ZEN
CELL REJUVENATION

ZEN CLINIC

Stem cell Therapy

You've heard about stem cells in the news, and perhaps you've wondered if they might help you or a loved one with Degenerative illnesses or injury's. You may wonder what stem cells are, how they're being used to treat such disease and injuries, and why they're so important to longevity.

Here are some answers to frequently asked questions about stem cells.

What are stem cells?

Stem cells are the body's raw materials — cells from which all other cells with specialized functions are generated. Under the right conditions in the body or a laboratory, stem cells divide to form more cells called daughter cells.

These daughter cells become either 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 cell types.

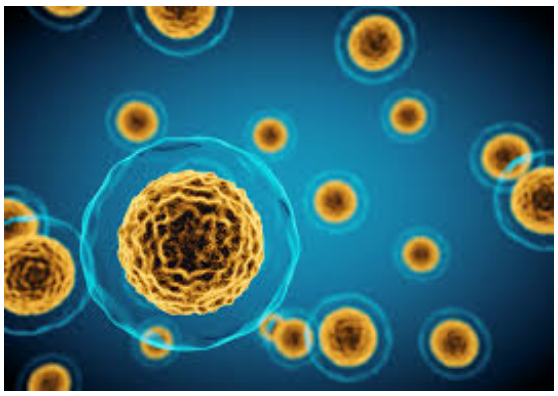
How do they work?

- **Generate healthy cells to replace cells affected by disease (regenerative medicine).** Stem cells can be guided into becoming specific cells that can be used in people to regenerate and repair tissues that have been damaged or affected by disease. People who might benefit from stem cell therapies include those suffering from osteoarthritis related conditions , diabetes, Parkinson's disease, amyotrophic lateral sclerosis, Alzheimer's disease, heart disease, stroke, and Longevity.

Where do stem cells come from?

There are several sources of stem cells:

- **Embryonic stem cells often referred to as MSC.** These stem cells come from embryos that are 3 to 5 days old. At this stage, an embryo is called a blastocyst and has about 150 cells. These are pluripotent (ploo-RIP-uh-tunt) stem cells, meaning they can divide into more stem cells or can become any type of cell in the body. This versatility allows embryonic stem cells to be used to regenerate or repair diseased tissue and organs.



- **Adult stem cells.** These stem cells are found in small numbers in most adult tissues, such as bone marrow or fat. Compared with embryonic stem cells, adult stem cells have a more limited ability to give rise to various cells of the body. Until recently,

researchers thought adult stem cells could create only similar types of cells. For instance, researchers thought that stem cells residing in the bone marrow could give rise only to blood cells. However, emerging evidence suggests that adult stem cells may be able to create various types of cells. For instance, bone marrow stem cells may be able to create bone or heart muscle cells. This research has led to early-stage clinical trials to test usefulness and safety in people. For example, adult stem cells are currently being tested in people with neurological or heart disease.

- **Perinatal stem cells.** Researchers have discovered stem cells in amniotic fluid as well as umbilical cord blood. These stem cells have the ability to change into specialized cells. Amniotic fluid fills the sac that surrounds and protects a developing fetus in the uterus. Researchers have identified stem cells in samples of amniotic fluid drawn from pregnant women for testing or treatment — a procedure called amniocentesis.

What is stem cell therapy (regenerative medicine) and how does it work?

Stem cell therapy, also known as regenerative medicine, promotes the repair response of diseased, dysfunctional or injured tissue using stem cells or their derivatives.

With current knowledge of stem cells, it is technically feasible to delay aging and improve both health and lifespan.

Stem cells can play a crucial role in delaying the aging process.

Stem cells, can create a sophisticated shield, which can prevent the effects of aging or at the very least slow the process down.

Increased wear and tear of the body's natural stem cells, increases cellular damage, and accelerate the natural process of aging.

Stem cells can potentially absorb the process of cellular aging. The introduction of un-trained stem cells into the human body can rejuvenate existing cells and allow the body to age more gracefully & even reverse and slow down some effects of the aging process. As we age, our cells get sick and die. When a cell dies, it creates a cascade of events, leading to inflammation and disease that can decrease the human lifespan.

The benefits of a stem cell Therapy for aging

- A feeling of vitality and rejuvenation
- Improved capacity for physical activities
- Thickening and improved quality of hair
- Increased libido
- A decrease in pain
- Increased strength, balance & overall mobility
- Enhanced immunity
- Overall improvement in the quality of life
- Immune system regulation

How stem cell therapy reduces inflammation, at a cellular level

Mesenchymal stem cells (MSC) can influence the processes of white blood cells. A macrophage is a large white blood cell that is an

integral part of our immune system. Macrophages are a type of blood cell that removes infectious agents and dead cells from the blood that can create inflammation and reduce inflammation (M2).

M1 macrophages are associated with accelerated aging, and M2 macrophages are associated with anti-aging. Mesenchymal stem cells shift M1 macrophages to M2. They are, therefore, giving the human body more tools to combat the natural aging process by significantly reducing inflammation.

Stem cells can maintain mitochondrial health

Cord tissue-derived mesenchymal stem cells also maintain mitochondrial health (the powerhouse of the cell) by intercellular communication through tunneling nanotubes. This system senses the mitochondrial status of patient's cells and physically transfers mitochondria from stem cells to unhealthy cells.

Stem cell anti aging, how our cells age

Aging is a complex, natural process; the effect of environmental factors, genetics, and routine wear and tear on the bodies eventually takes a toll in a multitude of different ways. It is this result of living life that can bring unavoidable health problems. Over time, the cells of the body age as we do, resulting in their inability to replicate; they become damaged and die. The loss of efficient cell replication is what causes our bodies to age.

What are the 10 signs of aging?

Some of the most common signs of aging are:

- Impaired vision
- Impaired hearing

• Loss of strength in muscles
• Loss of bone density
• Decreased immune system function
• Decreased cognitive ability
• Less efficient metabolism.
• Loss of energy
• Hair loss
• Decreased balance and overall mobility

Stem cell therapy for anti aging

Aging cells can contribute to disease. Thus if cell aging can be prevented, slowed down, or even reversed, many diseases could be better managed. Stem cells may have the ability to slow this process down & combat certain age-related conditions.

How do stem cells slow the aging process?

With stem cell therapies, you are replenishing the supply of stem cells to allow the body to repair and rejuvenate all the organs of your body.

Stem cells possess unique factors that aid in anti-aging by helping our bodies regenerate cellular tissues, such as:

• Skin
• Joints
• Bones
• Organs

This advanced therapy may be able to repair tissue that has been damaged by stress, injury, and environmental factors.

What is stem cell Therapy?

During stem cell therapy a patient receives approximately 10 million to 40 million stem cells depending on body weight a series of Blood tests. These stem cells are harvested from umbilical cord samples, all of which undergo an extensive amount of testing to assure sterility and viability (percentage of live cells).

Once you have passed all the testes to ensure you are viable for Cellular Therapy , you will first go through Colonic Hydro cleansing in a Closed system to rid the body of Toxins and any other unwanted bacteria's that my be lurking in the intestines on colon. This is done normally 2 days before the Cellular therapy starts.

On the day of the therapy the patient is first placed in a Hyperbaric Chamber at 1.3 ATA for 40-60 minutes , and then the Cellular infusion will take place combined with an immune booster.

Each infusion is no more than 15 million cells and can be repeated 7 to 10 days apart .

Patients who undergo stem cell therapy need to understand It would be wrong to promise that Stem Cell will cure an illness however research shows us that the bodies ability to regenerate is a cellular process and that having the ability to replace dying or damaged cells is the first line of defense in longevity and regenerative medicine.

In many cases there is a:

- A feeling of vitality and rejuvenation
- Improved capacity for physical activities
- Thickening and improved quality of hair
- Increased libido
- A decrease in pain
- Increased strength
- Enhanced immunity
- Overall improvement in the quality of life
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Can stem cells cure aging?

With our current knowledge of stem cells, it is technically feasible to delay aging and improve both health and lifespan. Stem cells can play a crucial role in delaying the aging process.

Increased wear and tear of the body's natural stem cells, increases cellular damage, and accelerate the natural process of aging. Stem cells combined with life style changes can potentially absorb the process of cellular aging. The introduction of stem cells into the human body can rejuvenate existing cells and allow the body to age more gracefully & even reverse some effects of the aging process.

Many of us will spend money on nice watches , cars and belongings yet tend to neglect our health ….preventive medicine is the key to longevity and as we understand the process of regenerative cellular therapy , it makes sence to do everything possible to increase longevity.

What is Stem Cell Rejuvenation?

Stem cell rejuvenation is a type of therapy used to combat the effects of the natural aging process. A large amount of youthful stem cells can be injected into the patient via IV. These are intended to replace ones existing "old" cells, thus allow to body to work more efficiently by reducing inflammation, modulating the immune system and promoting tissue repair and regeneration.

So What does it cost?

Cellular therapy is relatively in expensive when weighing up the benefits it offers.

In the past the cost of cellular therapy often reached extravagant pricing however due to the availability and todays technologies the

cost of Cellular therapy has reduced dramatically commencing form as little as:

5000 bht for Platelet Rich Plasma (PRP)

20,000 bht for Othopedic related Cell Therapy

125,000bht - 499,000 bht for Regenerative Cell Therapy depending on requirements .

So What should you expect after therapy ?

You need to think of Stemcell as “workers behind the scene’s”… it a bit like an illness of an organ, the cells slowly become damaged with no symptoms until the body starts to react to the damage or degeneration .

Stem Cell work the same way , in laymen's terms…Once the cells enter the body they are like little solders looking for territory under siege where they will rally to help those solders in need of reinforcement. The solders (cells) then adapt to the territory under attack and begin to multiple and fight to reclaim the territory.

This does not happen overnight… Cell continue to multiple intern boosting the body’s ability to slow and in some cases ward off unwanted

degenerative related illnesses or injury's.

As humans we all respond differently to treatments, some faster than others, but be rest assured in the back ground behind the scenes the Cell are doing their job.

At first you may feel a little tired for 24 hours, sleep is the best time

for the cells to do most of their work. Don't expect a sudden change as if you are going to turn into a super human, remember cells work behind the scenes and continue to do so warding off degeneration of cells and supporting the cells in need of help. As the process continues so does longevity and a better quality of life.

Some time when treating orthopedic related injuries with cell therapy the patient may get a little swelling and aching at the related injury site, this is normal as this is how the healing process works. If swelling happens then you should just put a cold pack on and try not to take anti inflammatory medication as it may slow or restrict the cells healing process.