

# Adult Pluripotent Stem Cells

## **What are Stem Cells?**

Stem Cells are cells which have the ability to renew themselves and become many other types of cells. They are our natural repair and regeneration system, which allows us to recover from injury and disease.

## **What are Pluripotent Stem Cells?**

Pluripotent Stem Cells are the most powerful Stem Cells in our body. They can become any other cell in the body. There are two types of Pluripotent Stem Cells: Embryonic Stem Cells and Adult Pluripotent Stem Cells. Embryonic Stem Cells are controversial, both for ethical and efficacy reasons. They have also shown very limited promise thus far as a remedy for most human diseases.

## **What are Adult Pluripotent Stem Cells?**

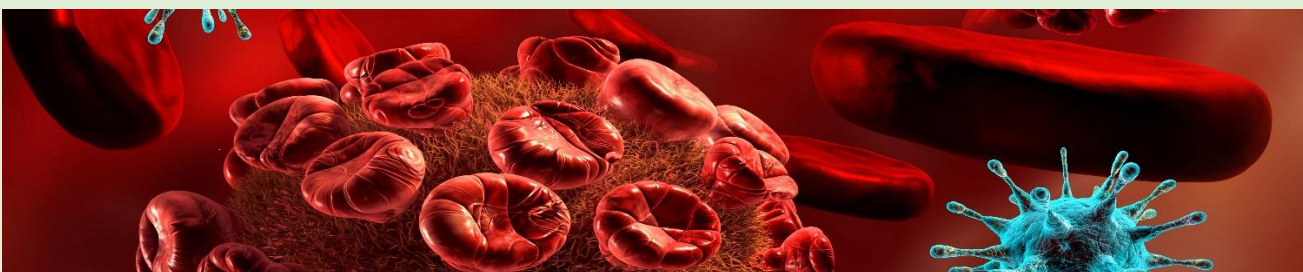
Adult Pluripotent Stem Cells (APSCs) are small Stem Cells which are found in our bone marrow, blood and some of our organs and tissues. They were discovered in 2006 by scientists at the University of Louisville, Kentucky. Since then many scientific studies have explored their potential to regenerate diseased organs and tissue, as well as their ability to slow the aging process and onset of cancer.

APSCs are formed on our bone marrow and released into our blood stream. They circulate through our body in the inactive form. Activation of these unique Stem Cells occurs when our body faces extreme stress, such as low oxygen, low body temperature and significant injuries. Once active, APSCs will home in on areas of injury and degeneration to begin the repair and regeneration process.

## **How can Adult Pluripotent Stem Cells be activated?**

After we collect blood or bone marrow samples, APSCs are separated from other cells using state of the art cell processing technology. Once isolated the APSCs are exposed to very cold temperatures to simulate hypothermia, which is known to activate APSCs. Finally, we combine the APSCs with powerful Growth Factors harvested from your own platelet cells from the same blood or bone marrow sample.

The active APSCs and Growth Factors can now be returned to your body through an intravenous injection (IV). Once in your blood stream, the APSCs will go to work, seeking out areas of inflammation and injury.



## The Three-Day Treatment. What will your visit entail?

This unique process is done over three consecutive days, excluding weekends:

- **Day 1** – Powerful I.V. vitamin compound, which helps to generate energy in form of ATP to cells is infused via intravenous to the patient, as well as an intra muscular injection of potent vitamins to stimulate and revitalize the body's own resource of Stem Cells in the bloodstream.
  - Timing: 90 Minutes
- **Day 2** – An amount of 260 mL (approximate 8 ounces) of peripheral whole blood, via venipuncture is drawn from the patient for cell processing.
  - Timing: 30 Minutes
- **Day 3** – Patient's own Adult Pluripotent Stem Cells & Platelet Enriched Lysate Growth Factors are infused via intravenous and in some instances under physician's discretion, a small portion may be reserved for injection to a specific, muscle-skeletal region where a condition is present.
  - Timing: 60-90 Minutes

