

After Exercise does Adding Yeast to Whey Protein Help Muscle Recovery

A recent study published found that in well-trained athletes, the incorporation of [yeast protein](#) into a whey-based supplement favorably influenced selected measures of recovery from exercise-induced muscle damage (EIMD) compared with water alone, but its superiority over whey protein alone was not established.



Study

This randomized three-arm trial included 54 well-trained athletes, randomly assigned to a yeast–whey protein blend, whey protein alone, or water-only control arms. The yeast–whey formulation contained 40% yeast protein ingredient and 40% [whey protein isolate](#), while the whey-only formulation contained 80% whey protein isolate, with the remainder of each consisting of flavorings and excipients. Both protein formulations provided 0.9 g/kg/day of actual protein. The analyses included 48 participants, as the others did not complete the follow-up.

After seven days of supplementation, participants underwent an EIMD assessment. Outcomes were assessed before and immediately after EIMD, as well as at 24, 48, and 72 hours. The [total supplementation](#) period lasted ten days.

The primary outcomes included [serum creatine kinase](#) (CK), inflammatory responses as reflected by circulating cytokines (interleukins (IL) such as IL-6, IL-1 β , and IL-10, and TNF- α), and metrics of muscle function and performance. These included countermovement jump (CMJ) performance, Maximal Voluntary Isometric Contraction (MVC), and isokinetic concentric and eccentric peak torque.

The secondary outcome was perceived [muscle soreness](#), assessed using the visual analog score (VAS). Males and females were separately analyzed, though the study sample lacked the statistical power to compare sex-specific effects of intervention.

Findings

CK increased over time in both sexes, with significant group-time interactions among males but not females after broader correction for multiple testing. Comparing the outcomes in pairs, the investigators found that the [yeast–whey protein](#) group had higher CK levels than the water-only control (C) just after the EIMD, though levels were lower than C at 48 hours. However, the

sensitivity analysis of immediate post-EIMD results did not find a significant difference between the yeast–whey protein group and C.

In females, an exploratory finding indicated that CK was lower than C with the yeast–whey [protein](#) blend at 24 hours only, although the group-by-time interaction was not significant after broader correction for multiple testing.

The authors highlight the heterogeneous origin of increased CK, which is affected by release kinetics, clearance, [training status](#), sex, and variability between individuals. This prevents its interpretation as evidence of less muscle damage.

These results also do not identify the cause of the reduction, which could be a yeast component, the combination of yeast and whey protein, the energy supplied by the blend, or the [total protein](#) supplied.

Soreness increased post-EIMD but declined over the follow-up period in both sexes. Among males, the mean VAS across all five assessments was lower with the yeast–whey protein blend than C, but there was no statistically significant difference between [whey protein](#) and C. Females did not show similar changes.

The difference may have been influenced by expectancy bias, since participants knew whether they were receiving protein supplements or water alone. The IL-6 responses showed differences over time in males but not females. The immediate post-EIMD IL-6 was lower with the yeast–whey protein blend than with C, whereas there was no statistically significant difference between whey protein and C. However, since muscle cytokines were not directly measured, and since circulating and local muscular cytokine levels do not always coincide, the authors conclude that the lower circulating IL-6 level does not necessarily indicate reduced [harmful inflammation](#) or muscle damage. Other measured inflammatory markers showed no consistent intervention-related changes.

Conclusion

The findings suggest that incorporating yeast-derived protein into a [whey-based supplement](#) may support selected aspects of muscle recovery from EIMD, with the clearest responses being in males. However, the study lacked power to compare the effects between sexes, and more importantly, does not show that the yeast–whey protein blend is superior to whey protein by itself.

The [yeast–whey protein blend](#) was associated with lower serum CK at 48 hours and, on average, less soreness in males than controls.

Muscle function parameters also suggested better [preservation](#), though most analyses were exploratory. Importantly, whey protein was also associated with better results compared to the control.

“Collectively, the findings indicate an outcome-specific response rather than a uniform effect across all [biochemical](#), perceptual, inflammatory, and functional manifestations of EIMD.”

Source:

<https://www.news-medical.net/news/20261016/Does-adding-yeast-to-whey-protein-help-muscle-recovery-after-exercise.aspx>