

Unlock the mystery of Performance longevity Medicine.

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PAIN & WELLNESS





Performance: the action or process of carrying out or accomplishing an action, task, or function.

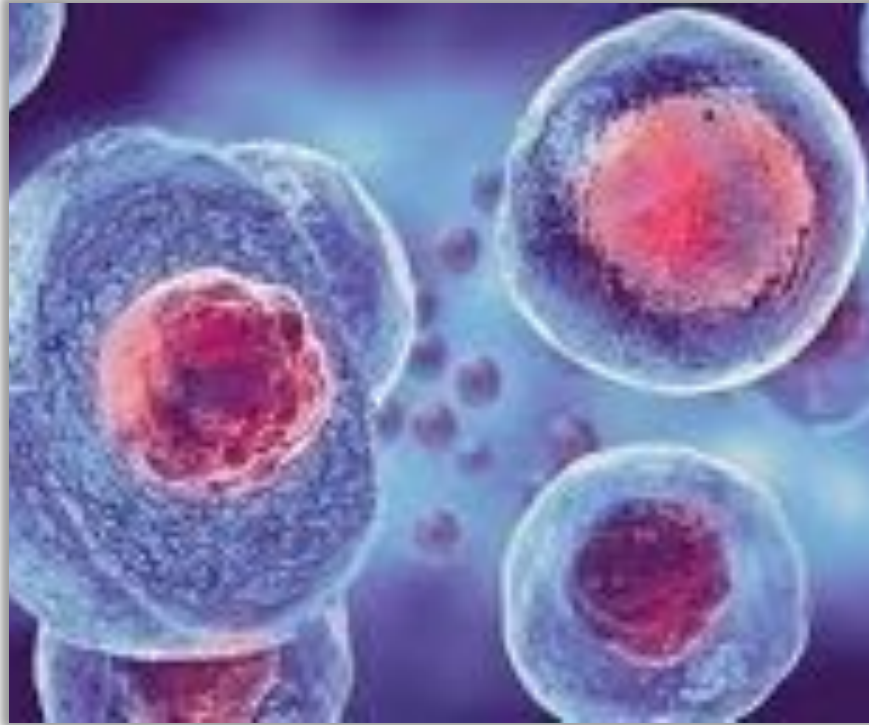
Longevity Medicine: is a medical specialty founded on the application of advanced scientific and medical technologies for the early detection, prevention, treatment, and reversal of age-related discomforts and diseases. This includes genetic, physiological, and nutritional testing to develop a customized protocol for keeping your body supported and nourished with what it needs to feel young and vital for years to come.





Do I need:

- Stem cell
- Exosomes
- Peptides



Stem cells versus exosomes:

Stem cells are a special type of cell found in the body. They're unique because they can become any type of cell, and they act as both building blocks and repair mechanisms in your body.

Exosomes are extracellular vesicles, which is the medical term for tiny bubbles that are released from stem cells. Exosomes carry genetic information and proteins to cells throughout your body, and they create paths for communication between cells

Stem cell therapy:

Stem cell therapy involves guiding stem cells into becoming specific cells in the body. Stem cells are found in several places, including embryos, umbilical cords, and in adult bone marrow and fat.

In stem cell therapy, donor stem cells are placed in your body to replace and repair diseased cells. Stem cells grow and divide for a long time, so treatment gets your body started on the healing process, and then it continues to create healthier cells over time.

Exosome therapy:

Unlike stem cell therapy, exosome therapy doesn't involve using donor cells in your body. Instead, exosomes are extracted from donated human mesenchymal stem cells (MSCs) and sterilized.

The exosome solution contains valuable lipids, messenger-RNA, micro-RNA, signaling cytokines, and proteins. Exosome therapy can be administered through intravenous (IV) therapy or direct injection in the treatment area.

Exosomes are powerful elements that can restore cells throughout your body. They enhance cell-to-cell communication, which is essential for overall cell health.

The idea back in the early 2000s was that ‘progenitor’ or adult stem cells (MSCs) could be given to patients and the administered cells would migrate to sites of damage or disease in the body. Once injected, it was thought, the cells would engraft and persist at these sites of injury and directly replace the patient’s own damaged cells. Example :The administered cells treating cardiac disease would become a part of the patient’s heart tissue. **However, it doesn’t work that way.**

As researchers from Oxford to Scripps have now concluded, it’s the exosomes stem cells release, rather than the cells themselves, that impart the **regenerative benefit**

Exosomes are being described as the ‘secret sauce’ of stem cells. **Exosome therapy** would avoid all the problems of a therapy based on live stem cells and yet harness a natural regenerative capability from stem cells.

Critically, exosomes are inherently less risky than live stem cell transplants. Exosomes cannot replicate; they cannot transform into malignant cells or other harmful cell types; they are less likely to trigger an immunogenic response; they cannot be infected with virus.

Being much smaller than whole cells, exosomes can circulate much more easily through the body to reach sites of injury or disease and trigger healing.

Early academic clinical studies are starting to prove exosomes' potential. A recent placebo-controlled trial on 40 patients with advanced chronic kidney disease showed that the patients receiving exosomes saw enhanced kidney function at 12 months after treatment and no adverse events in the treatment group

Nassar, W., et al. [Umbilical cord mesenchymal stem cells derived extracellular vesicles can safely ameliorate the progression of chronic kidney diseases.](#) *Biomaterials Research* **20**, 21 (2016)





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Exosome therapy and the FDA

Treatment with expanded MSCs is primarily not authorized by the FDA in the United States. These cells require approval from the FDA and require an Investigational New Drug Application (IND) submission.

Cannot make any claims

- Inflammation
- Erectile Performance
- Pain
- Regeneration

Some 'autologous' therapies using the patient's own cells have also become notorious in certain countries and the subject of doubtful or dangerous medical tourism.

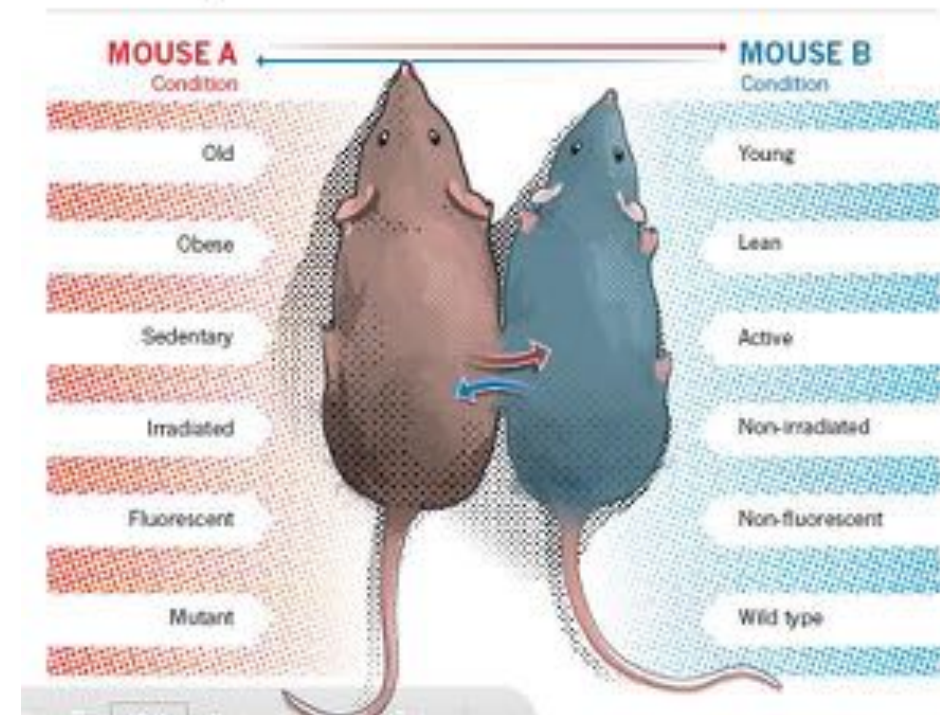
What can Science teach us regarding Aging?

By splicing animals together, scientists have shown that young blood rejuvenates old tissues.

By splicing the blood circulation of 2 animals together we have shown that young blood rejuvenates old tissues, bones, muscles, brain, and nerve tissue.

A simple surgery

A veterinary surgeon will anaesthetize the animals, peel away a thin layer of skin along their sides and stitch or staple the exposed surfaces together. Wound-healing processes join the bloodstreams through a capillary network, and in one to two weeks, the animals are pumping each other's blood.



Hair

Before



After



Joint Pain

Sexual Function

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Cross Barriers

- Alzheimer's Disease.
- Dementias.
- Parkinson's and Other Movement Disorders.
- Stroke and Transient Ischemic Attack (TIA)

KEY ADVANTAGES OF EXOSOMES:

1. Can travel via systemic therapy without risk of clumping
2. Can travel via local therapy
3. Cross the “Blood-Brain Barrier”
4. Deliver miRNA and mRNA
5. Can home
6. Not perceived as foreign
7. No first-pass lung removal as in MSCs
8. Can not transdifferentiate into other cells or into malignant cells
9. Easier to administer, store, freeze
10. Easily controlled dosage
11. Potency related to age of parent MSC

Telomeres

Telomeres are sections of genetic material that form a protective cap at the end of each chromosome in every cell of the body. When a cell divides, the telomere gets a tiny bit shorter, until there is no more telomere left to protect DNA from “unraveling,” and the cell dies. Cellular death causes the body to age, thus making telomeres a novel biomarker for biological age. The longer one’s telomeres, the younger one’s biological age. Moreover, the rate at which telomeres shorten is accelerated by inflammation, oxidative stress, nutritional deficiencies, genetic pre-disposition, and other lifestyle habits. Telomere shortening, when expedited, contributes to cardiovascular disease, dementia, stroke, and cancers. Test is around \$500.

About 1 percent of the heart muscle cells are replaced every year at age 25, and that rate gradually falls to less than half a percent per year by age 75, concluded a team of researchers led by Dr. Jonas Frisen of the Karolinska Institute in Stockholm.



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Peptides

What the heck are they???

A peptide is a short chain made up of two or more amino acids. The amino acids are linked by a chemical bond called a peptide bond. When organized in complex structures (typically consisting of 50 or more amino acids), peptides then become proteins. Peptides have several functions in the body. They are also the basis of various medications.

Research shows that BPC-157 heightens the healing of many different types of tissue from tendon, muscle, and the nervous system. It can also increase blood flow back to injured sites, protect organs, prevent stomach ulcers and heal skin burns.

When peptides are absorbed, they increase your body's natural production of hormones like hGH, the hormone responsible for physical strength and anti-aging skin factors.

**PEPTIDE
THERAPY**

Difference between the GHRH & GHRP peptides.

I wanted to put together a brief summary of which peptide would be the best to pick when a client is trying to choose one product that is going to help a patient obtain their goals. Most of the peptides that are a GHRH and or GHRP or combo all pulse the anterior portion of the pituitary to stimulate or pulse the release of GH to ideally produce IGF1.



Sermorelin Vs CJC1295 Vs Tesamorelin

Sermorelin was the first generation of GHRH's (Growth Hormone Release Hormone), and it is an excellent peptide. CJC1295 is the 2nd generation of this peptide, and it has the same benefits and more. It has a longer half-life which will have a longer pulse on the anterior portion of the pituitary gland for 2.5x longer than sermorelin. It takes less of a CJC1295 to get the same effective dosage as Sermorelin. Tesamorelin is the 3rd generation and is has been shown to have a longer half-life. It is the strongest GHRH on the market.

Sermorelin	CJC 1295	Tesamorelin
Half-Life 8-12 min	Half-Life 30 min	Half-life 26 - 38 min
Average dose 300 - 500 mcg	Average dose 100 mcg	1mg dose
1st generation peptide	2nd generation peptide	3rd generation peptide
Does not raise IGF1	Does not raise IGF1	Does raise IGF1
Does not affect glucose negatively	Does not affect glucose negatively	Increase glucose intolerance (reversible)

➤ Therapeutic Uses

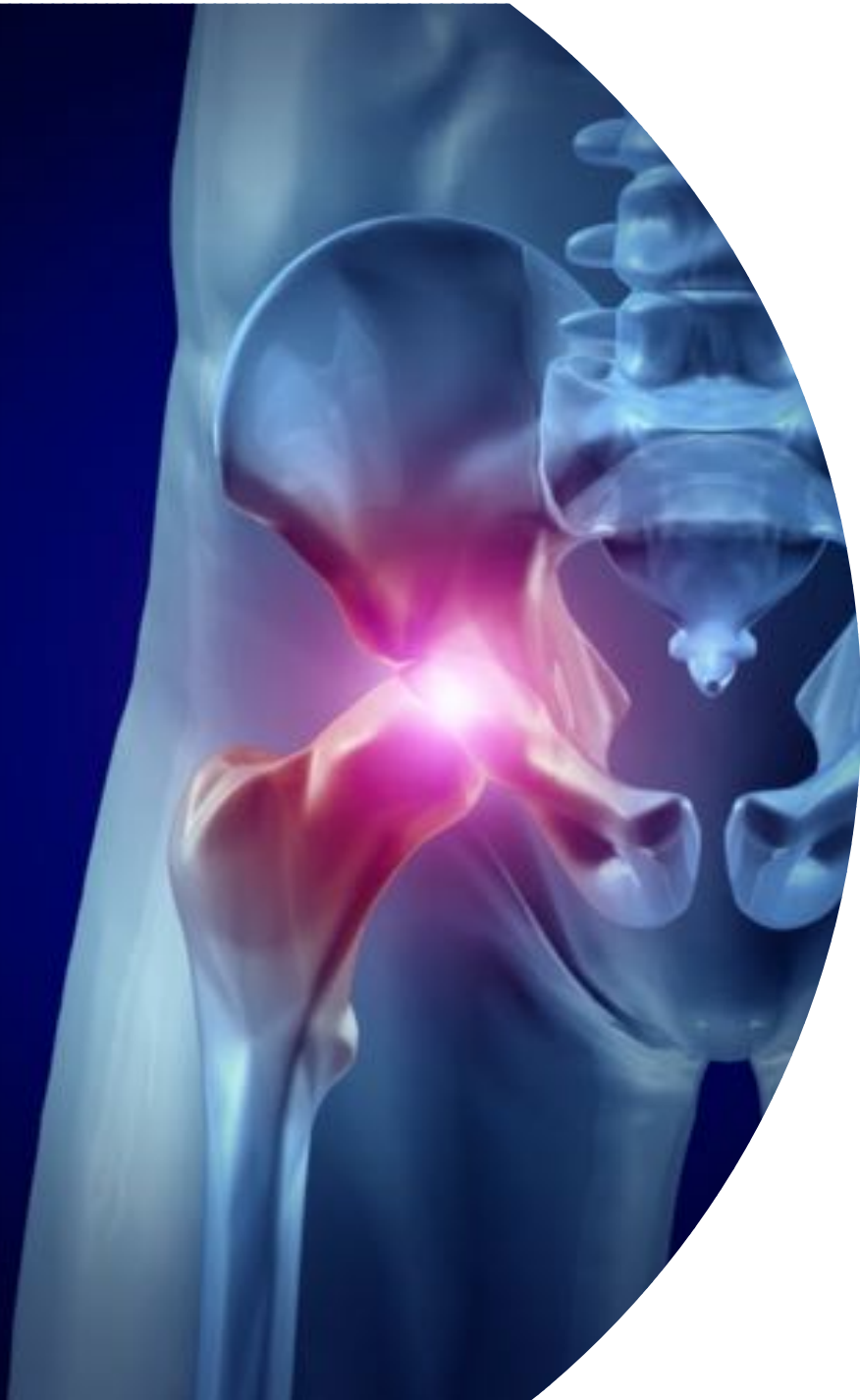
- Anti-oxidant
- Auto-immune diseases
- Neuroinflammation
- Parkinsons
- Chronic Fatigue Syndrome
- Anti-aging





- Can be used for
 - Alzheimer's
 - Anti-bacterial
 - Cancer
 - Anti-aging
- Shown to attenuate the formations of amyloid plaques and neurofibrillary tangles to help in Alzheimer's disease
- Repair impairments in mitochondrial function and cellular metabolism
- Activates SIRT1 and promotes mitochondrial biogenesis
- Infuse 50-100mg over 20-30 minutes 1-2x week





WHAT
BENEFITS
WILL YOU
GAIN WITH
IV THERAPY?



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Cardiac Health Panel



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LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
SMIGIEL	KEITH	MALE	1970-05-01	2108160195	08-16-2021

Lipids

Test name	In Control	Moderate	High Risk	In Control Range	Moderate Range	High Risk Range	Previous
Cholesterol, Total (mg/dL)	159			≤199	200-240	≥241	
LDL Calculation (mg/dL)	81			≤99	100-129	≥130	
HDL Direct (mg/dL)	69			≥56	35-55	≤34	
Cholesterol/HDL Ratio	2.3			≤3.5	3.6-4.9	≥5.0	
Triglyceride (mg/dL)	45			≤149	150-200	≥201	

LDL Direct

Test name	In Control	Moderate	High Risk	In Control Range	Moderate Range	High Risk Range	Previous
LDL Direct (mg/dL)	77			≤99	100-129	≥130	

Apolipoproteins

Test name	In Control	Moderate	High Risk	In Control Range	Moderate Range	High Risk Range	Previous
Apo A-1 (mg/dL)	174			≥120		≤119	
Apo B (mg/dL)	85			≤89	90-119	≥120	
Apo B: Apo A-1	0.37			≤0.69	0.70-0.90	≥0.91	



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• Thank You •
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