



AIS

AUSTRALIAN INSTITUTE OF SPORT POSITION STATEMENT

SUPPLEMENTS AND SPORTS FOODS IN HIGH
PERFORMANCE SPORT

Premise

Sports foods and supplements can play a small but important role in the sports nutrition plans of high performance athletes. Sporting organisations, sports science and medicine practitioners, coaches and athletes all contribute to a pragmatic and transparent approach that balances the pros and cons of supplement/sports food use by considering: is it safe? Is it effective? Is it permitted for use in sport?

Objective

The AIS Sports Supplement Framework provides resources that allow National Sporting Organisations to promote safe and evidence-based use of supplements and sports foods in the Australian high performance sporting system

Key stakeholders

- AIS Sports Supplement Governance Committees
- National Sporting Organisations
- National Institute Network, including the AIS, plus State Academies and Institutes of Sport in Australia
- Sport Integrity Australia



Executive Summary: AIS Sports Supplement Framework 2021

- Contemporary sports nutrition practices play an important role in optimising an athlete's health and performance. A “food first” approach, which promotes a focus on unprocessed and conventional foods, is a foundation goal of an evidence-based sports nutrition plan. However, some supplements and sports foods can play a small but valuable role in such a plan.
- The use of supplements and sports foods involves a balance between the potential rewards (contribution to an evidence-based sports nutrition plan) and potential risks (e.g. health concerns, Anti-Doping Rule Violations (ADRVs), misplaced priorities).
- Although there is no way to guarantee a zero risk of ADRVs associated with the use of supplements and sports foods, Best Practice involves Supplement Policies, Programs and Guidelines that support informed decisions and safe practices around supplement use. Key considerations should be addressed before the use of any product:
 - ***Is it safe?***
 - ***Is it effective?***
 - ***Is it permitted for use in sport?***
- The AIS Sports Supplement Framework is a Leadership activity involving the engagement of key stakeholders within the Australian high performance sport network to provide expertise and resources to enhance insights gained during the implementation of the Australian Institute of Sport (AIS) Sports Supplement Program (2000-2012). The AIS Sports Supplement Framework supports Australia's sporting organisations and agencies to develop their own Sports Supplement Policies, Programs and Guidelines which achieve Best Practice, including compliance with the requirements of Sport Integrity Australia and the National Anti-Doping Scheme.
- Trust components of the AIS Sports Supplement Framework include
 - **The ABCD classification system**, which provides a simple education tool to rank sports foods and supplement ingredients according to the scientific evidence that they can safely and practically contribute to an athlete's performance goals.
 - **Facilitation of 3rd Party Auditing programs** for supplements and sports foods used or provided to Australian athletes within their Sports Supplement Programs to minimize the risk of ADRVs.
- The relaunch of the AIS Sports Supplement Framework in March 2021 involves a new management structure and greater engagement with a variety of stakeholders in the Australian high performance sport network. Governance of this Framework includes a **Steering Committee** to set the strategic direction and communicate with regulatory partners, an **Advisory Committee** which is responsible for communication within the sporting sector, and a **Framework Committee** which manages the Framework categorisation and education resources. Regular updates and reporting schedules promote transparency, currency and capacity to address new projects that will further enhance best practice around the use of supplements and sports foods by Australian athletes.



The ABCD Classification System of the AUS Sports Supplement Framework: 2021

- The ABCD Classification system ranks sports foods and supplement ingredients into four groups according to scientific evidence and other practical considerations that determine whether a product is safe, permitted and effective in improving sports performance.
- The current classification of supplements and sports foods was made via the consensus of the AIS Sports Supplement Framework Committee, and will constantly evolve according to new knowledge plus the informed direction of our key stakeholders.
- The ABCD Classification system focuses on sports foods and individual ingredients rather than specific supplement products and brands.
- Multi-ingredient supplements (e.g. pre-workouts) raise specific concerns. These products contain a large list of individual ingredients and, in some cases, the doses of these ingredients are not stated on the label with the excuse that it is a “proprietary blend” over which the manufacturer has special ownership. Concerns about these products include the lack of an effective dose (e.g. inadequate amounts or poor timing of intake relative to exercise) of some active ingredients, potential for harmful interactions between ingredients, and the increased risk of inadvertent contamination due to the sourcing of ingredients from various locations.
- Our goal is to evolve knowledge and practice regarding the use of supplements and sports foods within Australian High Performance Sport via the engagement of our stakeholders and the resources that are created.
- We work in collaboration with Sport Integrity Australia to reduce the risk of Anti-Doping Rule Violations arising from the use of supplements and sports foods.



Group A

Overview of category within AIS Sports Supplement Framework	Sub-categories	Examples
<p>Evidence level: Strong scientific evidence for use in specific situations in sport using evidence-based protocols.</p> <p>Use within Supplement Programs: Permitted for use by identified athletes according to Best Practice Protocols.</p>	<p>Sports foods Specialised products used to provide a convenient source of nutrients when it is impractical to consume everyday foods.</p>	<p>Sports Drinks Sports Gels Sports Confectionary Electrolyte supplements Isolated Protein supplements Mixed Macronutrient Supplement (Bar, Powder, Liquid Meal)</p>
	<p>Medical supplements Supplements used to prevent or treat clinical issues including diagnosed nutrient deficiencies. Should be used within a larger plan under the expert guidance of a Medical Practitioner/Accredited Sports Dietitian.</p>	<p>Iron Calcium Vitamin D Multivitamin Probiotics Zinc</p>
	<p>Performance supplements Supplements/ingredients that can support or enhance sports performance. Best used with an individualised and event-specific protocol, with the expert guidance of an Accredited Sports Dietitian.</p>	<p>Caffeine β-alanine Bicarbonate Beetroot juice/Nitrate Creatine Glycerol</p>



Group B

Overview of category within AIS Sports Supplement Framework	Sub-categories	Examples
<p>Evidence level: Emerging scientific support, deserving of further research.</p> <p>Use within Supplement Programs: Considered for use by identified individual athletes within research or clinical monitoring situations.</p>	<p>Food Polyphenols Food compounds which may have bioactivity including antioxidant and anti-inflammatory properties. May be consumed in food forms (whole or concentrate) or as isolated extracts.</p>	<p>Fruit-derived polyphenols</p>
	<p>Antioxidants Compounds often found in foods which protect against oxidative damage from free-radical chemicals.</p>	<p>Vitamin C N-Acetyl Cysteine</p>
	<p>Tastants Food-derived compounds that interact with receptors in the mouth/gut to activate the central nervous system.</p>	<p>Menthol Transient receptor potential channel agonists Quinine</p>
	<p>Other</p>	<p>Collagen supplement Curcumin Ketone supplements Fish oils Carnitine</p>



Group C

Overview of category within AIS Sports Supplement Framework	Sub-categories	Examples
<p>Evidence Level: Scientific evidence not supportive of benefit amongst athletes OR no research undertaken to guide an informed opinion.</p>	<p>Category A and B products used outside approved protocols.</p>	<p>Fruit-derived polyphenols</p>
<p>Use within Supplement Programs: Not advocated for use by athletes within Supplement Programs.</p> <p>May be permitted for use by identified athletes where there is specific approval from, or reporting to, a Sports Supplement Panel.</p>	<p>Named Products Attention is drawn to products that have been moved to a new category.</p>	<p>Magnesium Alpha lipoic acid HMB BCAA/Leucine Phosphate Prebiotics Vitamin E Tyrosine</p>
	<p>The rest If you can't find an ingredient/product in Groups A, B or D, it probably deserves to be here.</p>	



Group D

Given the WADA list is updated on an annual basis, it should be used as the first point of call for confirmation of the current list of prohibited substances and practices <https://www.wada-ama.org/>. The list in this group is identified as “examples” only.

Overview of category within AIS Sports Supplement Framework	Sub-categories	Examples
Evidence level: Prohibited or at high risk of contamination with substances that could lead to a positive doping test. Use within Supplement Programs: Not be used by athletes.	Stimulants	Ephedrine Strychnine Sibutramine Methylhexanamine (DMAA) 1,3-dimethylbutylamine (DMBA) Other herbal stimulants
	Prohormones and hormone boosters	DHEA Androstenedione 19-norandrostenedione/ol Other prohormones Tribulus terrestris and other testosterone boosters* Maca root powder*
	GH releasers and “Peptides”	
	Beta-2 agonists	Higenamine
	Selective Androgen Receptor Modulators (SARMS)	Andarine Ostarine Ligandrol
	Metabolic Modulators	GW1516 (Cardarine)
	Other Consult WADA list for all examples: https://www.wada-ama.org/	Colostrum – not recommended by WADA due to the inclusion of growth factors within its composition

*These products do not appear on the WADA list and are thus not specifically prohibited. However, they are often found in multi-ingredient products that contain prohibited ingredients or are at high risk of being contaminated. Therefore, they are not recommended for use.





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