

News Release

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New study confirms that Carnipure™ tartrate supplementation decreases hypoxic stress following resistance exercise

Basel, Switzerland, August 18th, 2008 – Previous research from the University of Connecticut, USA has shown that supplementation with Carnipure™ tartrate, a very stable salt form of L-Carnitine, beneficially affects markers of oxidative stress following resistance exercise. However, the mechanism for this response remained unclear. A new company-supported study from the same research group was released in the July 2008 issue of the *Journal of Strength and Conditioning Research*. This study demonstrates that supplementation with Carnipure™ tartrate actually induces an increase in muscle oxygen consumption, providing a potential mechanism for reduced hypoxic stress following resistance exercise.

Resistance exercise is known to cause muscle hypoxia, which triggers a biochemical process resulting in free radical formation and membrane disruption. For the athlete, this means muscle damage, muscle soreness and reduced performance. Any attenuation of muscle hypoxia would therefore contribute to a faster and better recovery from exercise.

Changes were found in tissue oxygenation response of the thigh muscle in resistance trained athletes during the recovery periods following squat exercises. This led to the conclusion that the Carnipure™ tartrate-supplemented group had higher muscle oxygen consumption than the placebo group. “We’re pleased with this new evidence since it further strengthens the story behind the benefits of Carnipure™ tartrate on exercise recovery”, comments Kevin Owen, Ph.D., Head of Technical marketing and scientific affairs - North America at Lonza.

This research is also supported by another study actually published at the same time by an Indian research group led by Arkadeb Dutta in *Experimental Physiology*. Rats were exposed to hypoxia induced oxidative stress and supplementation with L-Carnitine was found to reduce oxidative damage and thereby delay muscular fatigue.

L-Carnitine is produced by the body and plays a critical role in fat and energy metabolism. It carries long-chain fatty acids, one of the primary energy sources for our body, into the mitochondria where they are broken down for energy generation. This is especially important for anyone who leads an active lifestyle and has high energy needs. A vast amount of research has shown that Carnipure™ tartrate supplementation may be beneficial not only for elite athletes, but also recreational active people.

Lonza is the only manufacturer of the Carnipure™ brand of L-Carnitine products including Carnipure™ tartrate (U.S. Patent 5073376, Japan Patent JP 2546068 and other international patents). Carnipure™ tartrate consists of 68% pure L-Carnitine and

32% L-tartaric acid and is self affirmed as GRAS (Generally Recognized as Safe). Carnipure™ products are crystalline, white, water-soluble and heat stable which makes them ideal for use in various food and drink applications. In addition, Carnipure™ tartrate is non-hygroscopic, odorless, has a pleasant citrus taste and excellent flowability. Carnipure™ products are kosher certified. Further details are available at www.carnipure.com.

About Lonza

Lonza is one of the world's leading suppliers to the pharmaceutical, healthcare and life science industries. Its products and services span its customers' needs from research to final product manufacture. Lonza is the global leader in the production and support of active pharmaceutical ingredients both chemically as well as biotechnologically. Biopharmaceuticals are one of the key growth drivers of the pharmaceutical and biotechnology industries. Lonza has strong capabilities in large and small molecules, peptides, amino acids and niche bioproducts which play an important role in the development of novel medicines and healthcare products. Lonza is a leader in cell-based research, endotoxin detection and cell therapy manufacturing. Lonza is also a leading provider of value chemical and biotech ingredients to the nutrition, hygiene, preservation, agro and personal care markets.

Lonza is headquartered in Basel, Switzerland and is listed on the SWX Swiss Exchange. In 2007, Lonza had sales of CHF 2.87 billion. Further information can be found at www.lonza.com.

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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