Study: Bovine Colostrum Does Not Improve Post-Exercise Immune Health

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Colostrum supplementation before short-term exercise was no better than skim milk powder.

Bovine colostrum, milk produced during late stages of pregnancy, is often considered for its potential role in improving immune health. But research published in the April 2011 issue of the International Journal of Sport Nutrition and Exercise Metabolism concludes that colostrum may not benefit immune health markers after short-term exercise.

Nine male athletes were assigned to 10 days of supplementation with colostrum or skim-milk powder. After the supplementation period, subjects performed an endurance trial for 90 minutes at 50% their maximum workload. A glycogen-depletion trial was administered the night before the endurance trial to make immune health more pronounced. Researchers sampled blood before the glycogen-depletion trial, immediately before and after the endurance trial, and about 22 hours after the endurance trial. C-reactive protein and a variety of cytokines were measured to assess post-exercise immune health.

As expected, plasma cortisol, C-reactive protein, and certain cytokines (interleukin-6, interleukin-10, and interleukin-1-receptory agonist) reached their highest levels after exercise—indicating that exercise held an effect on immune health—but no significant differences were observed in the two groups.

“Colostrum did not alter any of the postexercise immune variables compared with skimmilk powder,” concluded the study’s author, “suggesting no role for bovine colostrum supplementation in preventing postexercise immune suppression after short-term intense exercise.”

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