

StemCell-Maxum

Reversing Aging

Scientific research is constantly finding new anti-aging discoveries. Biological aging does not need to be our destiny. People will eventually live long, healthy lives while maintaining younger characteristics. A lifetime that of centuries or longer will eventually be a reality. Maintaining the body of a 21 year old for a lifetime that could stretch to centuries or longer will be a reality. We are developing products and therapies to extend lifespan. Progress will continue indefinitely. Your best strategy is to use dietary supplements, exercise and a healthy diet and lifestyle to extend your lifespan.

StemCell-Maxum is designed to prevent premature aging. This can help you feel better and look younger. Your cells lose function as you age. Adult stem cells rejuvenate damaged and old tissues, but adult stem cells are also aging. Now you can do something about it. *StemCell-Maxum* supports adult stem cells and their functions.

Stem Cell Power

Millions of people suffer from chronic disease conditions. We have hope that conditions afflicting mankind will eventually be remedied using stem cell regenerative medicine. Improve the effectiveness of your adult stem cells by using our *StemCell -Longevity*.

Ingredients in StemCell-Maxum have been proven to support:

1. Adult stem cell rejuvenation [1-4]
2. A healthy cardiovascular system [5-8]
3. Healthy blood glucose levels [9-13]
4. Healthy blood pressure levels [14-15]
5. Healthy cholesterol levels [9, 16-17]
6. Young looking skin [18-24]
7. Better learning and focus [25-30]
8. More endurance [31-35]
9. A healthy immune system [31-32, 36-39]
10. Healthy breasts, colon, pancreas and prostate [40-46]

Stem Cell Rejuvenation

As a child, we rapidly recover from injury or illness because of the ability of our young regenerative stem cells to regenerate damaged tissues. As we age, our stem cells slowly lose their repairing capacity. This natural progression occurs slowly, but we start to notice the body changes especially after age 50. *StemCell-Maxum* helps you regain your youthful regenerative potential.

Maximize Your Longevity Genes

We believe that premature aging can be defeated by maximizing your longevity genes. Our beliefs are as follows:

1. Aging is linked to our longevity genes;
2. Lifespan can be extended by modulating genes involved in aging and age-related disease.
3. Aging causes an exponential increase in the annual mortality rate. Aging causes a progressive increase in all-cause mortality and morbidity. In the case of humans, all-cause mortality doubles every eight years after sexual maturity until it reaches an annual mortality rate plateau of about 50% over 105 years of age.
4. There are natural substances on Earth that can support anti-aging by providing Stem Cell support.

Blood Chemistry Improvements

Users may expect a reduction in blood pressure, blood sugar, total cholesterol, LDL and triglycerides and an increase in HDL (good cholesterol) after a few months of taking *StemCell-Maxum*.

Telomere Support

Research indicates that the ends of chromosomes (telomeres) play a key role in aging. Telomeres shorten as we age, causing cellular aging. Telomerase is a key anti-aging enzyme that repairs the telomeres. Mice, without telomerase, prematurely age, whereas activating telomerase in these old mice brings back youthful looks and function. Many scientists believe that telomerase mediated reversal of age-related disorders may also work in humans. It has been shown that healthy diet and exercise, which lengthen life, increase telomerase activity and telomere length¹. People with shorter telomeres have higher mortality rates and have higher rates of Alzheimer's^{3,4}, cardiovascular disease⁵, diabetes⁶, and renal disease⁷.

Stem cells have telomerase activity. Telomerase activity in human stem cells is insufficient to maintain perfect function as we age, therefore, *StemCell-Maxum* can be expected to increase telomerase activity in stem cells via the resveratrol analog, pterostilbene. Pterostilbene is a potent natural analog of resveratrol. Resveratrol activates telomerase in human adult stem cells. It activates the WRN helicase gene that repairs telomeres⁸. Low activities of the WRN gene lead to premature aging diseases.

Our adult stem cell function declines with age

All the organs and tissues of the body have adult stem cells for regenerating cells in case of injury or disease. As we age, adult stem cells gradually lose the ability to differentiate into functional tissue-specific cells. For example, cardiac muscle stem cells exist but elderly people have only one half the number of cardiac stem cells found in young people. Thus, adult stem cells become more dysfunctional as we age, causing progressively increased organ and tissue dysfunction.

An example of the aging role of adult stem cells is your skin continually losing dead cells, so that adult stem cells must continuously replenish the dying skin cells. With age, there are progressively fewer functional skin stem cells. Skin cell turnover slows, leading to thinner, dryer, less elastic skin that loses its youthful beauty. Hair thins and turns grey as functional hair follicle stem cells decline. Vision, hearing, smell, taste, and touch slowly decline with age, as the declining stem cell populations responsible for maintaining these functions are unable to fully rejuvenate.

Stimulate adult stem cell growth

Stimulating adult stem cell populations is not a simple task. If the proliferation of adult stem cells is over stimulated, then you may get overgrowth of tissues or a potential tumor.

StemCell-Maxum is a dietary supplement designed to improve the function of your existing stem cells. When an organ or tissue is damaged, it emits natural signals that new cells are needed to replace old or damaged cells. *StemCell-Maxum* supports the adult stem cells that respond to provide new replacement cells.

What are the expected benefits of taking *StemCell-Maxum* :

1. Helps maintain of adult stem cells to reduce age-related losses
2. Helps maintain the cardiovascular system
3. Helps maintain healthy blood glucose levels
4. Helps maintain healthy blood pressure
5. Helps maintain healthy pulse rate
6. Helps maintain healthy cholesterol levels
7. Enhances skin elasticity and tightness
8. Promotes brain health
9. Promotes nerve health
10. Promotes strength and endurance
11. Promotes a healthy immune system
12. Promotes joint health
13. Promotes healthy kidneys, liver, and pancreas
14. Enhances sexual potency and performance
15. Promotes improvements in eyesight
16. Promotes healthy intestines, colon and bowel regularity

Recommended Use: Two capsules daily, with meals. Both capsules can be taken at once, but it is preferable to separate the two capsules by at least 12 hours. *StemCell-Maxum* is a potent formulation. Don't take more than three daily.

Recommended Users: Everyone can benefit from *StemCell-Maxum*. Younger persons will enjoy the wellness endurance boost during sports or exercise. Older persons will notice increased energy, youthful appearance, wellness and better weight management.

Caution: Normal blood glucose and/or blood pressure may result from taking *StemCell-Maxum*. Please consult with your doctor and regularly monitor yourself if you are on medication for these disorders. *StemCell-Maxum* is not recommended for pregnant or lactating individuals.

The statements above have not been reviewed by the FDA. StemCell-Maxum is not meant as a preventive or treatment for any disease.

References

1. Yu, Q., Y.S. Bai, and J. Lin, [Effect of astragalus injection combined with mesenchymal stem cells transplantation for repairing the Spinal cord injury in rats]. *Zhongguo Zhong Xi Yi Jie He Za Zhi*, 2010. 30(4): p. 393-7.
2. Xu, C.J., et al., [Effect of astragalus polysaccharides on the proliferation and ultrastructure of dog bone marrow stem cells induced into osteoblasts in vitro]. *Hua Xi Kou Qiang Yi Xue Za Zhi*, 2007. 25(5): p. 432-6.
3. Xu, C.J., et al., [Effects of astragalus polysaccharides-chitosan/polylactic acid scaffolds and bone marrow stem cells on repairing supra-alveolar periodontal defects in dogs]. *Zhong Nan Da Xue Xue Bao Yi Xue Ban*, 2006. 31(4): p. 512-7.
4. Zhu, X. and B. Zhu, [Effect of Astragalus membranaceus injection on megakaryocyte hematopoiesis in anemic mice]. *Hua Xi Yi Ke Da Xue Xue Bao*, 2001. 32(4): p. 590-2.
5. Qiu, L.H., X.J. Xie, and B.Q. Zhang, Astragaloside IV improves homocysteine-induced acute phase endothelial dysfunction via antioxidation. *Biol Pharm Bull*, 2010. 33(4): p. 641-6.
6. Araghi-Niknam, M., et al., Pine bark extract reduces platelet aggregation. *Integr Med*, 2000. 2(2): p. 73-77.
7. Rohdewald, P., A review of the French maritime pine bark extract (Pycnogenol), a herbal medication with a diverse clinical pharmacology. *Int J Clin Pharmacol Ther*, 2002. 40(4): p. 158-68.
8. Koch, R., Comparative study of Venostasin and Pycnogenol in chronic venous insufficiency. *Phytother Res*, 2002. 16 Suppl 1: p. S1-5.

9. Rimando, A.M., et al., *Pterostilbene, a new agonist for the peroxisome proliferator-activated receptor alpha-isoform, lowers plasma lipoproteins and cholesterol in hypercholesterolemic hamsters. J Agric Food Chem*, 2005. 53(9): p. 3403-7.
10. Manickam, M., et al., *Antihyperglycemic activity of phenolics from Pterocarpus marsupium. J Nat Prod*, 1997. 60(6): p. 609-10.
11. Grover, J.K., V. Vats, and S.S. Yadav, *Pterocarpus marsupium extract (Vijayasar) prevented the alteration in metabolic patterns induced in the normal rat by feeding an adequate diet containing fructose as sole carbohydrate. Diabetes Obes Metab*, 2005. 7(4): p. 414-20.
12. Mao, X.Q., et al., *Astragalus polysaccharide reduces hepatic endoplasmic reticulum stress and restores glucose homeostasis in a diabetic KKAY mouse model. Acta Pharmacol Sin*, 2007. 28(12): p. 1947-56.
13. Schafer, A. and P. Hogger, *Oligomeric procyanidins of French maritime pine bark extract (Pycnogenol) effectively inhibit alpha-glucosidase. Diabetes Res Clin Pract*, 2007. 77(1): p. 41-6.
14. Kwak, C.J., et al., *Antihypertensive effect of French maritime pine bark extract (Flavangenol): possible involvement of endothelial nitric oxide-dependent vasorelaxation. J Hypertens*, 2009. 27(1): p. 92-101.
15. Xue, B., et al., *Effect of total flavonoid fraction of Astragalus complanatus R.Brown on angiotensin II-induced portal-vein contraction in hypertensive rats. Phytomedicine*, 2008.
16. Mizuno, C.S., et al., *Design, synthesis, biological evaluation and docking studies of pterostilbene analogs inside PPARalpha. Bioorg Med Chem*, 2008. 16(7): p. 3800-8.
17. Sato, M., et al., *Dietary pine bark extract reduces atherosclerotic lesion development in male ApoE-deficient mice by lowering the serum cholesterol level. Biosci Biotechnol Biochem*, 2009. 73(6): p. 1314-7.
18. Kimura, Y. and M. Sumiyoshi, *French Maritime Pine Bark (Pinus maritima Lam.) Extract (Flavangenol) Prevents Chronic UVB Radiation-induced Skin Damage and Carcinogenesis in Melanin-possessing Hairless Mice. Photochem Photobiol*, 2010.
19. Pavlou, P., et al., *In-vivo data on the influence of tobacco smoke and UV light on murine skin. Toxicol Ind Health*, 2009. 25(4-5): p. 231-9.
20. Ni, Z., Y. Mu, and O. Gulati, *Treatment of melasma with Pycnogenol. Phytother Res*, 2002. 16(6): p. 567-71.
21. Bito, T., et al., *Pine bark extract pycnogenol downregulates IFN-gamma-induced adhesion of T cells to human keratinocytes by inhibiting inducible ICAM-1 expression. Free Radic Biol Med*, 2000. 28(2): p. 219-27.

22. Rihn, B., et al., *From ancient remedies to modern therapeutics: pine bark uses in skin disorders revisited*. *Phytother Res*, 2001. 15(1): p. 76-8.
23. Saliou, C., et al., *Solar ultraviolet-induced erythema in human skin and nuclear factor-kappa-B-dependent gene expression in keratinocytes are modulated by a French maritime pine bark extract*. *Free Radic Biol Med*, 2001. 30(2): p. 154-60.
24. Van Wijk, E.P., R. Van Wijk, and S. Bosman, *Using ultra-weak photon emission to determine the effect of oligomeric proanthocyanidins on oxidative stress of human skin*. *J Photochem Photobiol B*, 2010. 98(3): p. 199-206.
25. Haskell, C.F., et al., *The effects of L-theanine, caffeine and their combination on cognition and mood*. *Biol Psychol*, 2008. 77(2): p. 113-22.
26. Owen, G.N., et al., *The combined effects of L-theanine and caffeine on cognitive performance and mood*. *Nutr Neurosci*, 2008. 11(4): p. 193-8.
27. Yamada, T., et al., *Effects of theanine, a unique amino acid in tea leaves, on memory in a rat behavioral test*. *Biosci Biotechnol Biochem*, 2008. 72(5): p. 1356-9.
28. Jia, R.Z., et al., *[Neuroprotective effects of Astragalus membranaceus on hypoxia-ischemia brain damage in neonatal rat hippocampus]*. *Zhongguo Zhong Yao Za Zhi*, 2003. 28(12): p. 1174-7.
29. Nathan, P.J., et al., *The neuropharmacology of L-theanine(N-ethyl-L-glutamine): a possible neuroprotective and cognitive enhancing agent*. *J Herb Pharmacother*, 2006. 6(2): p. 21-30.
30. Nobre, A.C., A. Rao, and G.N. Owen, *L-theanine, a natural constituent in tea, and its effect on mental state*. *Asia Pac J Clin Nutr*, 2008. 17 Suppl 1: p. 167-8.
31. Murakami, S., et al., *Effects of oral supplementation with cystine and theanine on the immune function of athletes in endurance exercise: randomized, double-blind, placebo-controlled trial*. *Biosci Biotechnol Biochem*, 2009. 73(4): p. 817-21.
32. Kawada, S., et al., *Cystine and theanine supplementation restores high-intensity resistance exercise-induced attenuation of natural killer cell activity in well-trained men*. *J Strength Cond Res*, 2010. 24(3): p. 846-51.
33. Hu, Y.C. and J.Y. Hou, *[Effect of zhimu and huangqi on cardiac hypertrophy and response to stimulation in mice]*. *Zhongguo Zhong Yao Za Zhi*, 2003. 28(4): p. 369-74.
34. Chen, K.T., et al., *Reducing fatigue of athletes following oral administration of huangqi jianzhong tang*. *Acta Pharmacol Sin*, 2002. 23(8): p. 757-61.

35. Luo, H.M., R.H. Dai, and Y. Li, [Nuclear cardiology study on effective ingredients of *Astragalus membranaceus* in treating heart failure]. *Zhongguo Zhong Xi Yi Jie He Za Zhi*, 1995. 15(12): p. 707-9.
36. Sugiura, H., et al., [Effects of exercise in the growing stage in mice and of *Astragalus membranaceus* on immune functions]. *Nippon Eiseigaku Zasshi*, 1993. 47(6): p. 1021-31.
37. Cho, W.C. and K.N. Leung, *In vitro* and *in vivo* anti-tumor effects of *Astragalus membranaceus*. *Cancer Lett*, 2007. 252(1): p. 43-54.
38. Kong, X., et al., Effects of Chinese herbal medicinal ingredients on peripheral lymphocyte proliferation and serum antibody titer after vaccination in chicken. *Int Immunopharmacol*, 2004. 4(7): p. 975-82.
39. Takagi, Y., et al., Combined administration of (L)-cystine and (L)-theanine enhances immune functions and protects against influenza virus infection in aged mice. *J Vet Med Sci*, 2010. 72(2): p. 157-65.
40. Tin, M.M., et al., *Astragalus* saponins induce growth inhibition and apoptosis in human colon cancer cells and tumor xenograft. *Carcinogenesis*, 2007. 28(6): p. 1347-55.
41. Manna, P.W., et al., Pterostilbene inhibits pancreatic cancer *in vitro*. *J Gastrointest Surg*, 2010. 14(5): p. 873-9.
42. Paul, S., et al., Dietary intake of pterostilbene, a constituent of blueberries, inhibits the {beta}-catenin/p65 downstream signaling pathway and colon carcinogenesis in rats. *Carcinogenesis*, 2010.
43. Paul, S., et al., Anti-inflammatory action of pterostilbene is mediated through the p38 mitogen-activated protein kinase pathway in colon cancer cells. *Cancer Prev Res (Phila Pa)*, 2009. 2(7): p. 650-7.
44. Suh, N., et al., Pterostilbene, an active constituent of blueberries, suppresses aberrant crypt foci formation in the azoxymethane-induced colon carcinogenesis model in rats. *Clin Cancer Res*, 2007. 13(1): p. 350-5.
45. Chakraborty, A., et al., *In vitro* evaluation of the cytotoxic, anti-proliferative and antioxidant properties of pterostilbene isolated from *Pterocarpus marsupium*. *Toxicol In Vitro*, 2010. 24(4): p. 1215-28.
46. Alosi, J.A., et al., Pterostilbene inhibits breast cancer *in vitro* through mitochondrial depolarization and induction of caspase-dependent apoptosis. *J Surg Res*, 2010. 161(2): p. 195-201.