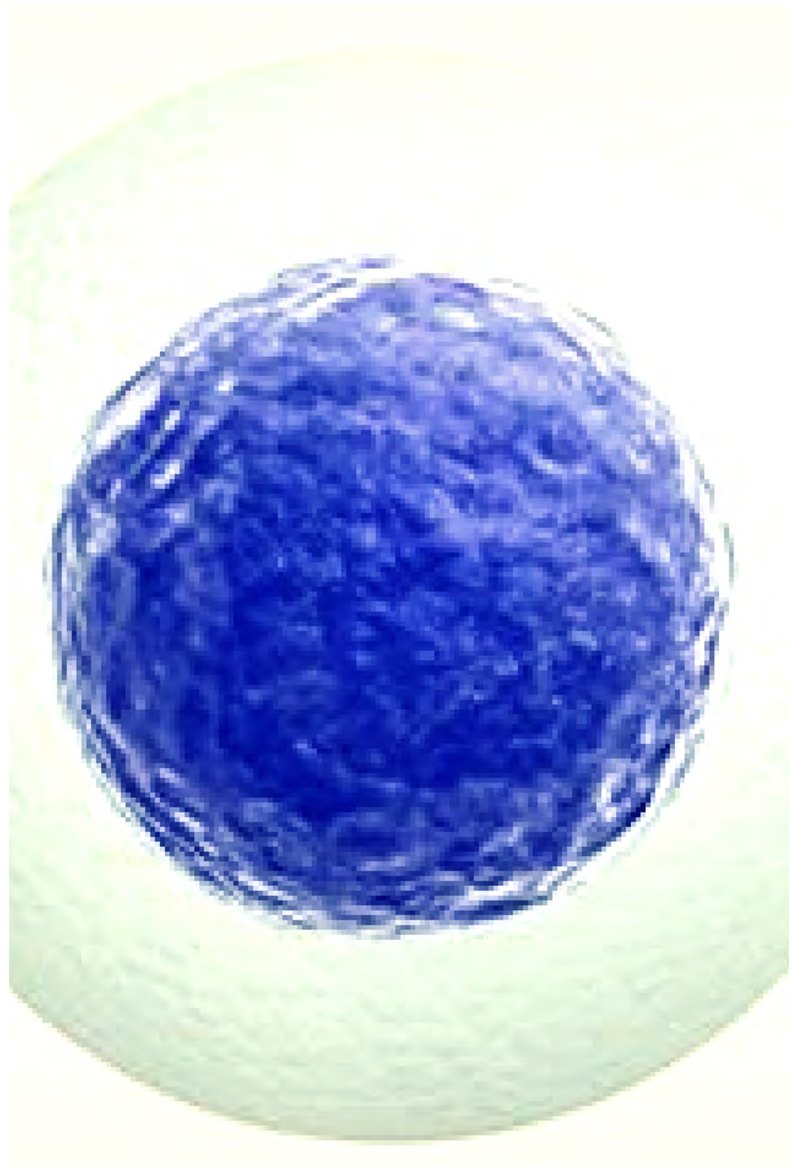
There are many different sources of stem cells and many different types of stem cells. Stem cell can be derived from umbilical cord tissue, placental tissue, amniotic fluid, peripheral blood, adipose tissue (fat), and bone marrow. Each of these sources has advantages and disadvantages based on several factors.

Originally, stem cells were found in the healing mechanisms of bone marrow. Once we discovered stem cells, a whole new branch of science and medicine began. This was called Regenerative Medicine. Regenerative medicine is the study and application of using cells, treatments, nutrients, and other modalities to stimulate the body's own natural healing capabilities.

the priority became locating viable and ethical sources from which we could harvest them. As previously mentioned, there are a number of sources which were discovered. Over the next few pages, we will go over regenerative medicine's most useful and modern methods for obtaining and administrating stem cell treatments.

Umbilical Cord

These stem cells come from healthy, live births delivered by cesarean section and donated by the mothers of these children. Umbilical cord derived-stem cells are by far the most effective type of stem cells that are obtained by ethical means and available today. Their young age makes them far more biologically active than their older counterparts and gives them a greater capability to divide and grow tissue (about 10 times as potent). There are also several different types of stem cells (mainly mesenchymal stem cells and hematopoietic stem cells) that can be derived from umbilical cords which allow for treatment of many different diseases and conditions.



Placental Tissue

These stem cells are similar to umbilical cord derived stem cells and are obtained in the same manner. A lot of research is looking at these stem cells to aid in burns, abrasions, and non-healing wounds.

Amniotic Fluid

Amniotic fluid is the fluid in which a newborn baby lives during a woman's pregnancy. There are some stem cells floating within the fluid which allow for proper development of a growing fetus, but they are very few in number. There are also many different types of bioactive molecules which aid in tissue growth. This is the least expensive type of stem cell treatment available because it contains the least amount of stem cells, but it is also the least effective. Amniotic fluid stem cell treatment is best used in patients with very mild degenerative conditions or as a supplemental treatment to an umbilical cord derived stem cell treatment to help accelerate tissue regeneration.

Peripheral Blood

Stem cells derived from peripheral blood are also very few in number. Most clinics use peripheral blood to isolate something called PRP (Platelet Rich Plasma). PRP contains many bioactive molecules such as growth factors, cytokines, proteins, antioxidants, and amino acids. These can aid in tissue repair and have been proven to increase patient results when used in conjunction with stem cell treatment. We always use PRP with all of our stem cell treatments to give our patients the best chance at improvement.

Adipose Tissue (fat)

These stem cells are obtained by performing a liposuction on a patient and then separating out the stem cells from the fat that is obtained. This can be a painful and invasive procedure, but it does yield a high amount of stem cells. Unfortunately, these stem cells come from an older source and are much less potent than those obtained from a younger source (such as umbilical cord tissue). Recent research suggests that adipose derived stem cells are much less effective than we once thought and the majority of the scientific community has moved on to other sources which are yielding much better results for patients.

Bone Marrow

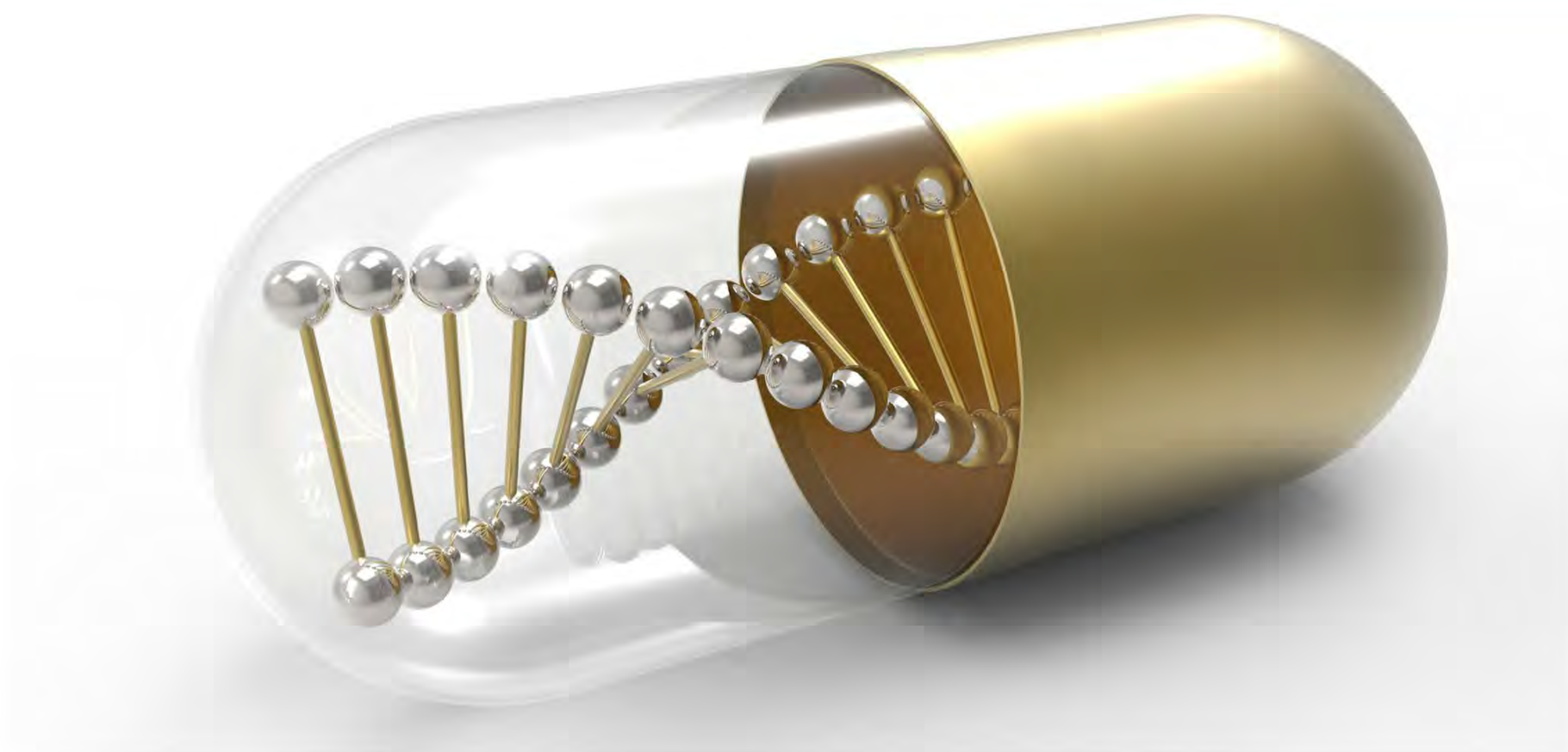
These stem cells are obtained by performing a bone marrow aspiration. This is an extremely invasive and painful procedure which involves drilling a hole into the hip bone and sucking out a portion of bone marrow. Bone marrow aspiration does not yield a large amount of stem cells and for this reason they normally need to be cultured (grown) for several weeks to reach a number which will result in an effective (therapeutic) dose. Unfortunately, culturing stem cells is illegal in the United States and therefore you will have to travel outside of the US to receive an effective dose of bone marrow derived stem cells.

"Stem cell research is the key to developing cures to degenerative conditions."
- Dr. Stephen Hawking

CHAPTER THREE

What can Stem Cells treat?

Due to the unique abilities of stem cells to change their structure and cell type, we are able to treat a multitude of disorders utilizing stem cells. More commonly, stem cells are used to repair damaged tissue due to injury. However, great strides have been made in the treatment of chronic diseases and other disorders.



Because of the vast number of applications, it is difficult to quantify just how many disorders are treatable by using stem cells. What we do know is the number of disorders NOT treatable has shrank considerably over the past several years.

Some of the more abundant research on treatment applications has been conducted on the following disorders:

ALS

ALS (Amyotrophic Lateral Sclerosis) also known as Lou Gehrig's disease, is a disease which results in the death of motor neurons controlling voluntary muscles.

Alzheimer's Disease

Alzheimer's Disease is a chronic neurodegenerative disease that generally worsens over time.

Anti-Aging

The Anti-aging movement is devoted to eliminating, reversing, or reducing the effects of the aging process.

Cardiovascular Disease (Heart Disease)

Cardiovascular disease (CVD) is a group of conditions that involve the heart or blood vessels.

Cerebral Palsy

Cerebral palsy (CP) is a group of movement disorders that appear in childhood.

Chronic Kidney Disease

Chronic kidney disease (CKD) is characterized by a progressive loss of kidney function over a period of months or years.

COPD/Emphysema

Chronic obstructive pulmonary disease (COPD) is a progressive obstructive lung disease that results in problems with airflow and an inability of patients to get air out of the lungs.

Degenerative Disc Disease

Degenerative disc disease (DDD) is characterized by degeneration of the intervertebral discs of the spine.

Diabetes Mellitus

Diabetes mellitus (DM) is a metabolic disorder which manifests as high glucose (sugar) levels within the bloodstream. .

Erectile Dysfunction

Erectile dysfunction (ED) is characterized by the inability to acquire or maintain an erection during sexual activity.

Fibromyalgia/CFS

Fibromyalgia (FM) is a condition characterized by chronic generalized pain throughout the body and an increased pain response to pressure stimuli.

Glaucoma

Glaucoma is characterized by a group of eye diseases in which damage to the optic nerve leads to vision loss.

Liver Disease

Liver disease is characterized by damage to the liver impeding liver function.

Lupus

Systemic lupus erythematosus (SLE) is an autoimmune disease in which the the immune system inaccurately attacks healthy tissues in the body.

Multiple Sclerosis
Multiple sclerosis (MS) is an autoimmune condition in which the insulation (myelin) around nerves in the brain and spinal cord becomes damaged.

Muscular Dystrophy
Muscular dystrophy (MD) is a group of progressive muscle diseases that cause a breakdown of skeletal muscle over time.

Neuropathy
Neuropathy (also known as peripheral neuropathy) is a condition that affects nerves outside of the brain and spinal cord (peripheral nerves).

Optic Neuropathy
Optic Neuropathy is damage to the optic nerve.

Osteoarthritis
Osteoarthritis (OA) is characterized as a degeneration of cartilage and bone within the joint.

Parkinson's Disease
Parkinson's disease (PD) is a progressive neurodegenerative disorder that initially affects the motor system followed by mental and behavioral problems later.

Pulmonary Fibrosis
Pulmonary fibrosis is a restrictive lung disease in which scars begin to form in the lungs.

Retinitis Pigmentosa
Retinitis pigmentosa (RP) is a genetic disorder that causes progressive loss of vision over time.

Rheumatoid Arthritis
Rheumatoid arthritis (RA) is an autoimmune condition in which the immune system mistakenly attacks tissues in the body, primarily joints.

Sensorineural Hearing Loss
Sensorineural hearing loss (SNHL) is a type of hearing loss where the inner ear (cochlea and/or vestibulocochlear nerve) is affected.

Spinal Cord Injuries
A spinal cord injury (SCI) is characterized by damage to the spinal cord that causes temporary or permanent changes to its ability to conduct electrical activity.

Sports Injuries/Muscle Tear
Sports Injuries/Muscle Tear (rotator cuff, groin, etc) are injuries that occur during sport, athletic activities, or exercising.

Stroke

A stroke is characterized by diminished blood flow and oxygen delivery to an area of the brain that results in cell death.

Traumatic Brain Injury (TBI)/Ataxia

Traumatic brain injury (TBI) occurs when an external force injures the brain.

CHAPTER FOUR

Important things to keep in mind

US Food & Drug Administration (FDA) Classifications

The FDA has set forth classifications for drugs and treatments that are not widely used, or are still early in their development. These classifications are known as Experimental / Investigational, Expanded Access, or Right to Try, or (2) trying an approved drug that is used for a different purpose than what is listed on the FDA-approved drug label (known as Off-Label Use).

When you are prescribed a drug for its approved use, you can be sure:

- That FDA has conducted a careful evaluation of its benefits and risks for that use.
- The decision to use the drug is supported by strong scientific data.
- There is approved drug labeling for healthcare providers on how to use the drug safely and effectively for that use.

The approved drug labeling for healthcare providers gives key information about the drug that includes:

- The specific diseases and conditions that the drug is approved to treat.
- How to use the drug to treat those specific diseases and conditions.
- Information about the risks of the drug.
- Information that healthcare providers should discuss with patients before they take a drug.
- Some drugs may also have labeling information for patients such as Medication Guides, Patient Package Inserts and Instructions for Use.

What are examples of unapproved uses of approved drugs?

Unapproved use of an approved drug is often called “off-label” use. This term can mean that the drug is:

- Used for a disease or medical condition that it is not approved to treat, such as when a chemotherapy is approved to treat one type of cancer, but healthcare providers use it to treat a different type of cancer.
- Given in a different way, such as when a drug is approved as a capsule, but it is given instead in an oral solution.
- Given in a different dose, such as when a drug is approved at a dose of one tablet every day, but a patient is told by their healthcare provider to take two tablets every day.

While the FDA may not have determined that the treatment is safe and effective for the unapproved use, there has been a great number of successful results in using Off-Label and Experimental Treatments.

FDA & Stem Cells

According to the FDA "Stem cell therapies may offer the potential to treat diseases or conditions for which few treatments exist." Due to the vast number of applications and newness of this branch of science, the FDA still classifies Stem Cell Therapies as Experimental and does not currently grant them FDA approval.

Not all Stem Cells are created Equal

Stem Cells and cellular biology, the understanding and applications therein, are incredibly complicated. While it is easy to summarize the abilities of stem cells, true understanding of the applications and biological changes induced by using stem cell therapies, is a very specialized and intricate field of study.

Issues arise when unqualified medical advisers begin offering stem cell therapy to unaware patients; there are many places offering stem cells at "discount prices", but this is a highly inadvisable course when exploring treatment. The old adage "you get what you pay for" applies to your medical treatment as well as every other area of life. Chiropractors, registered nurses, and even some medical doctors simply aren't qualified to perform stem cell injections as a therapeutic treatment.

"You wouldn't let a dentist perform open heart surgery."

You wouldn't let a dentist perform open heart surgery as they simply aren't equipped. The same can be said for stem cell treatments.

When Exploring Treatment

If you decide that stem cell treatment may be right for you, there are several key factors you should consider:

- **Your physician should carry an M.D. or N.M.D.** Stem Cell Therapy is something that should be understood in-depth by a physician who has a broad understanding of human biology.
- **There is no substitute for experience.** Your physician should not be using you as a medical guinea pig." He/she should have several years of experience focusing on regenerative medicine.

*Source www.fda.gov

- **Your physician should first "qualify" you for treatment.** The American Medical Association views stem cell therapy as a medical treatment. All treatments carry some risk and it is important you are evaluated and medically cleared for stem cell therapy prior to treatment.

- **Your Stem Cell products should be heavily screened.** The FDA has strict guidelines for screening tissue for therapeutic use. However, even FDA approved labs can be subject to contaminates. It is extremely important that your physician source his/her Stem Cells from advanced laboratories to ensure both viability and quality.

CHAPTER FIVE

The BestLife Difference

Modern science offers us tremendous advantages never before realized in medical care. It is equally important to understand the power coming from thousands of years of medical knowledge that lies within traditional cultural medicines. It is our firm belief that each of these methodologies are a piece to a larger whole. Each being likened to a chapter in the "big book of human care."

Dr. Garner has worked in urgent cares and family practice for many years and has worked with people with joint and spine issues since becoming a NP in 2005. In 2021 she became certified in stem cell injections and began traveling throughout the United States injecting cells into people with degenerated discs in the spine, injured worn out knees, torn rotator cuffs, wrists, ankles, and feet for neuropathy. Knowing that research shows alpha lipoic has shown to reduce neuropathy pain in patients combining stem cell treatments and IV alpha lipoic acid help treat the cause of the condition and begin repairing the nerves.

Dr. Garner specializes in the following stem cell treatments:

· Hair Loss

· Antiaging

· Erectile Dysfunction

· Sports Injuries

· Muscle Tears

· Tendon Injuries

· Acute Injuries

· Post-Surgical Repair

· Rotator Cuff Injuries

· Osteoarthritis

· Knee Injuries

In addition to our team, we use the highest quality Stem Cell products available. Our Stem Cells are sourced from an ISO3 (clean room) laboratory, and heavily screened for the highest quality.

Unfortunately, Stem cells are not covered by insurance or medicare at this point in time but Dr. Garner has secured cells from an FDA approved lab and using her expertise will develop a plan of care to incorporate these amazing cells to help restore your health using all the best services BEST LIFE MedSpas has to offer.

For more information on Stem Cell Therapies or to explore treatment options, please contact BestLife MedSpas at

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