

LE Magazine June 2000

Late-breaking brief news items to life extensionists, as well as anyone interested in living a longer healthier life.

In The News

High Iron Levels Linked to Stroke Progression

According to a study published in *Neurology*, the American Academy of Neurology's scientific journal, high iron levels in stroke patients may prompt more severe neurological symptoms and possibly increase brain damage.

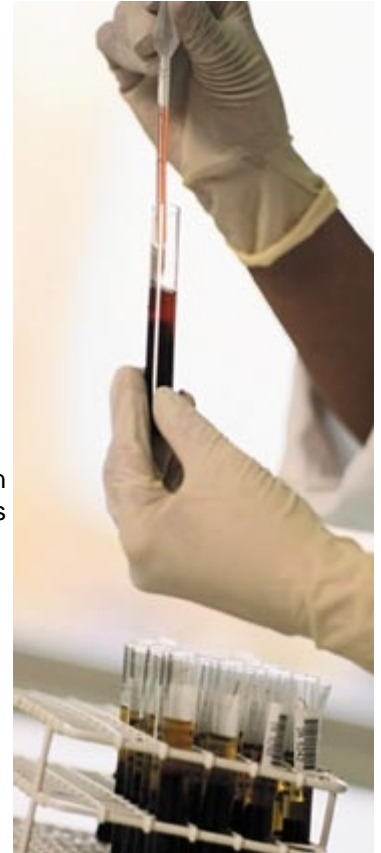
Blood ferritin is an indicator of the total amount of iron stored in the body. In high concentrations, it may intensify post-stroke neurological problems such as increased weakness, speech and orientation difficulties, and decreased levels of consciousness. Stroke patients with high ferritin concentrations may also have larger areas of the brain damaged due to stroke.

Neurologist and the study's lead researcher, Antoni Davalos, MD, at the Hospital Universitari Doctor Josep Trueta in Girona, Spain, said "Patients with ferritin levels higher than 275 ng/mL are 80% more likely to have progressing stroke." The researchers identified ferritin concentrations in plasma and cerebrospinal fluid samples taken from 100 stroke patients within 24 hours of stroke onset. The median plasma ferritin concentration of 45 patients who had progressing neurological decline due to stroke was 391 ng/mL. It was 148 ng/mL among those who remained stable or improved. The median ferritin concentration in cerebrospinal fluid was 17.4 ng/mL among the progressing stroke patients compared to 4.8 ng/mL in those less affected.

High body iron stores may increase free radical production in brain cells, thus prompting stroke progression. Iron stores may also cause progressing stroke by enhancing the release of glutamate, a neurotransmitter in the brain that is released in brain cells as a result of stroke. Glutamate then triggers biochemical reactions that lead to brain cell death and the production of free radicals. Measuring glutamate concentration in blood is a strong predictor of neurological deterioration or damage after stroke. About 60 percent of the patients with high ferritin levels also had high glutamate concentrations.

In past studies, blood ferritin concentrations have not been shown to fluctuate during the first 48 hours of stroke. Thus, the study's researchers concluded that the patients' high ferritin levels were not the result of the body's reaction to stroke. The 45 patients with progressing stroke also showed higher body temperatures and blood glucose concentrations, which have been associated with stroke worsening in other studies.

In healthy people, stored iron increases with age. This is the reason why most people should avoid taking supplements that contain iron. Given the relationship between iron deposits and stroke progression, the researchers concluded that blood ferritin levels should be regularly tested in patients with cardiovascular diseases or risk factors.



Don't Stop! Calcium intake is a life-time commitment

A decrease in bone density can cause osteoporosis and increase the risk of fractures in the elderly, making calcium supplementation essential. Post-menopausal women in particular lose bone density at about 1% per year. But according to the US Department of Agriculture (USDA), bone loss in the aged returns to its original level when calcium supplementation is stopped. A recent study shows that calcium intake should be a sustained life-time effort. Dr. Bess Dawson-Hughes, of the Jean Mayer USDA Human Nutrition Research Center on Aging, at Tufts University, Boston, presented her findings at the Experimental Biology 2000 conference.

Dawson-Hughes examined calcium intake and bone density in almost 300 men and women over the age of 65 for a two-year period. While all participants had taken calcium supplements for three years prior, a high percentage told researchers that they had stopped taking calcium. The study found that after one year of having stopped calcium supplementation, women continued losing bone density at pre-treatment rates. Men, on the other hand, took slightly longer to see the effect of calcium supplementation go away—after two

years of not taking extra calcium, their levels of bone loss rose to pre-treatment levels. According to Dawson-Hughes, there appears to be “no sustained benefit from calcium” after supplementation is halted.

Adolescents have shown similar patterns. Calcium is especially important for adolescents, who are building bone density to peak. Dr. Steven Abrams, a pediatric researcher at the USDA/ARS Children’s Nutrition Research Center, in Houston, Texas, looked at findings from four trials in girls and boys aged 6 to 14 years. The trials lasted one to two years each. Again, when supplementation ceased increases in bone density slowed to levels seen in untreated children.

Dawson-Hughes believes that “meeting calcium requirements should be a lifetime commitment.” Calcium supplements make the task easier. Other sources of calcium include dairy products and produce such as collards, turnip greens, rhubarb, broccoli, kale and other green-colored vegetables.



[Back to the Magazine Forum](#)

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