

# What is Regenerative Medicine?

Regenerative medicine is focused on developing techniques to replace or regenerate human cells, tissues, or organs to restore or establish normal function.

It involves using various approaches like stem cell therapy, tissue engineering, and other technologies to repair or replace damaged tissues or organs.



# What Is This Therapy Used For?

The goal is to harness the body's natural healing abilities or introduce external means to aid in the repair or regeneration of tissues, potentially offering treatments for conditions that currently have limited options, such as some organic diseases (thyroid, gut health) or severe tissue damage.

Or in simpler terms, it's helping to reverse the everyday damage our bodies undergo from joint issues to autoimmune diseases and more.



# Why we offer Regenerative Medicine

Dr. Justin, Dr. Matt, and Dr. Jessy suffered from old athletic injuries and current issues that have caused damage to joints including knees, shoulders, and back issues as well as digestive issues and more. Regerative Medicine has played a large roll in reversing those issues and helping them live life to it's fullest.

So of course we are going to give our clients access to the same strategies we have done for our own health. We have an MD and NP on staff to meet all these needs

And over the years many of our clients have been able to repair or reverse their health issues!

# Our Flagship Products

#### **EV Pure (Exosomes)**

Receptors found on Stem Cells that direct the body to activate an immune response which may rebuild healthy tissue and re- establish the bodies normal, healthy inflammatory response.

#### HylaGel (Stem Cells)

Pure Wharton's Jelly has potential to grow into any tissue the body needs to regenerate. When injected, they may halt degeneration and rebuild healthy tissue.

#### Vitti Pure and Platelet Rich Plasma

Healing growth factors found in the blood. When injected locally can crush inflammation and stimulate a repair process. Let's Do A Deeper Dive

# PLATELET RICH PLASMA

#### What Is It?

Platelet-rich plasma (PRP) is a substance derived from your own blood that contains a higher concentration of platelets than normal. Platelets are tiny blood cells that play a crucial role in blood clotting and wound healing.

## How Does PRP Works In The Body?

The concentrated platelets in PRP injection release growth factors and other proteins that facilitate the healing process and may accelerate tissue repair. Its use varies across medical specialties and continues to be studied for its effectiveness in different applications.

## How Is PRP Made?

To create PRP, a small amount of your blood is drawn and then spun in a centrifuge machine to separate the different components of blood. This process isolates the platelets and concentrates them in plasma, forming the platelet-rich plasma.

\*Exodus Health Center also offers Vitti-Pure which is PRP derived from healthy Umbilical Cord Tissue (this is never from aborted fetal tissue). Vitti-Pure offers an alternative to a blood draw for our clients.\*





#### What is PRP Used For?

PRP is used in medical treatments as well as in the beauty world. The following are the most common uses of PRP therapy.

1. **Orthopedics**: PRP injections are used to treat joint (AMAZING FOR KNEES AND SHOULDERS AND OTHER JOINTS) injuries, osteoarthritis, tendonitis, and other musculoskeletal problems. The PRP is injected directly into the injured area to stimulate tissue repair and reduce inflammation.

2. **Sports Medicine**: Athletes often use PRP therapy to speed up recovery from sports-related injuries like tendon and ligament sprains or tears (PLANTAR FASCIITIS, ACHILLES, ELBOWS, and SHOULDERS improve drastically). It's believed to promote healing and possibly enhance tissue regeneration.

3. **Dermatology**: In dermatology and cosmetic medicine, PRP is used for skin rejuvenation, scar reduction, and hair loss treatment. It's injected into the skin or applied topically after procedures like micro needling to stimulate collagen production and improve skin texture and appearance.

4. **Dental Procedures**: PRP may be used in oral surgery, particularly in procedures like dental implant placement, to aid in tissue healing and bone regeneration.





# STEM CELLS

#### What Are Stem Cells?

Stem cells are special cells in the body that have the remarkable ability to develop into many different cell types. They're unique because they can divide and produce both identical stem cells (self-renewal) and specialized cells with specific functions (differentiation) that make up various tissues, organs, and systems in the body.

#### Where Are Stem Cells Found?

There are two primary types of stem cells:

1. Embryonic stem cells: These are found in embryos and have the potential to become any type of cell in the body. They are pluripotent, meaning they can differentiate into almost any cell type. <u>AT NO POINT</u> EVER ARE STEM CELLS DERIVED FROM ABORTED FETAL TISSUE!

2. Adult (somatic) stem cells: These exist in various tissues throughout the body (including umbilical cord blood which are preferred) and are responsible for repairing and maintaining specific tissues. They are multipotent or sometimes unipotent, meaning they can differentiate into a limited number of cell types related to the tissue they reside in.





#### Why Use Umbilical Cord Blood Stem Cells?

While various tissues (like adipose fat tissue) contain Stem Cells, Umbilical Cord Stem Cells are the highest concentration and highest potency at birth giving the best chance for regenerative healing.

#### How Are Stem Cells Harvested For Use?

Umbilical cord blood stem cells are collected immediately after a baby is born and the umbilical cord is clamped and cut. The process of collecting these stem cells is relatively simple and painless. Here's an overview of the steps involved: Our Current Lab tracks multiple factors in both mom and baby from before pregnancy all the way through birth and has the most stringent requirements to be a donor. At any point if the requirements aren't met the cord blood will not be used.

1.Consent and Preparations: Prior to birth, the parents may decide to donate or privately store the cord blood. If they choose to bank it privately for potential future use by their family, they need to arrange with a cord blood bank in advance.

2.Collection: After the baby is born and the umbilical cord is clamped and cut, a healthcare professional trained in cord blood collection will collect the blood from the umbilical cord using a needle and a special collection bag.

3.Processing: The collected cord blood is then transported to a laboratory. Here, it undergoes processing to extract and isolate the stem cells from the rest of the blood components.

4.Cryopreservation: The isolated stem cells are frozen and stored at very low temperatures in a cryogenic storage facility. These temperatures preserve the stem cells for potential future use in medical treatments.





#### How Are Stem Cells Used For Regenerative Medicine?

Stem cells have significant potential in medicine for regenerative therapies, as they could be used to replace or repair damaged tissues and organs. Regenerative medicine aims to repair, replace, or regenerate damaged tissues or organs, and stem cells play a crucial role in achieving these goals. Here are some ways stem cells are used in regenerative medicine:

- Tissue Regeneration: Stem cells can be guided to differentiate into specific cell types needed for repairing or replacing damaged tissues.
   For instance, in orthopedics, stem cells might be used to potentially regenerate bone or cartilage in injured joints.
- 2. **Organ Repair:** Stem cells are investigated for their potential to regenerate damaged organs, such as the heart, liver, or kidneys. Research explores how to stimulate stem cells to differentiate into the specific cell types required for organ repair.
- 3. **Treatment of Diseases**: Stem cell therapies are being explored as potential treatments for various diseases. For example:
  - Hematopoietic stem cell transplants are used to treat certain blood disorders and cancers like leukemia.
  - Stem cell-based therapies are investigated for neurological conditions like Parkinson's and Alzheimer's disease, where damaged neurons might be replaced with healthy ones.
  - Clinical trials explore the use of stem cells in treating spinal cord injuries, diabetes, and heart disease.

4. **Wound Healing**: Stem cells are researched for their role in enhancing wound healing. They can promote tissue repair and regeneration, potentially improving the healing process for chronic wounds or injuries.







## How Are Stem Cells Applied Clinically?

**1.Locally:** Stem Cells can be injected directly in to a joint or area to stimulate regenerative properties in that tissue or area (commonly used for joint repair such as knees and shoulder regeneration)

**2.Systemically:** Stem Cells can be injected through an IV push directly to the blood stream so they can access all areas of the body where their regenerative properties can be used. This requires a specially filtered Stem Cell and is often done in conjunction with Exosomes (see Exosomes) to increase healing.

**3.Locally and Systemically done together.** 

# This is An Evolving Therapy with So Much Promise

While stem cell therapies hold promise, their application in clinical settings is still being researched and refined. Challenges include ensuring the safety and effectiveness of treatments, ethical considerations, and addressing potential immune rejection issues when using stem cells from donors. Clinical trials and ongoing research continue to explore the full potential and safety of stem cell-based therapies in regenerative medicine.

# What Can You Expect?

Because these are healing messengers designed for body regeneration this process takes time. Some people experience a quick internal environment change and ease of symptoms but most of the time it takes patience (and sometimes another treatment) to let these cells talk with the body and create the healing they need.





# EXOSOMES

#### What Are Exosomes?

Micro-Vesicles (exosomes) are acellular "packages" that carry all the necessary factors to enhance your bodies' ability to potentially regenerate any and every cell of the body.

Micro-Vesicles (exosomes) were first identified by scientists approximately 30 years ago. In the past decades researchers have made amazing progress with these "exosomes" for all kinds of health purposes but in- particular while looking for regenerative medicine cures and treatments for Autoimmune Diseases. What also makes them particularly powerful is they can cross the blood-brain barrier, making them very special in the world of regenerative medicine.

These Exosomes are not cells but are powerful communicators ranging between 30-150 nm in size which is about 1/1,000th the size of a cell. The other difference is they contain no nucleus or DNA. Because of this they can be regarded as the purest form of regenerative therapy available because their function is to direct tissue and wound healing by activating the patient's own regenerative cell response.

#### Where Are Exosomes Found?

Exosomes are extracellular (outside the cell) vesicles (communicators) produced by virtually every cell type in out body as a way of communication and transmission of Healing Factors.

While found everywhere they are found in large quantities on Stem Cells (cells that can become anything the body needs, see Stem Cells) throughout the body. However, they are the most powerful for health and healing when harvested from Umbilical Blood Stem Cells (UCTSC which stands for umbilical cord tissue stem cells) because Umbilical Blood contains the highest amount and most pure form of stem cells and exosomes.





#### How Are Exosomes Harvested For Use?:

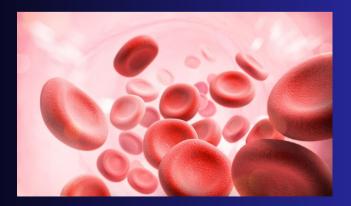
Umbilical cord blood stem cells are collected immediately after a baby is born and the umbilical cord is clamped and cut. The process of collecting these exosomes from stem cells is relatively simple and painless. Here's an overview of the steps involved: Our Current Lab tracks multiple factors in both mom and baby from before pregnancy all the way through birth and has the most stringent requirements to be a donor.At any point if the requirements aren't met the cord blood will not be used.

1.Consent and Preparations: Prior to birth, the parents may decide to donate or privately store the cord blood. If they choose to bank it privately for potential future use by their family, they need to arrange with a cord blood bank in advance.

2.Collection: After the baby is born and the umbilical cord is clamped and cut, a healthcare professional trained in cord blood collection will collect the blood from the umbilical cord using a needle and a special collection bag.

3.Processing: The collected cord blood is then transported to a laboratory. Here it undergoes processing to extract and isolate the exosomes from the stem cells from the rest of the blood components.

4.Cryopreservation: The isolated exosomes are frozen and stored at very low temperatures in a cryogenic storage facility. These temperatures preserve the stem cells for potential future use in medical treatments.





#### How Do Exosomes Work?

Each Exosome carries proteins, growth factors and immune communication agents that assist the surrounding cells with promoting a healing environment. Because of special protein receptors on cell membranes for these vesicles, they can travel and focus on healing areas of injury and inflammation by stimulating the body's own natural regenerative processes.

Exosomes obtained from stem cells (particularly from Umbilical Blood) contain all the necessary factors to promote healing of any and every cell of the body. The massive amount of information and the wide spectrum of proteins that these vesicles carry allow these to be much more effective than normal healing factors used in traditional medicine.

# How Are Exosomes Applied Clinically?

**1.Locally:** Exosomes can be injected directly in to a joint or area to stimulate regenerative properties in that tissue or area (commonly used for joint repair such as knees and shoulder regeneration)

**2.Systemically:** Exosomes can be injected through an IV push directly to the blood stream so they can access all areas of the body where their regenerative properties can be used.

#### 3.Locally and Systemically done together.





#### Why Exosomes Are So Amazing?

- They are neuroprotective keeping the Nerve System Protected
- They can help extend cell lifespan and longevity.
- They protect against cellular and oxidative damage from everyday life.
- They have a major effect on reducing inflammation.
- They stimulate the production of angiogenesis (new blood vessel formation).
- They reduce apoptosis (programmed cell death) allowing faster repair of tissues.
- They enhance tissue remodeling which heals foundational proteins.
- Because they contain no DNA,
- They can be used with other true "stem cell regenerative therapies" for further effectiveness.

# What Clinical Applications Are They Used For?

- Central Nervous System
  Disorders
- Metabolic Processes
  and Hormone Health
- Autoimmune Disorders and Defenses
- Anti-inflammatory Responses
- Sexual Health Healing
- Degenerative Conditions
  of the Skeletal System
- Injury and Wound Healing
- Eyesight/Eye Disease
- Diabetes
- Skin Health
- And more.....

- Osteoarthritic Conditions of the Joints
- Cognitive Health
- Acceleration of Post-Surgery Healing
- Carpal Tunnel Syndrome
- Long Haul COVID healing
- Joint Repair and Healing
- Tendonitis Issues
- Back and Neck Pain
- Gut Health and Healing
- Aging Support

# Let's Wrap This Up

# Is This Therapy Safe?

XODUS

Our Products go through rigourous safety testing and are approved by oversight boards for both research and retail use.

There are no known side effects to these therapies other than occasional soreness at the injection site.

#### <u>AT NO POINT EVER ARE STEM CELLS DERIVED FROM ABORTED</u> FETAL TISSUE!

## What Can You Expect?

Because these are healing messengers designed for body regeneration this process takes time. Some people experience a quick internal environment change and ease of symptoms but most of the time it takes patience (and sometimes another treatment) to let these micro-vesicles talk with the body and create the healing they need.

# Which Therapy is Right For You?

The only way to know which therapy is right for you is to do a thorough consultation and examination including imaging if necessary. Many times combinations of the therapies is necessary with followups as often as 30 days!

# Why Choose Exodus Health Center?

While there are many choices to help with your Regenerative Medicine therapies and healing we believe our approach is unique.

- Thorough consultation and examination
- Expert application of treatment
- Regular Follow Up appointments for 1 year when necessary included
- Access to other In-Office Therapies at Exodus Health Center
- Rehabilitative Home Care Included in each plan
- Dietary Supplement Protocols to increase healing time included in each plan

# What's Your Next Step?

It's as simple as scheduling your consultation with one of our Doctors by calling 615-445-7701