ASU/NCRC Human Performance Laboratory

The mission of the ASU-NCRC HPL is to investigate unique nutritional products as countermeasures to exercise- and obesity-induced immune dysfunction, inflammation, illness, and oxidative stress. Research funding is provided through multiple industry partners.

Types of research studies:
- Athletic (double-blind, placebo controlled)
- Community (double-blind, placebo controlled)
- Equipment and new technology validation

Pictured above:
Dr. Farris, a collaborating physician researcher from the Carolina Medical Center, extracts a muscle biopsy sample from a cyclist’s leg.

Dr. Meaney prepares a blood sample for analysis.
The ASU-NCRC Human Performance Lab (HPL) was established in the spring of 2009 and is directed by David C. Nieman, DrPH, FACSM. Dr. Nieman is a pioneer in the research area of exercise and nutrition immunology, has written more than 300 peer-reviewed publications and nine books on health, exercise science, and nutrition, and received $7.3 million in research funding since 1990 ($3.2 million since 2009 at the NCRC). Dr. Nieman’s H index is 71, and his publications have been cited more than 16,000 times. He received the Research Citation Award from the American College of Sports Medicine in 2013.

Research Discoveries

Discoveries by Dr. Nieman and his research team include the protective effect of regular moderate exercise in augmenting immunity and decreasing illness, the anti-inflammatory benefits of ingesting one liter of sports drink with 60 grams of carbohydrate per hour of heavy exertion, the pro-oxidative (thus harmful) effect of using large dose vitamin E supplements prior to competing in an Ironman race, the pro-inflammatory (thus harmful) influence of using ibuprofen during competitive ultramarathon races, the anti-pathogenic influence of quercetin (1,000 mg/day) in endurance athletes, runners experience a profound systemic shift in blood metabolites related to energy production especially from the lipid super pathway, and vitamin D2 supplementation in NASCAR pit crew athletes amplifies eccentric exercise induced muscle damage.

Personnel

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