Cell Technologies

Regenerative Therapies

The future of Medicine

Contact: info@wemake.cloud
Cell: (001) 650-489-5808

INTRODUCTION

Guide for regenerative medicine therapy with mesenchymal stem cells

- **Do you suffer from chronic pain?**
- **Are you looking for a way to reverse the effects of aging?**
- **Do you suffer from any autoimmune disease that affects your quality of life?**

In this guide we will explain how regenerative medicine and mesenchymal stem cell therapies can be the alternative you are looking for.

WHAT ARE
STEM CELLS?

STEM CELLS ARE THE RAW MATERIAL OF THE BODY;
from them all other cells with specialized functions are generated. Under the right conditions in the body or in a laboratory, stem cells divide to form more cells called daughter cells.

These daughter cells become new stem cells or specialized cells (differentiation) with a more specific function, such as blood cells, brain cells, heart muscle cells, or bone cells. No other cell in the body has the natural ability to generate new types of cells.

WHERE DO STEM CELLS COME FROM?

EMBRYONIC STEM CELL

These stem cells come from embryos that are 3 to 5 days old.
These are pluripotent stem cells, which means they can divide into more stem cells or can become any type of cell. Safety: They are not safe to use for treatments. They usually lead to tumor formation since the embryo wants to become a baby. They also are considered unethical by many.

HEMATOPOIETIC STEM CELLS

These stem cells are found in small numbers in bone marrow. Their main function is to produce red and white blood cells. Safety: Excellent safety profile.
Best uses: Blood diseases, leukemia, and certain cancers.
Reasons not to use: They create new red and white blood cells, so they are not effective at healing old injuries. They have not shown much benefit to autoimmune diseases or chronic degenerative diseases.

MESENCHYMAL STEM CELLS

These stem cells are found in amniotic fluid, placenta, umbilical cord, and other tissues.
Safety: Excellent safety profile.
Best uses: Orthopedic joint repair, autoimmune diseases, chronic degenerative diseases, and cosmetic uses.
Reasons not to use: Best to not use for patients that have had cancer within five years as the research isn't clear if it in this case helps or harms.

At ZignaGenix we use mesenchymal stem cells (MSCs)
for our regenerative medicine treatments as we believe they are the best option for our patients.
Thousands of studies have been published about MSCs and everyday there are more testimonies of patients with successful results that are proof of their effectiveness and safety.

WHAT ARE

MESENCHYMAL STEM CELLS (MSCS)?

Mesenchymal stem cells are cells with a high replication capacity and capable of regenerating any organ or mature tissue. Mesenchymal stem cells are stem cells that are capable of guiding regeneration.
Inside the body, mesenchymal stem cells follow inflammatory signals from damaged tissues and have multiple ways to guide the repair.

MESENCHYMAL STEM CELLS CAN DIFFERENTIATE INTO THE FOLLOWING:

CHONDROCYTES

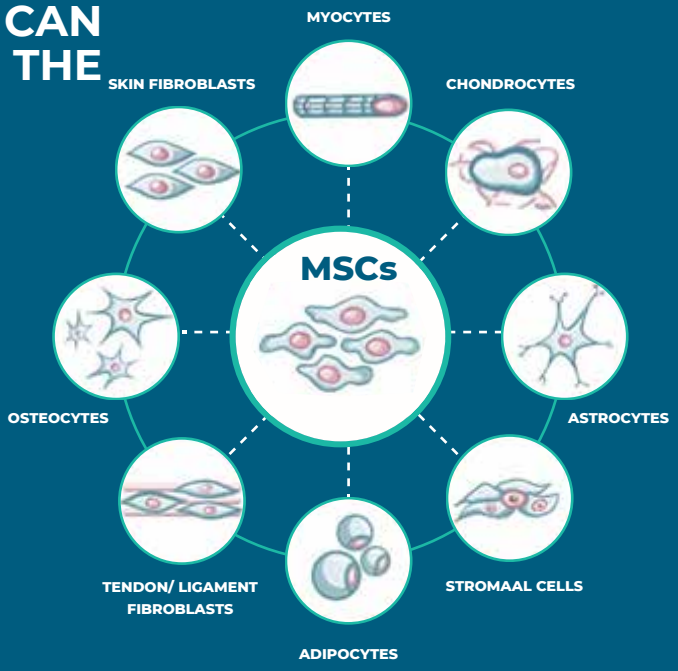
Cells found in healthy cartilage. They produce and maintain the cartilage matrix, which consists mainly of collagen and proteoglycans.

MYOCYTES

A type of cell found in some types of muscle tissue. They help build and repair muscles.

SKIN FIBROBLASTS

Cells within the dermis layer of the skin that are responsible for generating connective tissue allowing the skin to recover from injury.



ASTROCYTES

Glial cells in the brain and spinal cord. They perform many functions, including biochemistry. They support endothelial cells that form the blood-brain barrier, supply nutrients to nervous tissue, maintain extracellular ionic balance, and play a role in the repair and healing process of the brain and spinal cord after traumatic injuries.

STROMAAL CELLS

Connective tissue cells that play an important role in organ healing.

ADIPOCYTES

Fat cells. They help the body store energy.

TENDON/LIGAMENT FIBROBLASTS

Tendon or ligament cells that produce the structural framework of tissues and are essential in wound healing.

OSTEOCYTES

Most common cell in bone. They keep bones healthy and strong.

Once in the human body, these cells DO NOT transform into different types of cells or tissues. They work via the paracrine effect which guides the body's immune and regenerative modulation capacity.

As we age, we have fewer mesenchymal stem cells, in fact, when we reach bone maturity, we only have 10% left of the mesenchymal stem cells that we had.

Mesenchymal stem cells guide and manage the cells of the immune system. So, when we have inflammation, the cells of the immune system receive signals to go to that area and repair.

In a perfectly healthy and functioning state, the cells of the immune system (for example, the T cells) would only attack antigens and pathogens. Unfortunately, since we have fewer mesenchymal stem cells to guide the T cells, they sometimes get confused and instead of attacking only the antigens and pathogens they begin to attack the area of inflammation as well.

So instead of helping, our immune system, it is compromised and aggravates the problem. When we put more mesenchymal stem cells back into our system, we help things work properly again and our body can heal itself naturally and faster as when we were younger.

If you've ever wondered why children heal faster than adults, this is why.

The mesenchymal stem cells can be Autologous or Allogeneic.

Autologous MSCs: They come from a tissue that belongs to the patient that will be treated.

Allogeneic MSCs: They come from a tissue that does NOT belong to the patient that will be treated.

MSCS AUTOLOGOUS

(from fat or Bone Marrow)

- These come from the patient's own body.
- They are the only type of MSCs available in the USA, Canada, Australia, and most European countries due to regulations that do not allow the administration of cultured and expanded MSCs.
- They do not replicate fast enough when cultured.
- They are generally obtained from bone marrow and adipose tissue, which requires a considerably painful procedure for the patient.
- The biggest disadvantage when doing a treatment with these MSCs in another country is that since they cannot be replicated and expanded and must be administered the same day, the number of MSCs applied for the treatment is insufficient to have good results.
- If a patient has an autoimmune disease, the use of its own stem cells is not recommended since the MSCs are not working properly.

MSCS ALLOGENEIC

(from Umbilical Cord or Blood)

- They come from a donor.
- The sanitary regulation in México allows the cultivation, expansion, and therapeutic use of MSCs to those labs and clinics that have the official authorized licenses.
- In our case we obtain umbilical cord and placenta tissue from a live, healthy birth.
- They replicate (expand) very quickly, so it is possible to have many cells available for treatments in a short time.
- There is no risk of rejection by the recipient because the MSCs lack human leukocyte antigen (HLA).
- These MSCs are best for autoimmune diseases because they are from the youngest possible tissue that has had little to no interaction with the immune system. This means they can help reprogram the recipient's immune system to function properly.
- They are excellent for anti-aging because they are from the youngest possible tissue and their telomere length is longer.

HOW DO

MESENCHYMAL STEM CELLS WORK?

MSCS TARGET INFLAMMATION

MSCs are attracted to inflammation. When they reach an inflamed area of the body, they work on the root cause. They have many tools to guide the repair process such as cytokines, chemokines, neurotrophic factors, growth factors and exosomes.

CYTOKINES

are signaling proteins that MSCs release to influence immune cells, repair cells and tissues.

CHEMOKINES

use chemical stimulus to influence cells in the body.

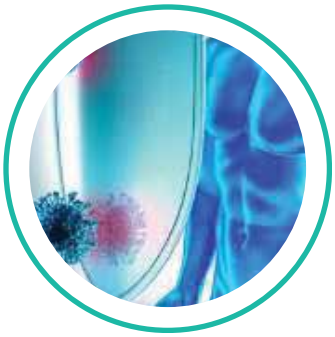
NEUROTROPHIC FACTORS

released by MSCs are capable of guiding neurons to regenerate nerves. They help to restore the myelin in the nerve sheath that allows the repair of their electrical connectivity.

THE GROWTH FACTORS

released by the MSCs can help in cell regeneration and the elimination of fibrosis. Some like VEGF-1 help improve blood flow to regenerating areas by creating new micro blood vessels.

MSCs are smart enough to know what to release in the specific area of inflammation to produce the best repair and healing process. This is how our bodies are designed to heal, but as we age, we have fewer and fewer MSCs. This means that white blood cells take over most of the healing process, which they do through fibrosis (scarring).
This often causes more problems because it is a patch up job and prevents healing. MSCs heal efficiently.

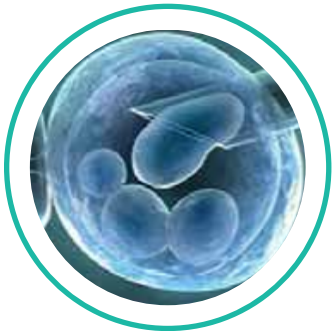


MSCS HELP THE IMMUNE SYSTEM

They have a profound effect on the immune system. They are capable of releasing cytokines to reprogram immune cells. This is especially effective in autoimmune conditions where immune cells are attacking the body. MSCs reprogram immune cells to protect the body rather than attack it by creating a cascade of positive immune responses to improve immune function and many other health benefits.

MSCS HELP REPAIR NERVES

MSCs work fast on damaged nerves. They reach damaged nerves following inflammation markers and releasing neurotropic factors. These are capable of interacting with neurons, guiding them to repair the myelin sheath around the damaged nerve. If a nerve is pinched or compressed, then MSCs repair around the compressed area to re-establish electrical connection and relieve pain. We have obtained relief from neuropathic pain much faster than other treatments and have helped many patients reduce or eliminate the use of strong pain relievers.



MSCS GUIDE THE PROCESS OF REGENERATION AND HEALING

You could say that MSCs are like the managers on a construction site when it comes to the regeneration and healing process. They send out their arsenal of tools to tell the repair cells what to do.

By administering the mesenchymal stem cells intravenously (IV) or by direct infiltration we can accelerate the regenerative and healing process.

Normally the regeneration time is from 3 to 6 months after treatment, although in many cases the relief of pain and discomfort can be felt much faster. Many conditions for which there is currently no conventional treatment can be treated and significantly improve the quality of life of patients through regenerative medicine therapies with MSCs.

We treat a wide range of autoimmune diseases, chronic degenerative diseases, orthopedic injuries and more.

WE STRONGLY BELIEVE THAT MSCS ARE TRULY THE FUTURE OF MEDICINE.

WHAT RESULTS CAN I EXPECT

FROM REGENERATIVE MEDICINE THERAPIES WITH MSCS?

EXPECTATIONS OF THERAPY WITH MSCS

We only offer treatments for conditions that are backed by many years of research and free of side effects. Many studies have shown the efficacy of mesenchymal stem cell therapies for various degenerative diseases, and we have had great success with our patients throughout these 10 years of experience.

RELIEF OF PAIN AND INFLAMMATION

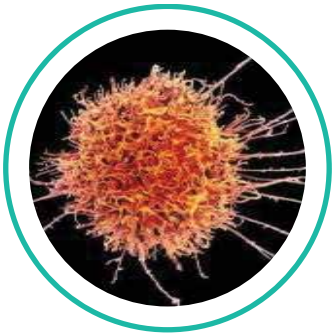
You can expect mesenchymal stem cells to target chronic or recent inflammation. Then to guide the regenerative process to fix the root cause. Our patients report less or no pain, more mobility and greater strength. Most patients see results 3-6 months after treatment. Relief of pain and discomfort may occur sooner.

REGENERATE DEGRADED TISSUE

You can expect mesenchymal stem cells to regenerate damaged, diminished, and degraded tissue. The degree of regeneration and repair depends on the patient, how old the injury is, the patient habits and the follow-up to the indications that are given after the treatment. Our protocols include imaging studies tailored to each treatment to determine the current condition of the injury and give the patient realistic expectations. We use as many MSCs as possible in hope that one treatment will be enough. If the damage is too much, more than one treatment may be required for full recovery (rare). Normally 3 to 6 months after the treatment are necessary to obtain results. Relief of pain and discomfort may occur sooner.

REPROGRAM THE IMMUNE SYSTEM

You can expect mesenchymal stem cells to improve the immune function. How much and for how long will depend on how long the patient has had the disease and the patient's own body. Most patients see results 3-6 months after treatment. In some cases, a follow-up treatment 1 or 2 years later may be necessary. We use as many MSCs as possible in hope that one treatment will be enough.



OUR MESENCHYMAL

STEM CELLS ARE SAFE

SAFETY STARTS IN THE LAB

Our lab adheres to the highest standards of MSCs production. Our clinic is equipped with advanced technology and adheres to the highest standards of safety, ensuring optimal outcomes for our patients.

SAFETY CONTINUES AT THE CLINIC

Our physicians are certified to administer MSCs treatments and have many years of experience. We adhere to the highest-level sterility and safety protocols. Positive results are our top priority.

Our clinics in North America has all the necessary licenses and permits to obtain, cultivate, and expand mesenchymal stem cells.

MSCS FOR PAIN AND ORTHOPEDIC CONDITIONS

Fortunately, mesenchymal stem cells are extremely effective in repairing cartilage, ligaments, tendons, muscles, and bones.

It is possible to do regenerative medicine therapies with MSCs in the spine (cervical, thoracic, and lumbar), shoulder, elbow, hip, knee, ankle, wrist, hand, and foot.

It is important to perform bloodwork and imaging tests, to have a starting point, to confirm that the treatment is viable and can be beneficial for the patient.

With that we can establish a treatment plan and we are able to give the patient realistic expectations of the results that can be obtained.

MSCS FOR

AUTOIMMUNE DISEASES

Mesenchymal stem cells (MSCs) have given extraordinary results against autoimmune diseases. The reason for their effectiveness is that they send out cytokines to reprogram the immune system.

MSCs create a chain of positive reactions in the body to achieve long-lasting results.

Most of our patients have improved their quality of life considerably with a single treatment.

TYPE 2 DIABETES

MSCs reprogram the immune system to protect the pancreas, causing glucose levels and A1C to drop.

RHEUMATOID ARTHRITIS

MSCs reprogram the immune system to protect joints and regenerate cartilage, reducing or eliminating pain.

MULTIPLE SCLEROSIS

MSCs reprogram the immune system to protect the brain and spinal cord by healing their lesions and reducing or eliminating symptoms.

ULCERATIVE COLITIS

MSCs reprogram the immune system to protect the intestines and colon by eliminating fibrosis, repairing tissue, and decreasing or eliminating pain.

MSCS FOR

SEXUAL FUNCTION

P-SHOT

Mesenchymal stem cells in regenerative medicine have proven being very in treating erectile dysfunction, increased sensitivity, Peroni's disease, useful and general well-being. Mesenchymal stem cells break down any fibrosis in the penis and guide cell repair. They help create new blood vessels that help the patient so that he can have more and longer lasting erections. Most patients see their performance improved within 1 to 3 months of treatment.

V-SHOT (O-SHOT)

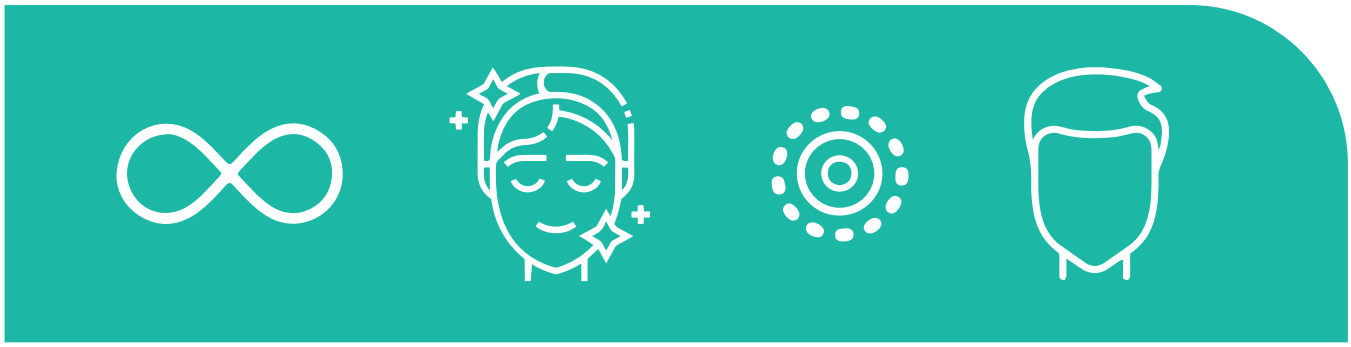
Mesenchymal stem cells achieve increased sensitivity and lubrication, they also regenerate and strengthen tissue, reducing and even eliminating incontinence and providing general well-being. The MSCs repair fibrosis in the vagina so that the tissue can regenerate. They help create new blood vessels which increases the sensitivity of the patient. Part of our treatment includes the use of a device called High Intensity Focused Ultrasound (HIFU). HIFU tightens the vaginal walls to strengthen them which helps improve orgasms and prevent or treat incontinence.

PROSTATE

Mesenchymal stem cell can reduce or eliminate inflammation of the prostate. As men age the chance of an inflamed prostate increases. If left unchecked this can become a serious problem and even pose a risk of cancer.
The prostate stem cell treatment will help reduce the size of an inflamed prostate. This often leads to fixing issues such as frequent urination or erectile dysfunction. This is a very safe procedure.

MSCS FOR

ANTI-AGING



Mesenchymal stem cells (MSCs) have many anti-aging abilities.
Almost all diseases related to aging begin with inflammation, as mesenchymal stem cells are attracted to inflammation to guide regeneration.

Several studies have shown that MSCs extend the length of telomeres in certain cells which extend cell life and therefore the life of the patient. MSCs are very effective
in helping to eliminate senescent cells that can contribute to life extension. These are just a few of the many ways they help extend life and slow aging.

MSCS FOR AESTHETIC

IN SKIN

MSCs can create new collagen and restoring fat under the skin. They will also guide skin cell repair and its underlying problems. We combine stem cells with Platelet-rich plasma (PRP) which it is loaded with growth factors that help repair tissue and form new blood micro vesicles.

ON THE SCALP

MSCs will strengthen the hair follicle to prevent hair loss and promote the growth of new hair.