

No evidence found to support using antioxidants to provide a noticeable reduction in post-exercise muscle soreness

Clinical Question	How effective are antioxidant supplements and antioxidant-enriched foods for preventing and reducing the severity and duration of delayed onset muscle soreness following exercise?
Bottom Line	There was moderate- to low-quality evidence that antioxidant supplementation did not result in a clinically relevant reduction of muscle soreness after exercise at any of the five follow-up times: up to six hours and at 24, 48, 72 and 96 hours after exercise. There was no evidence available on subjective recovery and only limited evidence on adverse effects of taking antioxidant supplements. Some antioxidant supplements such as N-acetylcysteine might cause unwanted side effects including gastrointestinal discomfort and diarrhoea.
Caveat	There was large variation in the dose and duration of the antioxidants used. There were no older participants included in this review (age range of participants: 16 to 55 years).
Context	Muscle soreness typically occurs after intense or unaccustomed exercise. It peaks between 24 and 72 hours after the initial bout of exercise. Many people take antioxidant supplements such as vitamin C and/or E or antioxidant-enriched foods such as tart cherry or pomegranate juice before and after exercise in the belief that these will prevent or reduce muscle soreness after exercise.
Cochrane Systematic Review	Ranchordas M et al. Antioxidants for preventing and reducing muscle soreness after exercise. <i>Cochrane Reviews</i> , 2017, Issue 12. Art. No.: CD009789. DOI: 10.1002/14651858.CD009789.pub2. This review contains 50 studies involving 1,089 participants.

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Cochrane systematic review link: <http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD009789.pub2/full>