

AIS SPORTS SUPPLEMENT FRAMEWORK

CURCUMIN GROUP B



As a group B supplement, this supplement should only be used under the close supervision of your sports dietitian

Curcumin is the most abundant phenolic compound found in turmeric - a spice. In its raw form, turmeric looks like ginger, but orange on the inside and is commonly found in curry powders and sauces. It has a long history of use in cooking and traditional Indian and Chinese systems of natural medicine. Curcumin has been researched for its medicinal, health and possible sport recovery and performance benefits.



Curcumin is an unstable compound and its bioavailability is very poor in its unmodified form. Companies have formulated supplements with piperine (pepper extract), turmeric oil or soy lecithin, and particle size to improve absorption



Curcumin is a yellow powder. As a supplement it is most often available in capsule form



Piperine (an extract of black pepper) may enhance bioavailability of curcumin by 2000%

BENEFITS OF CURCUMIN SUPPLEMENTATION



FASTER RECOVERY - REDUCED DOMS (DELAYED ONSET MUSCLE SORENESS)



ANTI - INFLAMMATORY [e.g. reduce perception of pain]



IMPROVED MUSCLE FUNCTION



PROTECTION FROM CELL DAMAGE

WHEN TO CONSIDER CURCUMIN SUPPLEMENTATION?

- ☒ Joint pain
- ☒ High workload training or competition with limited time for recovery
- ☒ Athletes (including Masters athletes) with inflammatory-related concerns

HOW TO USE

- > Research has shown curcumin supplementation can be effective across a range of different time periods.
- > Specific prescription is difficult given the range in bioavailability of curcuminoids (the active part of curcumin) depending on the specific supplement used, and any related ingredients to facilitate enhanced bioavailability. Seek the expert guidance of your sports dietitian for specific guidance.



Starting at least 48 hrs pre - exercise



200 - 1000 mg curcuminoids per day



Extending for at least 24 - 72 hrs post exercise



CURCUMIN

FOOD FIRST

> Curcumin is present in whole foods containing the spice turmeric. The average intake of turmeric in an Indian diet is approximately 2 - 2.5 g for a 60 kg individual, which is equal to approximately 60 - 100 mg of curminoids.

> Ways to include curcumin in the diet might include: curries and stir-fries containing turmeric, turmeric tea, turmeric porridge or overnight oats, turmeric seasoning on baked vegetables and homemade chips, turmeric scrambled eggs, turmeric smoothies and turmeric rice etc. Adding black pepper to these foods may enhance curcumin bioavailability.



> Calculating the amount of curcumin in food is difficult, and furthermore the bioavailability of curcumin in whole food form is a limiting factor in using food alone to achieve a therapeutic dose. Formulated batch tested supplements are likely the most effective option for achieving specific outcomes.

CONCERNS & CONSIDERATIONS



Generally well tolerated with no known side effects, although there are safety concerns with doses over 2 g per day. No more than 8 g curcumin should be taken per day.



Advanced curcumin formulations often carry additive and other compounds. Extra caution should be exercised in regards to inadvertent doping.



Effects of long-term supplementation on the potential for dampening training response and adaptation are unknown and warrants further research.



The effect of curcumin on attenuating DOMS might be diminished in elite or highly trained athletes



There is lack of clarity on which formulations are most effective and more research is required. The total number of curcuminoids appears key to efficacy.



More research is needed in terms of effective dose and bioavailability of natural vs. advanced formulations with added ingredients.



All supplements have a doping risk of some kind. Some supplements are riskier than others. Athletes should only use batch-tested supplements. The Sport Integrity Australia app provides a list of more than 400 batch-tested products. (www.sportintegrity.gov.au/what-we-do/supplements-sport).

While batch-tested products have the lowest risk of a product containing prohibited substances, they cannot offer you a guarantee. Before engaging in supplement use, you should refer to the specific supplement policies of your sport or institute and seek professional advice from an accredited sports dietitian (www.sportsdietitians.com.au). Athletes are reminded that they are responsible for all substances that enter their body under the 'strict liability' rules of the World Anti-Doping Code.