

AISSPORTS SUPPLEMENT FRAMEWORK

MENTHOL GROUP B



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

Menthol is a transient receptor potential (TRP) channel agonist, which may be useful during exercise as a heat management strategy to facilitate a perception of cooling. TRP channels are located on the outside of cells that are involved in communicating a variety of sensations including pain, temperature, taste, pressure and stretch.

Menthol is derived from the oils of mint and peppermint plants and has a 'minty' aroma and taste. It is widely used as a food ingredient to flavour confectionary, oral hygiene (mouth wash/ chewing gum) and medicinal products to relieve pain temporarily (e.g. Deep Heat/ cough drops).



In its pure form menthol is a stable white crystal. Using it in this way is not recommended due to risk of confusion about a safe dose



Emerging research supporting its use is resulting in menthol being integrated into specific sports foods like gels. Commercially available products are currently limited



Foods containing menthol may be worth experimenting with your dietitian e.g. menthol containing confectionary such as Fisherman's Friend®

BENEFITS OF SUPPLEMENTATION



REDUCE PERCEPTION OF HEAT STRESS



REDUCE PERCEIVED EXERTION

Menthol ingestion can aid performance in some circumstances when competing in hot conditions by exerting a cooling sensation, despite no impact on body temperature

> When ingested during exercise, menthol gives a perception of cooling i.e. 'that fresh mouth feel' that comes when using a mouth wash. This perceived cooling may be further enhanced if you also drink a cold drink/ slushie after menthol ingestion.

WHEN & HOW TO USE IT?



Menthol may be beneficial when exercising in hot environments for shorter periods of time e.g. running and cycling.



For longer duration events where a true cooling effect is required, other heat management strategies such as cold showers, ice baths, slushies, chilled drinks and personal cooling products such as ice vests, chill towels and neck ties may be more appropriate.



There is no clear consensus on safe and effective internal application of menthol use for athletes. Best practise protocols are yet to be established.



Menthol supplementation should only be considered and trialled in collaboration with an accredited sport scientist and/or sports dietitian. Be sure to extensively trial your supplement strategy in similar environmental conditions to that anticipated in competition, to confirming tolerance and perceived benefit.



Consider strategies such as repeated use every 5 - 10 minutes during exercise and at strategic time points (e.g. near end of prolonged endurance event) to optimise sensory benefit.



MENTHOL

FOOD FIRST PHILOSOPHY

> Given the limited number of commercially available menthol containing supplements, athletes may wish to work with their sports dietitian to start by trialling the use of menthol containing foods. The menthol content of these options is often unknown but likely low, so too will the risk profile.

Follow with an ice slushie or icy cold fluid to maximise the cooling effect



Original Fisherman's Friend®
25g packet (approx. 20 lozenges)
= 10 mg menthol per lozenge
= 200 mg menthol per packet



While the menthol content of these mint lozenges is unknown, sucking on them for 10-20 seconds may provide a mouth cooling effect



A small number of sports foods are now available that also contain menthol, presumably to facilitate that mouth cool feel. They often contain other ingredients such as caffeine, so read labels closely

CONCERNS & CONSIDERATIONS



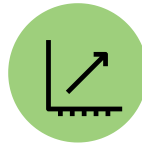
Can be lethal if used in amounts as low as 50-150 mg/kg body mass [equivalent to 3 g for a 60 kg individual = 15 x 25g Fisherman's Friend packets].



Individual differences in response to menthol may impact the effect. More studies needed in elite athletes [particularly female] representative of real-world performances.



Unknown if there is a benefit for intermittent, dynamic, explosive activities, fine motor movements and team based sports.



A clear dose-response is yet to be identified, however, individual strategies are recommended over a 'more is better' approach.



Avoid using mouth wash as a menthol containing rinse as it often contains alcohol or similar and can dry out the mouth.



Avoid combining menthol with other substances, which may make it ineffective, harmful, or give the potential for contamination with unapproved substances.



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.