Why Active Adults May Need More Folic Acid

Health/Science

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Posted on : 2017/2/11 12:15:08

By Darla Leal - Reviewed by a board-certified physician. Updated February 10, 2017 Athletes and active adults push their bodies to the physical limit. While intense workouts are typically good for our health and fitness, risk factors linked to cardiovascular disease can be increased. Chronic studies have shown that demanding workouts can place stress on our body. Research also indicates strenuous physical activity can decrease folic acid levels and adversely affect our heart health over time. Monitoring folic acid status may protect athletes and active adults by reducing their risk of heart problems. Is Intense Exercise Harmful? Exercise, in general, is healthy and an important part of keeping our body healthy. Extreme physical demands occurring in sports like weight training, soccer, and even competitive handball are a different story. The body experiences inflammation, muscle breakdown, and increased circulating free radicals caused from the workout. During intense workouts like weight lifting, for example, muscle tissue is damaged. We feel the side effects when we experience delayed onset muscle soreness (DOMS). Other indicators are fatigue and decreased muscle performance. Other things going on in our body are a release of inflammatory molecules and homocysteine. What Is Homocysteine? Homocysteine is an amino acid byproduct from protein being metabolized in our body. Elevated homocysteine levels are indicated to increase the risk of heart attack and stroke. Increased levels are also shown to cause plaque buildup damaging arterial walls. Strenuous physical sports increase circulating homocysteine by decreasing our folic acid levels. The combination of altered homocysteine and folic acid levels are contributing factors determining heart health. Research has recommended folic acid status be monitored in athletes to prevent folate deficiency. What Is Folic Acid and How Does It Help? Folic acid is one of the B vitamins also known as folate. Folate naturally occurs in foodswhereas folic acid is the synthetic form of the vitamin. Our body is unable to make folic acid and therefore it must be obtained from food intake or supplementation. Folic acid is used to prevent and treat low blood levels of folate which can adversely affect our health. It's required for proper development and functioning of the human body. Pregnant women are often prescribed folic acid to prevent birth defects and promote healthy fetal development. Folic acid may be recommended to treat conditions caused by low levels of folate in our body. Those may include: Anemia (red blood cell deficiency) Nutrient absorption deficiency Complications of ulcerative colitis Liver disease Kidney disease Alcoholism Certain cancers (colon and cervical) Heart disease Stroke Age-related illness Reducing homocysteine levels (heart health) Folic acid is an important micronutrient helpful to maintain overall health. Athletes and active adults can be at increased risk of folic acid deficiency performing high-intensity exercise. Monitoring folic acid status and maintaining normal homocysteine levels are essential if participating in strenuous sports. Research and Other Information According to research published in the *Journal of the International Society of Sports Nutrition*, folic acid supplementation improved homocysteine levels in competitive handball players. A small study included 14 competitive players

monitored for 16 weeks. Homocysteine levels and other clinical data were recorded prior to and after the trial period. The participants were tested with and without a 200 microgram dose of folic acid supplementation. When the athletes took folic acid, a significant decrease in homocysteine levels was experienced. Research also discovered that aerobic exercise didn't have an effect on homocysteine levels. Aerobic exercise appears to lower the chemical according to the study. This shows a direct correlation to strenuous physical training and increased circulating homocysteine. It also indicated folic acid improved those levels. Findings conclude folic acid can help reduce the risk of heart disease that may come along with intense exercise. Another study examined how folic acid improved vascular function in professional dancers with endothelial dysfunction (inner lining of the blood vessels). Professional dancers are shown to be at increased risk of hormone imbalance, amenorrhea (no period), and disordered eating. It appears reduced estrogen and nutrient deficiencies can adversely affect how the arteries function. During the 4-week trial period, 22 professional ballet dancers volunteered to supplement with 10 milligrams of folic acid daily. All dancers showed significant improvement in vascular function with folic acid supplementation. The results indicate folic acid may reduce the risk of heart disease typically a result of reduced vascular function. Other research examined if folic acid would improve vascular function in runners with amenorrhea (no period). Ten athletes who had a regular period and ten with athletic amenorrhea volunteered for the study. Testing lasted four weeks and each participant supplemented with 10mg of folic acid daily during the trial. The women still having a period were considered the control group and had no change in vascular function. The female runners not having a menstrual cycle showed significant improvement in vascular function. The results indicate folic acid to help runners with athletic amenorrhea improving blood flow and reducing their risk of heart problems. For complete article text, link below: https://www.verywell.com/folic-acid-re ... blems-in-athletes-4119922