

STEM CELLS AND ANTI-AGING PATIENT GUIDE

WE ALL KNOW THE SIGNS OF AGING

We all know the signs of aging. **Our skin loses elasticity** that causes wrinkles. **Our bones become weaker** which leads to the inability to maintain or grow muscle. **The cells in our brain also diminish,** resulting in a loss of focus and memory.

Our body is made up of millions of cells. These **cells are in constant repair.** They need to divide in order to create new cells. Cells can replicate about 50 times before they are no longer able to copy the genetic material correctly.... and as a result our bodies start to show signs of aging.

WHY DOES THIS HAPPEN?

The ends of each chromosome are covered by a "telomere". **Telomeres form a protective cap at the end of each chromosome to prevent DNA loss during cell replication**. Without telomeres, important DNA would be lost every single time a cell divides.

Unfortunately, every time a cell is replicated, the telomeres get shorter, while the aging through cell division is natural, there are other factors that can speed up this process:

Chronic Illness | Cigarette Smoke | Drugs and Alcohol

Environmental Pollution | Hormonal Imbalance | Sun Damage

IN OTHER WORDS, **AGING IS THE IMPACT OF TIME ON THE HUMAN BODY,** AND IT OCCURS ON MULTIPLE LEVELS:

• Cellular Aging:

Cells age based on the number of times they have replicated. A cell can replicate about 50 times before the genetic material is no longer able to be copied accurately, which is due to shortened telomeres. The more damage done to cells by free radicals and other factors, the more cells need to replicate.

• Hormonal Aging:

Hormones play a huge factor in aging, especially during childhood growth and adolescent maturity. Hormone levels fluctuate through life. Puberty brings acne and larger pores. As we get older, hormonal changes lead to dry skin and menopause.

• Accumulated Damage:

Accumulated damage is caused by external factors. Exposure to toxins, the sun, harmful foods, pollution, and smoke take a toll on the body. Over time, these external factors can lead to tissue damage and the body falls behind in its ability to maintain and repair cells, tissues, and organs.

• Metabolic Aging:

As you go about your day, **your cells are constantly turning food into energy,** which produces byproducts that can be harmful. **The process of metabolizing and creating energy results in damage to the body over time.** Some believe that slowing down the metabolic process through practices such as calorie restriction may slow aging in humans.

By smoking, maintaining bad eating habits, not exercising enough or exposing ourselves to smog and bad air quality, we're helping speed the aging of our cells causing those aging signs to appear early. However, we can also reverse those signs by using some treatments, and the one that we advise is stem cell application.

ANTI-AGING STEM CELL THERAPY

We regularly receive patients that wish to recover youthful energy levels, elasticity of their skin and increase their overall well-being. Through the use of mesenchymal stem cells,we administer stem cell injections intravenously (IV) to introduce them into the patient's bloodstream. From there, they travel to organs, areas and tissues that, due to natural damage accumulated through the years, require support in order to regenerate and recover.

Stem cell therapy for anti-aging also reinvigorates the patient's health, promotes immunomodulation, which provides a boost to the immune system, helping in the prevention of possible diseases and unfavorable conditions.

BENEFITS OF STEM CELL THERAPY FOR ANTI-AGING

Immunomodulation

 (regulates immune system) that boosts disease prevention

 Sleeping cycles are stabilized and improved

• Sex drive increases

• Increase energy levels

• Skin is smoothed (facial rejuvenation)

• Age spots fade (face)

What stem cells do is alleviate the "normal" load that the immune system usually sustains. After stem cell treatment, your immune system stabilizes and functions better, approaching its natural balance. With this treatment, you help yourself to prevent diseases and fight infections or future conditions more effectively. With an immune system in a better working state, it can combat infections or conditions in a "reinforced" manner. As a result, it can continue to bear the regular daily burden and new additions that tend to arise with age



HOW WE CAN HELP YOU?

Our treatment plan is based upon three advantages that these regenerative cells, also known as Mesenchymal stem cells, exhibit. Firstly, **they release anti-inflammatory** proteins over an extended period. Secondly, **they have an immunomodulatory effect**, which means that they can help control and regulate the immune system. Lastly, **they exhibit a paracrine effect**, secreting substances like exosomes to alter cell behavior and communicate with neighboring cells, guiding them to areas of damaged tissue. These three aspects of Mesenchymal stem cells play a big part in treating patients and garnering results, especially in autoimmune disorders and chronic degenerative diseases.

The effects of these regenerative cells on the human body can be seen almost immediately, though in some cases it takes a few weeks after the reintroduction of cells. The secondary response exhibited is often called the trophic effect, and this is where the formation of new tissue can be observed. These cells can help promote angiogenesis, or formation of new blood vessels, which can help bring additional blood supply to the damaged tissue to help promote healing.

WHAT ARE THE DIFFERENT CELLULAR THERAPIES AVAILABLE FOR YOU?

Of the different kinds of cellular products available for use, there are two main sources that can be used to target Anti-aging

- Autologous procedures are those in which the patient is their own donor for the cellular therapy treatment. In these kinds of procedures, a doctor takes a sample (usually of bone marrow or adipose tissue) and harvests the cells from it, before administering it locally.
- Allogeneic procedures are those in which the patient receives cells that have been sourced from a donor that is not the patient. These samples are neonatal tissue and are comprised of umbilical cord blood. They are extensively screened to ensure the quality and health of the cells.

The type of treatment used depends on a variety of factors, including medical history and age. At the Cellular Hope Institute, we endeavor to give each patient a personalized, case-by-case treatment plan to ensure that the only possible outcome is a positive one.



CELLULAR HOP

SCHEDULE A FREE CONSULTATION WITH OUR SPECIALISTS

Before determining which type of treatment is most appropriate, our medical team should review the patient's medical history, including previous and current treatments.

We interview our patients to know more about them in order to form a custom treatment plan.

If you are interested, we could schedule a time for you to meet our medical team and ask them any questions you have, as well as for them to walk you through the possible treatment you will be undergoing.

For more information on how to schedule a FREE consultation with our team to address any questions about undergoing an anti-aging treatment with Cellular Hope Institute contact us in the following link www.cellularhopeinstitute.com/thank-you-page-aesthetics-anti-aging/



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