

Food Sensitives in Athletes: Why More Common Than You May Expect?

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ABSTRACT

Food sensitives, which differ from food allergies, are caused by digestive problems to foods that may lead to symptoms such as bloating, diarrhea, constipation, fatigue, headache, joint pain, and sleep disturbances, among other issues. It is estimated that food sensitivities affect 15-20% of the US population. These are IgG antibody-mediated responses that may develop from a variety of causes such as enzymatic defects in the digestive system. Research suggests that IgG-based tests produce clinically meaningful results that aid in the development of a targeted elimination diet. In a non-athletic sample with food sensitivities, our lab previously reported that 70% of the population demonstrated a sensitivity specifically to whey protein. Athletes are not impervious to these individualized food sensitivities. Some researchers have stated 30-50% of endurance athletes complain about gastrointestinal issues that impair performance and/or recovery. **PURPOSE:** To assess the prevalence of whey protein sensitivity in NCAA Division I athletes at the University of the Incarnate Word. **METHODS:** A small sample of endurance athletes [N=16, Male=13, Age=19.44 ± 1.50, Wt (kg)=70.77 ± 8.29, LBM (kg)=63.76 ± 10.72] performed a food sensitivity test at the beginning of the Spring 2023 semester. Frequency and descriptive analyses were run to assess prevalence of food and whey sensitivity. Additional food sensitivity data from a partner study involving a public sample with high inflammatory symptoms [N=20, Male=20, Age=26 ± 7.6, Wt (kg)=88.43 ± 20.74, LBM (kg)=67.44 ± 10.15] were included for comparative analysis via t-test and chi-square test of independence. **RESULTS:** Frequency distributions for the athlete sample indicated 75% positive for a whey sensitivity and 93.8% positive for any food sensitivity. The current sample tested moderate-severe for 40 unique foods, with the greatest frequencies for whey, cow's milk (68.8%), gluten (62.5%), wheat (50%), cheddar cheese (50.0%), and casein (43.8%) to name a few. Further, inflammatory symptom scores did differ between the athlete (8.93 ± 1.60) and public sample (17.96 ± 1.38; t=4.279, p<.001). Although, the proportion of subjects with a whey sensitivity did not differ in the athlete (75%) versus public sample groups (70%; $\chi^2 = .111$, p = .739). **CONCLUSION:** Whey protein is commonly used as a protein supplement because it is a complete protein that is high quality and typically very digestible. However, if an athlete has a sensitivity to whey protein this supplement may be causing more harm than good. Moving forward these athletes will receive 4 weeks of whey protein versus 4 weeks of plant protein daily after practice to assess changes in performance, recovery, and inflammatory symptoms.