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USANA Health Sciences and TOSH Collaborate on New Vitamin Studies

***Can Vitamin D Reduce Muscular Weakness in Healthy, Active Adults?
Second Study Examines Vitamin C Role in Knee Injury Recovery***

MURRAY, UTAH - July 15, 2010 - Can something as simple as a vitamin supplement help your body recovery more quickly from the pain and stiffness associated with vigorous exercise, or even improve recovery from surgery? Researchers at TOSH-The Orthopedic Specialty Hospital and USANA Health Sciences, Inc. (NASDAQ: USNA) are hoping to answer these questions with different studies focused on vitamin supplements.

In the first study, Tyler Barker, PhD., a physiologist at TOSH, and Brian Dixon, PhD., a senior scientist at USANA, are hoping to determine whether vitamin D - most recently championed as a means to prevent or reduce a person's risk of cardiovascular disease - can reduce post-exercise muscular weakness in young, physically-active people.

"The implication here is that vitamin D will help shorten recovery time by minimizing muscular weakness," says Dr. Barker. "That could make a significant difference in an individual's performance and help them avoid some of the unpleasant after-effects of vigorous or unaccustomed exercise and establish the basis for future studies conducted at the molecular and cellular level."

Dr. Barker classifies the study participants as "weekend warriors," ages 18 to 45 years old, who are not taking any vitamin supplements. The athletes are randomly divided into three groups: one is given a placebo, the other two groups receive either 200 IU or 4000 IU (international units) of a specially formulated vitamin D (cholecalciferol) supplement.

Study participants will provide several blood samples and muscular strength measures prior to and following intense exercise. Dr. Barker says researchers are only testing study participants during the winter months when a person's vitamin D levels are at their lowest levels. The study began this past winter and is expected to run for two to three more years.

A second study involves patients at TOSH with ACL (anterior cruciate ligament) injuries. Investigators are hoping this study helps them find a complimentary therapeutic approach for improving muscular strength in post-surgical patients.

"In results recently published in *Free Radical Biology and Medicine*, we discovered an association between plasma ascorbic acid concentrations prior to surgery and muscular strength gains after surgery," says Dr. Barker. "Specifically, patients with higher levels of vitamin C in their blood before ACL surgery are showing greater strength recovery after surgery."

Which makes sense.

According to the National Institutes of Health, the human body needs vitamin C to produce collagen - which is used to create skin, scar tissue, tendons, ligaments, and blood vessels – as well as to heal wounds, and repair and maintain healthy cartilage, bones, and teeth.

Vitamins C and E are both antioxidants – nutrients that slow the aging process and help our bodies eliminate the excess free radicals that accelerate aging. Dr. Barker says lowering oxidative stress and increasing vitamins E and C to adequate and safe levels in the body may improve recovery following ACL surgery.

“Oxidative stress occurs all the time,” he says. “It’s a natural part of living. But you don’t want it to exceed your antioxidant capacity. That’s when we find impairments in muscular strength or size, as suggested in experimental animal studies; causation remains to be explicitly tested in humans, a causation that we are uniquely exploring in several different human models.”

Participants in this study are all TOSH patients being treated for ACL injuries. Two weeks prior to their surgery, their blood is tested for vitamin C and E levels, and then each leg is separately tested for strength. Patients are given a placebo, customized vitamins E and C, or a multi-vitamin/mineral (USANA Essentials). Patients will supplement for a total of 18 weeks: starting 2 weeks prior to and conclude 16 weeks after surgery. Single leg strength and blood measures are tested again several times – at two, three and four months post-surgery.

“We hope that our studies will provide evidence-based results that identify complementary therapeutic approaches for patients recovering from ACL surgery,” says Dr. Barker. “The idea that we can use vitamin supplements to build strength and improve physical rehabilitation is provocative. Through the collaborative research efforts between USANA and TOSH, we are positioned to advance the body of knowledge regarding complementary and alternative medicine approaches in diverse human conditions.”

In both studies, USANA is providing custom and existing supplements (i.e., USANA Essentials) with designated and certified levels of purity and potency. This is crucial, Dr. Barker says, because of the lack of oversight by some supplement manufacturers. Many supplements can have significantly more or less of the active ingredient than the label suggests.

“At TOSH, we appreciate and feel extremely fortunate for the collaborative research relationship established with USANA Health Sciences and the Research and Development department therein,” says Dr. Barker. “In a scientific setting, it is important to know exactly what you are studying and what you are providing to subjects/patients. USANA Health Sciences provides remarkable scientific and research support, pharmaceutical grade supplements, and quality assurance of individual ingredients”.

Dr. Dixon notes that USANA uses the highest quality raw materials in their manufacturing process and takes great pains to ensure their final product meets the highest standards.

He says they are excited to be part of these two important studies.

“TOSH’s reputation proceeds itself,” says Dr. Dixon. “We are proud to be working together on these projects. TOSH has the ability to assess muscular-based end points with distinct clinical applications to patient recovery, whereas USANA examines mechanisms predominantly at the molecular and biochemical level. Working together, we should be able to identify if alterations at the molecular or cellular level improve clinical- and functional-based outcomes in patients.”

Besides providing the supplements for both of these studies, USANA is also providing a partial funding to the Vitamin E and C study in ACL patients. The Deseret Foundation at Intermountain Healthcare is funding both the Vitamin D and Vitamin E and C studies. Persons who are interested in taking part in the studies can contact Dr. Barker at TOSH at 801-314-4951.

ABOUT USANA

USANA Health Sciences develops and manufactures high-quality nutritionals, personal-care, energy and weight-management products that are sold directly to Preferred Customers and Associates throughout the United States, Canada, Australia, New Zealand, Hong Kong, Japan, Taiwan, South Korea, Singapore, Malaysia, the Philippines, Mexico, the Netherlands and the United Kingdom. Learn more at www.usana.com.

ABOUT TOSH

TOSH is one of the country's premier centers for orthopedic surgery, orthopedic research, sports performance training, comprehensive physical therapy and rehab, and sports medicine programs. TOSH's broad range of service includes TOSH Acceleration training, sports medicine, sports biomechanics, physical therapy, occupational therapy, athletic training, nutrition, biomechanical engineering, and exercise and sport physiology.

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