

Frequently Asked Questions

1. What is a stem cell?

A stem cell is a cell that has the ability to duplicate itself endlessly and to become cells of virtually any organ and tissue of the body. Embryonic stem cells are cells extracted from the blastula, the very early embryo, that have an exceptional ability to duplicate in vitro, that is in a test tube, and to become cells of almost any tissue. Adult stem cells are cells found in an organism after birth. Until very recently, it was believed that adult stem cells could only become blood cells, bone and connective tissue. But recent development over the past five years has revealed that adult stem cells have capabilities similar to embryonic stem cells.

2. What is the Stem Cell Theory of Renewal?

The Stem Cell Theory of Renewal proposes that stem cells are naturally released by the bone marrow and travel via the bloodstream toward tissues to promote the body's natural process of renewal. When an organ is subjected to a process that requires renewal, such as the natural aging process, this organ releases compounds that trigger the release of stem cells from the bone marrow. The organ also releases compounds that attract stem cells to this organ. The released stem cells then follow the concentration gradient of these compounds and leave the blood circulation to migrate to the organ where they proliferate and differentiate into cells of this organ, supporting the natural process of renewal.

3. Why do we hear much in the news about embryonic stem cells and very little about adult stem cells?

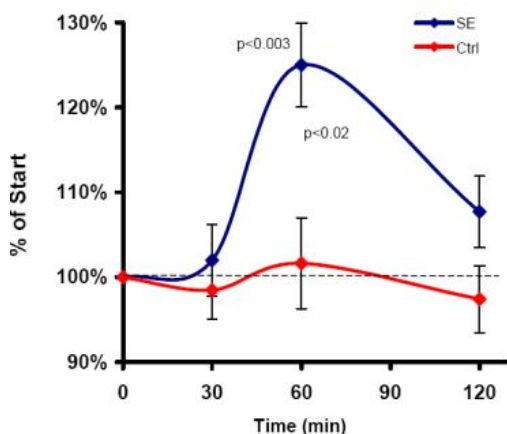
The first human embryonic stem cells were grown in vitro, in a petri dish, in the mid 1990s. Rapidly, scientists were successful at growing them for many generations and to trigger their differentiation into virtually any kind of cells, i.e. brain cells, heart cells, liver cells, bone cells, pancreatic cells, etc. When scientists tried growing adult stem cells, the endeavor was met with less success, as adult stem cells were difficult to grow in vitro for more than a few generations. This led to the idea that embryonic stem cells have more potential than adult stem cells. In addition, the ethical concerns linked to the use of embryonic stem cells have led to a disproportionate representation of embryonic stem cells in the media.

But recent developments over the past 2-3 years have established that adult stem cells have capabilities comparable to embryonic stem cells **in the human body**, not in the test tube. Many studies have indicated that simply releasing stem cells from the bone marrow can help support the body's natural process for renewal of tissues and organs.

4. What is the effect of StemEnhance®?

StemEnhance® is a blend of two compounds extracted from the widely consumed aquatic botanical *Aphanizomenon flos-aquae* (AFA). One extract, which contains an L-selectin ligand, supports the natural release of stem cells (CD34+ cells) from the bone marrow. The other extract, a polysaccharide-rich fraction named Migratose™, may support the migration of stem cells out of the blood into tissues.

5. What is the science behind StemEnhance®?



The effect of StemEnhance® on stem cells was tested in a triple-blind study. In brief, volunteers rested for one hour before the first blood sample, which established the baseline level in the number of circulating stem cells. After the first blood samples, volunteers were given StemEnhance® or placebo. Thereafter, blood samples were taken at 30, 60 and 120 minutes after taking the consumables. The number of circulating stem cells was quantified by analyzing the blood samples using Fluorescence-Activated Cell Sorting (FACS). Consumption of StemEnhance® triggered a significant 25% increase in the number of circulating stem cells.

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6. What is the recommended dose?

One gram of StemEnhance® triggers a significant 25-35% increase in the number of circulating stem cells. The effect lasts for a few hours. The recommended dosage is therefore 2 capsules once or twice day, at least 6 hours apart.

7. Can StemEnhance® deplete the bone marrow? Do we have a finite number of stem cells?

No, StemEnhance® will not deplete the bone marrow. The bone marrow constantly produces stem cells for the entire life of an individual. Stem cells released by the bone marrow are responsible for the constant renewal of red blood cells and lymphocytes (immune cells).

A 25-30% increase in the number of circulating stem cells is well within physiological range and does not constitute stress on the bone marrow environment. The amount of active bone marrow amounts to about 2,600 g (5.7 lbs), with about 1.5 trillion marrow cells. A 25-30% increase in the number of circulating stem cells triggered by the consumption of 1 gram of StemEnhance® corresponds to approximately 3 million cells, which is a small portion of the stem cells present in the bone marrow. Stem cells that do not reach any tissue or become blood cells return to the bone marrow.

8. What happened to stem cells if they do not reach a tissue?

Stem cells released from the bone marrow that do not reach a tissue simply home back to the bone marrow after some time.

9. Can stem cells lead to aberrations such as cancer?

Only embryonic stem cells have been associated with the development of aberrant growth. Stem cells present in specialized tissues such as the intestinal mucosa may also play a role in the development of aberrant growth. But stem cells released from the bone have not been associated with such problems.

10. Why has STEMTech HealthSciences elected to use the Network Marketing distribution channel?

The Stem Cell Theory of Renewal constitutes a new paradigm in health sciences. Likewise, StemEnhance® is the first product in a novel category of revolutionary products called "stem cells enhancers." Stem cell enhancers are product that supports stem cell functions in the body. Given the novel nature of both the concept and the product, a significant effort of education is required to help people become aware of this new technology. The power of networking offers a unique opportunity to generate awareness and educate people about this new paradigm. Furthermore, the MLM channel offers unique opportunities for people to develop home-based businesses and create greater financial freedom.

11. Why may StemEnhance® be contraindicated for people on anticoagulant therapy?

One gram of StemEnhance® contains roughly half of the recommended daily allowance in vitamin K. Vitamin K is an essential nutrient playing an important role in the process of blood coagulation. Hence, doctors often tell people to avoid vitamin K while being on anticoagulant therapy. This being said, it is not so much the presence of vitamin K in the diet as much as the consistency in the daily intake. Therefore, the best approach is to discuss with your doctor your desire to take StemEnhance®, that it contains vitamin K, and the anticoagulant prescription can be adjusted through careful monitoring of your condition by your doctor.

12. Can Stem Enhance be taken with other drugs?

There is a possible interaction with antidepressant medications, as StemEnhance® contains phenyl ethylamine (PEA), a compound naturally produced by the brain that affect dopamine and nor epinephrine in the brain. PEA is known for its effect on mood elevation and mental energy. Interactions with antidepressant medications have not been reported, but the possibility exists. People should consult their doctor before taking StemEnhance® if they are on antidepressant medication. There are no other known contraindications.

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13. Can Stem Enhance be taken by children?

The ability of stem cells to be released by the bone marrow and the quality of the stem cells released by the bone marrow both appears to decrease with age. Therefore, one might conclude that children and infants have a very effective “stem cell system” and do not need stem cell support. Nevertheless, we have received very compelling testimonials suggesting that StemEnhance® could bring significant benefits to young children.

StemEnhance® is made of two extracts from the cyanophyta *Aphanizomenon flos-aquae* (AFA), which has been consumed by children for more than two decades with a good history of safety.

14. How does an increase in the number of circulating stem cells lead to optimal health?

Circulating stem cells can reach various organs and become cells of that organ, helping such organ regain and maintain optimal health. Recent studies have suggested that the number of circulating stem cells is a key factor; the higher the number of circulating stem cells the greater is the ability of the body at healing itself.

15. What is the optimum way of taking StemEnhance® capsules?

StemEnhance® can be taken with or without food, though some people at times experience some heaviness when taken on an empty stomach. The same experience has been reported when taken with an acidic juice like orange juice. Otherwise, StemEnhance® can be taken with any fruit or vegetable juice, or with water.

In our studies, StemEnhance® was always taken in the morning. However, it is quite possible that StemEnhance® might bring greater benefits when taken before sleep, as the body tends to regenerate better during sleep. This being said, this remains to be studied. At this point, with the data available, the best way to take StemEnhance® is to take 2 capsules once or twice a day, in the morning or morning and evening.

16. Is StemEnhance® FDA approved?

No. FDA does not approve dietary supplements in the same way that FDA approves some drugs and medical devices. Nonetheless, FDA does regulate product quality, product safety, and product claims, and has authority to remove products from the market that are not safe or that make claims that are not substantiated by scientific evidence.

17. Is StemEnhance® truly natural? Organic? Non-genetically modified? Farmed?

StemEnhance® is made of two extracts from the aquatic botanicals *Aphanizomenon flos-aquae* (AFA). AFA grows naturally in a pristine lake of Southern Oregon, it is therefore wild crafted, not farmed or manipulated in anyway, hence no genetic modification. StemEnhance® is produced by an Organic certified facility and is certified Organic.

18. Are there any synthetic ingredients in StemEnhance®? If so, what?

StemEnhance® is made of 100% natural AFA extracts.

19. Is StemEnhance® actually patented, or has the company only applied for a patent?

One patent has been issued on StemEnhance® and another one has been filed. The issued patent is a Use Patent that pertains to the use of AFA for supporting stem cell physiology. The second patent is a Composition Patent that pertains to the specific components in AFA responsible stem cell support.

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20. How is StemEnhance® different from whole AFA?

Whole AFA has been used for more than two decades with a very good track record of safety and health benefits. Whole AFA has been used as a natural anti-inflammatory product, to support the immune system, and to improve mental clarity and mental energy. Over the past few years STEMTech's scientific team has isolated and identified the various components in AFA responsible for the various health benefits of AFA. In brief, AFA has been found to contain phenyl ethylamine (PEA) responsible for providing a feeling of mental energy, phycocyanin responsible for the antioxidant and anti-inflammatory properties, a polysaccharide responsible for supporting the immune system, and most recently an L-selectin ligand responsible for supporting the release of stem cells from the bone marrow.

StemEnhance® is a 5:1 concentrate of AFA that concentrates the four compounds listed above. It is specifically designed and developed to support stem cell physiology, but it also concentrates other compounds unique to AFA, bringing unique support for the whole body.

21. What are other ways of increasing your stem cell blood level?

Due to the novelty of the concept of supporting the release of one's own stem cells, very little scientific work has been done so far to identify compounds or conditions that increase the release of stem cells from the bone marrow. So far, StemEnhance® is the only natural compound shown to support the release of stem cells from the bone marrow.

22. What are the ingredients?

The ingredients are listed in the Supplement Fact box of the label, as stipulated by the Dietary Supplement Health and Education Act. One serving is obtained with 2 capsules, totaling 1 gram of cyanophyta extracts. StemEnhance® is made of only two ingredients that are extracted from the same plant, *Aphanizomenon flos-aquae*.

Labeling laws require listing any nutrient found in an amount superior to 2% of the daily recommendation. Carotenoids and proteins are found in significant amount in StemEnhance®. Therefore, carotenoids and proteins that are naturally present in StemEnhance® are listed on the label. Carotenoids are listed as vitamin A because they are measured as retinal equivalent.

23. For whom is the product advisable?

Since StemEnhance® supports the natural release of stem cells from the bone marrow, which in turn travel throughout the body to maintain the health of various organs and tissues. StemEnhance® is the optimal daily support for the maintenance of optimal health. It is for everyone interested in giving their body an extra boost toward daily renewal of cells throughout the body. It is for anyone interested in supporting his or her body's natural renewal system.

24. Has any study shown that people improved their health as a result of taking it?



Numerous empirical reports and testimonials testify to the health benefits of taking StemEnhance®. Many companies have been shut down by the FDA because of inferred health claims linked to documentation of improvements with various diseases. We intend to maintain our message clearly within the boundaries of the Dietary Supplement Health and Education Act, and let StemEnhance® speak for itself. The most recent publication further supports the science behind StemEnhance®.

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