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©Journal of Sports Science and Medicine (2009) 08, 150 - 151 **Letter to editor**

History may be the Best Guide for Determining the Athlete's Dietary Protein Needs

Umile Giuseppe Longo[1], Filippo Spiezia[1], Nicola Maffulli[2], Vincenzo Denaro[1]

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Dear Editor-in-Chief

I was encouraged to read Dr. Longo and colleagues' Letter to the Editor entitled "The best athletes in ancient Rome were vegetarian!"(Longo et al., 2008). These writers ask that we rethink the issue of what is an optimal dietary protein content for athletes by considering the diets that sustained the ancient gladiators of Rome. Historical evidence shows that humans of ancient times performed at intense levels while consuming 78% of their diets' as plant protein (Kanz and Grosschmidt, 2007). This anthropological fact, and some recent laboratory evidence, argues against the need to increase the protein RDA for athletes from 0.8 g of protein per kilogram of body weight per day to 1.2 to 1.4 g per kilogram per day (ACSM, 2000). Our research group found that amino acids make a small contribution (2 - 3% of total) to endurance energy needs (Lamont et al, 1999) and that athlete's have similar oxidation rates if corrections are made for oxygen consumption and fat-free body mass. Others report that a short-term training program of 38-days reduces amino acid use during exercise and down-regulates a critical enzyme in the oxidative pathway in order to spare this nutrient (McKenzie et al., 2000)

Yet sport nutritionists and physiologists continue to recommend an increased protein RDA for this group. If one does a Google search using the words exercise and protein you would literally get millions of citations recommending the athlete to increase their protein intake. One reason for this continued recommendation, I believe, is that the laboratory procedure used to justify an increased protein RDA (field-based nitrogen balance measurements) has many methodological shortcomings that are not recognized by the sports science community (Lamont, 2008). The problems with this technique are so great that its scientific fidelity has been questioned (Lamont, 2008). And as Longo and colleagues have highlighted (2008) the Institute of Medicine concluded that the evidence for increasing the RDA in active individuals is not compelling (Washington, 2002). All of these facts speak to the argument that many have "jumped the gun "in recommending that athlete's increase their protein intake. The ancient (and modern) evidence indicates that we need to recalibrate our dietary protein recommendations for this group. This argument is compelling when we consider that protein and amino acid supplements are among the highest nutritional supplements consumed (Lawrence and Kirby, 2002).