

Creatine for endurance athletes: is it worth it?

Creatine is not a magic endurance supplement, but it can have a place for athletes who understand what it does - and what it does not do.

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What creatine actually does

Creatine pops up in squad chats every few months. Usually someone has seen a reel about it, and usually it comes with the same questions: *Isn't that a bodybuilder supplement? Won't it make me heavy?*

The short version: creatine is not only for the gym, and it is unlikely to be the difference between a good race and a bad one. But it is a well-studied, low-cost tool that may make sense for some endurance athletes - provided the basics are already in place.

Creatine is stored in muscle, including as phosphocreatine, where it helps rapidly regenerate ATP: the immediate energy source for muscle contraction. Supplementing can raise muscle creatine stores beyond what most people obtain from food alone.

That is most relevant for short, high-intensity work and repeated efforts: a surge over a climb, the final part of an interval, a sprint finish, or the quality work in the gym. It does not build your aerobic engine or replace consistent endurance training.

The honest read on endurance performance

The direct endurance-performance evidence is not a slam dunk. A 2023 systematic review and meta-analysis of 13 placebo-controlled studies in trained athletes found no meaningful overall improvement in endurance performance with creatine.

That does not make creatine useless for an endurance athlete. It means the better case is more specific: supporting repeated high-intensity efforts, strength and power work, or a mixed training programme - not expecting a faster marathon, Ironman or long-course ride simply because you have added a scoop to your shake.

For an athlete whose limiting factor is aerobic durability, fuelling, sleep or training consistency, those are still the levers that matter most.

What about body weight?

This is the sensible concern. Creatine can increase body mass, particularly with a loading protocol. Early change is commonly related to water retained within muscle; longer-term changes can also reflect lean mass when it is paired with resistance training.

That is not fat gain, but it can still matter in a weight-sensitive event or for an athlete who is already closely managing race weight. Do not tell yourself it is *always negligible*: response varies, so watch the trend rather than guessing.

The VO2max concern is related. If body mass rises, a relative VO2max expressed in mL/kg/min can fall on paper even if the aerobic system itself has not become less capable. Context beats one number.

Creatine, heat and cramps

Creatine has a persistent reputation for causing cramps, dehydration and poor heat tolerance. The available controlled evidence does not support that reputation at recommended doses. A systematic review found no evidence that creatine impairs heat dissipation or body-fluid balance during exercise in the heat.

That is not permission to ignore hydration, sodium or heat acclimation. They remain their own jobs - especially in an Australian summer.

A simple protocol

- **Choose creatine monohydrate.** It is the form with the deepest evidence base.
- **Take 3-5 g daily.** Consistency matters more than timing.
- **A loading phase is optional, not required.** Skipping it is a reasonable way to reduce the chance of short-term gastrointestinal upset or a rapid change in body mass.
- **Give it around four weeks** of daily use before deciding whether it is useful for you.
- **Use a batch-tested product.** HASTA, Informed Sport or NSF Certified for Sport are sensible options for tested athletes. The risk is product quality and contamination, not that creatine itself is prohibited.
- Athletes who eat little or no meat may start with lower muscle creatine stores and can respond more noticeably, although individual response still varies.

If you have kidney disease, are pregnant or breastfeeding, take regular medication, or have been advised to limit supplements, speak with your GP or an accredited sports dietitian before starting. For healthy adults, the current evidence does not show that recommended creatine use harms kidney function - but that is not a substitute for individual medical advice.

So, should endurance athletes take it?

Creatine is a reasonable add-on if you are already covering the unglamorous stuff: enough energy intake, good sleep, sensible strength work and weeks of consistent training. It may be particularly worthwhile when your programme includes gym work, repeated hard efforts or a genuine power component.

But keep its place in perspective. It is a rounding error next to consistent training and well-practised race fuelling. I would rather see four unbroken weeks of sensible work than a perfectly optimised supplement cupboard.

If you decide to try it, let your coach know. A small change in body mass or gym performance is useful context when we are reading your training data.

References

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