

TREAT AGING?

Repair damaged DNA and stimulate muscle building with first milk

Colostrum is mother's first milk for all mammals, and from bovine (cow) sources has been used for several thousand years for healing tissues and repairing cells throughout Asia and Europe. The Guardian said as for using colostrum in sports, "plenty of other British Olympic athletes will be—and with good reason."

Dr. Glen Davison's study in the May 2010 British Journal of Nutrition shows bovine colostrum helps prevent reduced immune function after exercise. Intensive exercise like running can run down immunity, but colostrum helps stop this, says the report out of Aberystwyth University, in Wales, UK. "Oral supplementation with bovine colostrum has been shown to enhance immunity in human subjects," says the study author.

Exercise induces "significant increases in markers of physiological stress and stress to the immune system" and confers "some benefits to host defense."

In March, 2007 researchers from The University of Queensland, in Brisbane, Australia reported in the Journal of Applied Physiology that "low-dose" bovine Colostrum supplementation "modulates immune parameters during normal training and after an acute period of intense exercise, which may have contributed to the trend toward reduced upper respiratory illness in the bovine [colostrum] group."

Was it true Great Britain's star weightlifter Zoe Smith, the first English woman to win a Commonwealth Games weightlifting medal and holder of the British clean and jerk record, was "on a

special diet of colostrum" as UK papers recently described? Smith may have protested too vigorously when she Tweeted: "I assure you it's not true. I'm a normal person who eats normal food and the occasional protein shake. Stop making me sound like a colostrum drinking freak!"

University of Kent, UK, sports scientist Glen Davison, Ph.D., told The Guardian, "It's not a wonder food but it can be very useful in boosting the immune system, especially during periods of intense physical training and when someone is under a lot of stress."

But colostrum does more than support immune recovery. It also helps athletes build muscles.

The 1988 and 1992 Olympic silver medalist Winthrop Graham began using Anovite, a colostrum product, after a knee injury in the 1996 Olympics. "It was a rather serious injury and doctors wanted to perform surgery, but I opted for a rehabilitation program," says Graham. Two years passed. But he was still having trouble recovering after running the hurdles. His knee would become stiff and prevent him from training consistently. "However, within two months after I began taking 12 colostrum capsules a day, I could run the hurdles with no stiffness at all," he says. The retired Jamaican athlete was

onto something. Research reveals colostrum builds muscles.

ANABOLIC FACTORS

Growth factors are broad-spectrum small proteins (polypeptides) that play key regulatory roles in cell growth, replication, and differentiation. Growth factors support complex feedback loops between the immune, nervous and hormonal systems that maintain healthy homeostasis under normal circumstances. Insulinlike growth factor-I (IGF-I) acts as a second messenger for growth hormone, carrying out its effects. Human Growth Hormone (hGH) is responsible for many effects on growth, physical development, immunity and metabolism. Produced and secreted by the anterior pituitary gland in the brain, hGH is normally



released in pulses in response from signals from the hypothalamus, usually during sleep. It exerts anabolic effects throughout the body favoring the tissues, bones and muscles.

An aging person exhibits lower levels of growth hormone than a younger one. Over time this decreased hGH level has significant negative effects on fat deposition, immunity and overall energy.

Both hGH and its mediator, IGF-I, may actually help treat the blueprint of aging, keeping the cells undamaged. Human Growth Hormone initiates transport of amino acids and nucleic acids into cells. IGF-I takes the work of hGH one step further and facilitates the transport of nucleic acids into the nucleus of the cell where the DNA resides, giving it the raw materials needed to repair damage and initiate cell division.

Exercise and training result in

muscle damage which, in turn, limit continued physical exertion and will reduce overall performance. Colostrum seems to counteract this negative effect.

In a study from the Department of Biology of Physical Activity, University of Jyväskylä, Finland, researchers examined the effects of bovine colostrum supplementation on serum insulin-like growth factor I (IGF-I), immunoglobulin G, hormones, and amino acid and saliva immunoglobulin. At concentrations during a strength and speed training period.

Nine male sprinters and jumpers underwent three randomized experimental training treatments of eight days separated by 13 days. The only difference in the treatments was one group consumed 125 milliliters of colostrum. Post-training increases were noticed for serum IGF-I in the

colostrum compared with the placebo group (given normal milk whey). "It appears that a bovine colostrum supplement...may increase serum IGF-I concentration in athletes during strength and speed training," note the researchers.

At the Center for Research in Education and Sports Science, at the University of South Australia, in Adelaide, a double-blind, placebo-controlled study was conducted to determine the effect of supplementation with a commercial bovine colostrum product on plasma IGF-I concentrations and endurance running performance. In the study, 39 males, aged 18-35, completed an eight-week running program while consuming 60 grams per day of the colostrum or whey protein. Although no differences in plasma IGF-1 concentrations were found between the groups at the start or end of the study, the colostrum group

continued to improve its performance capacity after four weeks, while the performance of the placebo group reached a plateau. By the eighth week, the colostrum group was running farther and doing more work than the placebo group. However, athletes receiving colostrum displayed a strong trend over eight weeks to reduce the increase in serum creatine kinase concentrations per unit of work done, while there was no such trend in the whey group. Creatine kinase is an enzyme that, during muscular activity, causes the breakdown of phosphocreatine in muscle to product adenisone triphosphate. Total creatine kinase measurement in

serum has remained the best overall marker for detection and monitoring of skeletal and muscular stress. High levels are undesirable.

The Anovite's produce, "first-milking" colostrum, is obtained within six hours of birth. True colostrum is produced before the birth of the calf and can only be collected for a short period, without being diluted by the subsequent production of milk. At the time of birth, potency is at its peak. The active elements such as immune factors, growth factors, antioxidants and anti-inflammatory agents are at their highest concentrations. What this means is that the sooner the colostrum is collected, the less diluted

it is with milk, and the greater the concentration of beneficial factors. ■

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