

## **CALCIUM- SO MUCH MORE THAN STRONG BONES.**

Everyone knows that calcium is necessary for strong bones, but most people don't know that it plays such an important role in so many other bodily functions. Calcium is the most abundant mineral in the body, and virtually every cell in the body contains some form of calcium. More and more scientists are turning their attention to this mineral, and its importance in human growth, development, health and disease prevention are finally being understood. Some lesser known facts about calcium is that it is involved in regulation of blood pressure, protection from colon cancer, prevention of kidney stones, reduction of symptoms associated with PMS, and reduced risk of breast cancer.

Cardiovascular disease is the number one killer in the United States, and recent studies show that calcium plays a major role in heart function and vascular tone. Calcium in the blood is responsible for heart muscle contraction and relaxation. Calcium is also necessary for the nervous system to transmit messages that properly control the rate of heartbeats as well as the tonicity of the blood vessels. Research reveals that groups that ate diets low in calcium have an increased risk of heart disease and high blood pressure.

Calcium might also have a protective effect on reducing the incidence of colon cancer. Observational studies reveal that Northern Europeans whose diets were high in fiber and dairy products had lower rates of colon cancer. Some of the thinking on how this occurs is that calcium inhibits tumor growth in the colon by binding with certain harmful, cancer causing compounds and carries them out of the colon along with other body wastes. This interrupts the potential for these compounds to cause damage and mutations to the cells lining the intestinal wall.

Kidney stones are another condition that is directly linked to calcium intake. The medical profession at one time believed that restricting calcium would help prevent kidney stone formation. But recent long-term studies have found that both men and women who had the highest dietary calcium intakes had the lowest risks of developing kidney stones. Most kidney stones are actually made of a combination of calcium and oxalic acid. Research is revealing that it is the oxalic acid content in blood that determines the likely hood of stone formation, not calcium content. And that low levels of dietary calcium cause increased urinary excretion of oxalic acid, leading to stone formation.

New research supports the theory that calcium may also be beneficial for the relief of symptoms associated with PMS. A placebo controlled study was step up with one group of participants taking a placebo and another group taking 1,200 mg. of calcium supplements a day. The study found that the group taking the calcium supplements reduced their PMS symptoms by almost half compared to the placebo group. Supporting these findings is the fact that most premenopausal women have calcium deficient diets. Given the importance of calcium in hormone regulation, muscle contraction and nerve impulse transmission, it is highly conceivable that calcium plays a major role in the incidence and onset of premenstrual syndrome.

Breast cancer is another area where recent calcium based research has been performed. In animal studies, it has been shown that a diet low in calcium and vitamin D coupled with high intakes of fat leads to increased growth of breast cells. It was further

observed that when calcium and vitamin D were added to the animals diet, breast cell growth was halted. This preliminary data suggests a direct connection between calcium and breast cancer cell development, and also the importance of all vitamin and mineral compounds in the war against cancer.

This leads me to an important point. If you are taking a calcium supplement, make sure you take it with other foods and nutrients. By combining with other nutrients in food, the vitamins and minerals will work synergistically with one another and have a much more positive effect than by taking fractionated amounts of supplements alone. In other words, taking a calcium supplement is no substitute for eating naturally occurring foods that are high in calcium as well as other vitamins and minerals. If you want to supplement calcium in your diet or have been diagnosed with a calcium deficiency, 1,200 mg. a day is a good place to start. The best and most absorbed forms of calcium come in the form of calcium hydroxyapatite and calcium carbonate. It is also important to eat food rich in calcium such as fermented milk products like yogurt, kefir or cheese. Non dairy calcium fortified beverages such as rice milk, soy milk and almond milk are also good calcium choices. Green leafy vegetables are also packed with calcium that is actually better absorbed by the body than the dairy sources. Broccoli, brussels sprouts, kale, turnip, collard greens, bok choy, seaweed and cauliflower are all excellent choices. Even nuts and beans are sources of calcium.

And of course, make sure to do some form of bone strengthening exercise everyday. The more we work our bodies, the stronger it will get, and the more efficient all of our physiologic processes will become.

Dr. Bernhard J. Sengstock is a licensed Chiropractor in the State of New York with 300 hours of post-doctorate training in the field of Rehabilitation. Clinical nutrition and exercise is a large part of his practice located at 152 Islip Ave., Suite 23, Islip, NY 11751. Please call (631) 277-6767 for an examination and consultation, or E-mail your questions and comments to BSengstock @ aol.com.

Calendar of Events- October 26, 2000 @ 7:00pm - East Islip Public Library, Free Presentation on Tai Chi and Qigong. Learn the science, philosophy and art of these ancient healing practices, and some of the basic routines to get you started. Please call Universal Health & Rehabilitation @ (631) 277-6767 for reservations

Calendar of Events- October 5, 2000 @ 7:30pm- Central Islip Public Library, Free Presentation on low back and neck pain. Presented by Dr. Brian Yodice of Universal Health & Rehabilitation. Learn some of the best techniques to help alleviate your pain and discomfort as well as preventative measures you can take to minimize your chances of injury. Please call Universal Health & Rehabilitation @ (631) 277-6767 for reservations.