

TAKE A CLOSER LOOK AT STEM CELL NUTRITION

In recent times, the topic of stem cells has dominated both the technical and mainstream news media. What are these cells, and why are they important? What does the research show?

WHAT ARE STEM CELLS

Stem cells are the body's fundamental building blocks. They are within most organs and tissues of the body, and they help to maintain optimum health. There are two basic types of stems cells – embryonic and adult. While controversy surrounds the use of embryonic stem cells, no such debate exists with the use of adult stem cells, which are naturally occurring in the body.

Stem cells differ from other kinds of cells in the body. All stem cells - regardless of their source – have three general properties: they are capable of dividing and renewing themselves for long periods; they are unspecialized and they can give rise to specialized cell types. However, during the natural aging process, adult stem cells are known to have a reduced regenerative capacity.

WHY ARE STEM CELLS IMPORTANT?

According to the National Institute of Health (NIH), stem cells have the remarkable potential to develop into many different cell types in the body. When a stem cell divides, each new cell has the potential to either remain a stem cell or become another type of cell with a more specialized function, such as a muscle cell, a red blood cell, a skin cell, etc. New stem cells migrate to the areas of the body where they are needed most as we grow older. Serving as renewal for the body, stem cells can theoretically divide without limit to replenish other cells as long as a person or animal is alive.

The NIH further concludes that the primary role of adult stem cells is to maintain and renew tissue. As we age, our adult stem cells decrease in number and lose their natural ability to help maintain a healthy immune system and address other health issues. Therefore, a strong stem cell population becomes even more important as we grow older.

WHAT DOES THE RESEARCH SHOW?

Massachusetts Institute of Technology (MIT) researchers have developed a technique to encourage the survival and growth of adult stem cells, a step that could help realize the benefits of such cells. Adult stem cells, found on many

tissues in the body, are precursor cells for specific cell types. For example, stem cells found in the bone marrow develop into blood cells, bone cells, and other connective tissues, and neural stem cells develop into brain tissue.

Paula C. Bickford, Ph.D., is a well-respected and internationally recognized scientist whose research focuses on the role of inflammation and oxidative stress in brain aging and neurodegenerative diseases. Professor of Neurosurgery and Pharmacology at the University of South Florida and a member of the university's Center of Excellence for Aging and Brain Repair, Dr. Bickford has spoken extensively about the nutritional aspects of improving the function of stem cells. The co-author of a report entitled Nutraceuticals Synergistically Promote Proliferation of Human Stem Cells, Dr. Bickford asserts that we can support the health of our bodies' own stem cells, in part by employing nutritional supplementation.*

WHAT DOES IT ALL MEAN?

Millions of cells in the body die every day, and millions are created. This is the way our bodies are designed, the way they renew and regenerate. We know that as we grow older, the process for creating new cells slows. That's why it's important to continue to give the body the fuel it needs to repair itself naturally.

Stem cell investigation continues to fascinate and excite researchers and consumers. One point of agreement is that proper nutrition is necessary in order for all cells of the body to flourish. There is help in the form of supplements such as StemPlex® that provide nutritional support that in vitro (in a test tube) and in vivo (a living animal body) research that enable stem cells to reproduce and may protect existing stem cells from the harmful effects of damaging agents such as free radicals. A proliferation of stem cells, then, along with a balanced regimen of proper diet and exercise, can help us maintain the optimum health we wall want.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.