

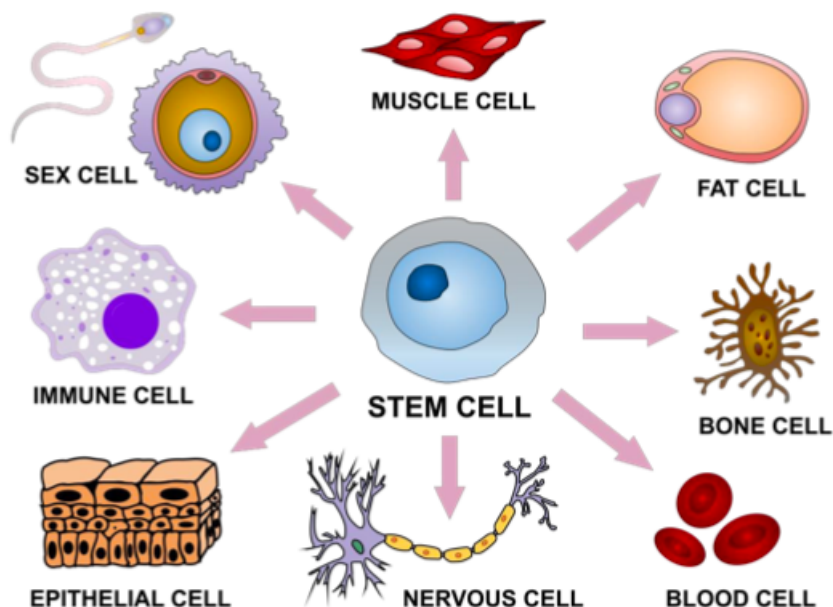
# May Your Anti-Aging Dreams Come True- ASP Stem Cells Therapy

## What Stem Cells Are?

Science has proven that our body parts has completed its primitive development during the embryonic development phase. The origin cell (Blastocyst) which make up our body will no longer re-differentiate into a specific cell type but only divide and proliferate after we are delivered . The cell division & proliferation are much faster than the Apoptosis of dead cells and hence our bodies will grow eventually and when we age, it works the other way round as the cell division & proliferation speed declines. Thus, our bodies stop growing when aged.

Generally stem cells are cells that have the potential to develop into many different or specialized cell types. Stem cells can be thought of as primitive, "unspecialized" cells that are able to divide and become specialized cells of the body such as liver cells, muscle cells, blood cells, and other cells with specific functions. Stem cells are referred to as "undifferentiated" cells because they have not yet committed to a developmental path that will form a specific tissue or organ.

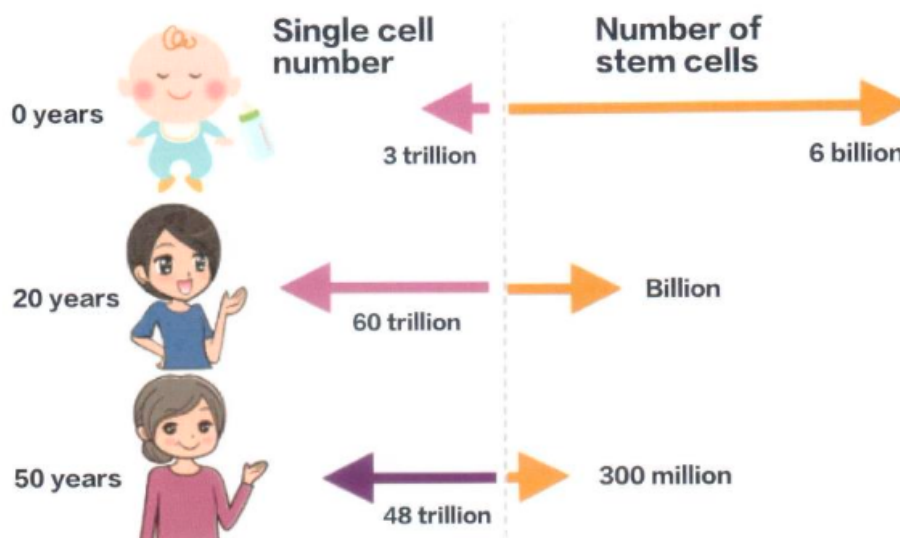
Stem cells are distinguished from other cell types by two important characteristics. First, they are unspecialized cells capable of renewing themselves through cell division. Second, under certain physiologic or experimental conditions, they can be induced to become tissue- or organ-specific cells with special functions. Given their unique regenerative abilities, stem cells offer new potentials for treating diseases such as diabetes, and heart disease, preventive treatment, immune enhancement therapy. It has been termed as the "wonder cells" by the medical community as it works "wonder" and has become the most potential subject of 21<sup>st</sup> century to explore and develop in regenerative medicine. It brings hope to many patients.



## The Importance of Stem Cells ?

Aging is a complex process, which deteriorates body functions such as loss of skin elasticity, accumulation of fats and atherosclerosis, decline of the immune system, bones prone to fractures, and eventually death. Aging is determined by a complex mixture of genetic, non-genetic, and environmental factors. Stem cells are the regenerative building blocks and seeds of life. They enhance the restorative prowess of living organisms. Stem cells could be a backup system for the living organism to replace damaged tissue or worn-out cells. Thus, stem cells could be a core factor in deciding aging.

In another words, stem cells are cells with the ability to re-activate weakened cells responsible for replacing damaged and dead cells in the body (tissue maintenance role) in order to maintain our health and prevent premature aging. Our body consists of billions of cell when we are a baby but decreasing every day as a natural consequence of aging. By the time we are elderly, the quantity of stem cells reduces up to 90%. Aging of stem cells affect regenerative potential, growth, and divisions. It is encouraged to replenish stem cells via autologous treatment especially for those who are at risk. The immune system is one of the most important body function whereby we can't afford to lose.



The immune system protects the body like a guardian from harmful influences in the environment and is essential for survival. It is made up of different organs, cells and proteins and, it is the most complex system that the human body has.

As long as our body's system of defence is running smoothly, we do not notice the existence of immune system. In addition, different groups of cells work hand-in-hand

and form alliances against any unrecognized foreign substances/ pathogen (germ). But illnesses can occur if the performance of the immune system is compromised, if the pathogen is especially aggressive, or sometimes also if the body is confronted with a pathogen it has not come into contact with before.

Without an immune system, humans would be exposed to the harmful influences of pathogens or other substances from the outside environment. The main tasks of the body's immune system are:

- I) Neutralizing pathogens like bacteria, viruses, parasites or fungi that have entered the body, and removing them from the body
- II) Recognizing and neutralizing harmful substances from the environment
- III ) Fighting against the body's own cells that have changed due to an illness, for example cancerous cells

Moreover, NK cells, known as the ultimate warrior in the human body, as a core part of the immune system, are the most valuable congenital immune cells in the human body. It can inhibit the invasion of bacteria and viruses, remove cancerous, diseased and aging cells, has the peculiar effect of preventing cancer and delaying the aging of the body. It has been recognized by the medical community as "the first barrier of the human body" and the scavenger of blood. Whether it is normal cells or cancer cells, even if some cancer cells try to hide, they can't escape the filtration of NK cells. In comparison with other cells, NK cells directly screen and destroy cancer cells. Studies have shown that NK Cells activity is closely related to health & longevity. One well-known journal by Lancet has found that lowered efficiency of NK cell leads to an increase cancer rate over age.

The following are the conditions/group of people whereby is encouraged to undergo the Autologous Immune Enhancement Therapy from ASP:

- I) Those with declined immune system
- II) Tumour gene screening indicates mutations, defects or strong family cancer history
- III) People with chronic diseases related to immunity,
- IV) Post-operation recovery
- V) For those who developed persistent fatigue symptoms
- VI) For those looking forward to delay aging process
- VII) People who aim to improve their health status

**ASP Autologous immune enhancement therapy (AIET)** is a treatment method in which immune cells are taken out from the patient's body which are cultured and processed to activate them until their resistance to cancer is strengthened and then the cells are put back in the body. The cells, antibodies, and organs of the immune system work to protect and defend the body against not only tumour cells but also bacteria or viruses. It encompasses three main function: Anti-aging, cancer prevention & health regulation.

ASP will analyse the immune cells type quantity (NK cells, NK Activity, Lymphocytes, T cells, Suppressor T Cells, Neutrophils) prior to the multiplication and culture of the stem cells in order to maximize the effectiveness of treatment based on individual customers. For instance if Customer A has insufficient NK cells in her body, we will culture ample amount of NK cells to replenish the NK cells.

Health comes from within and you deserve better immunity!

### **Types of Stem Cell Therapy**

There are 2 main types of stem cell therapy:

I) Autologous - The stem cells come from the same person who will receive the stem cell

- \* Direct Activation of the stem cell without multiplication

- \* Multiplication of the stem cells up to Millions before activation

II) Allogeneic - The stem cells obtained from a matched related or non-related donor.

Price range will vary depending on the type of stem cell therapy:

- Basic : Direct Activation without multiplication

- Premium : Involves proliferation & multiplication of stem cells up to 200 millions.

## What makes ASP Autologous immune enhancement therapy (AIET) unique?

ASP is utilizing the cell processing centre located in Japan, whereby the Stem cell culture is carried out under strict hygiene control. The Japanese Cell Center will adopt a culture environment which resembles the human body, using a unique 3D stereoscopic culture of autologous stem cell technology, which can be successfully cultured and frozen.

On the other hand, in comparison to allogeneic stem cells therapy, autologous has minimal risk as there is no rejection reaction when the cell is extracted from the same person and re-infuse to the donor. In addition, the in vitro expansion culture is carried out by Japanese high-efficiency NK cell amplification technology, and the median multiplication ratio can be as high as 1500 times, which is 150 times better than other peers.

Japan is one of the first countries in the world to establish a complete regulatory system for regenerative medicine through legislation. A strict bill on the review of regenerative medical institutions and facilities. Stem cell extraction can be done in many countries, but cultivation requires tip top standard to adhere to as well as the culture environment. There is no serum in the Japanese stem cell culture medium, and no animal-derived substances are added to the culture solution hence known as the purest culture among all. Furthermore, there is a strong research team with good scientific research to provide strong theoretical support for clinical use, ensuring clinical safety and innovation. Professor Shinya Yamanaka of Kyoto University, became more widely known after he was awarded the Nobel Prize in Physiology or Medicine in 2012 due to his finding in IPs (induces pluripotent stem cells) which significantly promotes Japan's stem cell technology to the world.