



THE AIS SPORTS SUPPLEMENT FRAMEWORK

SPORTAUS

February 2019

Executive Summary

AIS Sports Supplement Framework 2019

1. The use of supplements and sports foods by Australian athletes involves a balance between the potential benefits (e.g. contribution to an evidence-based sports nutrition program) and potential risks (e.g. waste of resources, distraction, poor role modelling, Anti-Doping Rule Violations). Events in recent years have demonstrated that poor practices with supplements can lead to substantial problems; as a result, Australian Sporting Organisations have been called to action to implement clear guidelines to the athletes within their governance to ensure that their use of supplements and sports foods is safe, effective and legal.
2. The AIS Sports Supplement Framework is a Leadership activity of the Australian Institute of Sport which provides the expertise and resources developed during the implementation of the AIS Sports Supplement Program (2000-2013) to allow Australian Sporting Organisations and agencies to develop their own Sports Supplement Guidelines and Programs.
3. Trust components of the AIS Sports Supplement Framework have been retained:
 - a. 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.
 - b. 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 Anti-Doping Rule Violation.
4. An updated version of the Framework has been developed, with the engagement of key stakeholders, to enhance the evidence base and resources that underpin it. These updates will continue to expand the Framework during 2019 in the form of an Evidence Map that provides more specific detail about the situations of use of supplements and sports foods, and the strength of the evidence that supports this.



Summary of components within the AIS Sports Supplement Framework

Key stakeholders

- AIS Sports Supplement Framework working team
- National Sporting Organisations and their Sports Supplement Panels
- National Institute Network: The AIS and State Academies and Institutes of Sport in Australia and their Medical, Science and Nutrition experts
- Australian Sports Anti-Doping Authority (ASADA)

ABCD Classification system

- The ABCD Classification system ranks sports foods and supplement ingredients into 4 groups according to scientific evidence and other practical considerations that determine whether a product is safe, legal and effective in improving sports performance
 - The ABCD Classification system focusses on sports foods and individual ingredients rather than supplement products and brands. The list in each group is identified as “examples” to note that it may not be complete
 - 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 of some of active ingredients, potential for harmful interactions between ingredients, and the increased risk of inadvertent contamination due to the sourcing of ingredients from various locations.
- The current Classification was made via the consensus of the AIS Sports Supplement Framework working team, and will constantly evolve according to new knowledge, practical issues and the direction of our key stakeholders.
- The new Evidence Map project is engaging experts from our key stakeholders to enhance the resources and scientific underpinning of the Classification system.
- 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 ASADA to reduce the risk of Anti-Doping Rule Violations arising from the use of supplements and sports foods.



Group A

Overview of category	Sub-categories	Examples
<p>Evidence level: Supported for use in specific situations in sport using evidence-based protocols.</p> <p>Use within Supplement Programs: Provided or permitted for use by some 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 drink</p> <p>Sports gel</p> <p>Sports confectionery</p> <p>Sports bar</p> <p>Electrolyte supplement</p> <p>Isolated protein supplement</p> <p>Mixed macronutrient supplement (Bar, powder, liquid meal)</p>
	<p>Medical supplements Supplements used to prevent or treat clinical issues including diagnosed nutrient deficiencies. Best used with advice from an appropriate medical/nutrition practitioner.</p>	<p>Iron supplement</p> <p>Calcium supplement</p> <p>Multivitamin supplement</p> <p>Vitamin D supplement</p> <p>Probiotics</p>
	<p>Performance supplements Supplements/ingredients that can support or achieve an enhancement of sports performance. Best used with an individualised and event-specific protocol, with the advice of appropriate sports science/nutrition practitioner</p>	<p>Caffeine</p> <p>B-alanine</p> <p>Bicarbonate</p> <p>Beetroot juice/Nitrate</p> <p>Creatine</p> <p>Glycerol</p>



Group B

Overview of category	Sub-categories	Examples
<p>Evidence Level: Deserving of further research and could be considered for provision to athletes under a research protocol or case-managed monitoring situation</p> <p>Use within Supplement Programs: Provided to athletes within research or clinical monitoring situations.</p> <p>Note that some of the products currently listed in Group B have been included due to their interest by Key Stakeholders.</p> <p>Our new Evidence Map approach will aim to better define the scientific support for these products</p>	<p>Food polyphenols Food compounds which may have bioactivity including antioxidant and anti-inflammatory properties. May be consumed in food forms or as isolated chemicals.</p>	<p>Cherries, berries and black currants</p> <p>Quercetin, ecgc, epicatechins & others</p>
	<p>Other Compounds which attract interest for potential benefits to body metabolism and function</p>	<p>Collagen support products</p> <p>Carnitine</p> <p>HMB</p> <p>Ketone supplements</p> <p>Fish oils</p> <p>Phosphate</p> <p>Circumin</p>
	<p>Sick Pack Multi-supplement approach to address an issue or health or well-being Best used with advice from an appropriate medical/nutrition practitioner</p>	<p>Zinc lozenges and Vitamin C</p>
	<p>Amino Acids Constituents of protein which may have effects when taken in isolation, or may be consumed individually by the athlete to fortify an existing food/supplement that is lacking in this amino acid.</p>	<p>BCAA/Leucine</p> <p>Tyrosine</p>
	<p>Antioxidants Compounds often found in foods which protect against oxidation or reactions with free-radical chemicals. May be consumed in food forms or as isolated chemicals</p>	<p>Vitamin C & E</p> <p>N-acetyl cysteine</p>



Group C

Overview of category	Subcategories	Examples
<p>Evidence Level: Have little meaningful proof of beneficial effects</p> <p>Use within Supplement Programs: Not provided to athletes within Supplement Programs</p> <p>May be permitted for individualized use by an athlete where there is specific approval from, or reporting to, a Sports Supplement Panel.</p>	<p>Category A and B products used outside approved protocols</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>	<p>See list for Category A and B products</p> <p>The AIS Supplement Framework will no longer name Group C supplements or supplement ingredients in this top line layer of information. This will avoid the perception that these supplements are special.</p>



Group D

Overview of category Use within AIS system	Subcategories	Examples
<p>Evidence level: Banned or at high risk of contamination with substances that could lead to a positive drug test</p> <p>Use within Supplement Programs Should not be used by athletes</p>	<p>Stimulants Consult WADA list for all examples: https://www.wada-ama.org/</p>	<p>Ephedrine</p> <p>Strychnine</p> <p>Sibutramine</p> <p>Methylhexanamine (DMAA)</p> <p>1,3-dimethylbutylamine (DMBA)</p> <p>Other herbal stimulants</p>
	<p>Prohormones and hormone boosters Consult WADA list for all examples: https://www.wada-ama.org/</p>	<p>DHEA</p> <p>Androstenedione</p> <p>19-norandrostenedione/ol</p> <p>Other prohormones</p> <p>Tribulus terrestris and other testosterone boosters*</p> <p>Maca root powder*</p>
	<p>GH releasers and “Peptides” Consult WADA list for all examples: https://www.wada-ama.org/</p>	<p>Technically, while these are sometimes sold as supplements (or have been described as such) they are usually unapproved pharmaceutical products</p>
	<p>Beta-2 agonists Consult WADA list for all examples: https://www.wada-ama.org/</p>	<p>Higenamine</p>
	<p>Selective Androgen Receptor Modulators (SARMS)</p>	<p>Andarine</p> <p>Ostarine</p> <p>Ligandrol</p>
	<p>Metabolic modulators</p>	<p>GW1516 (Cardarine)</p>



	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
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*some of the substances listed in Group D are not banned by WADA. However, they are often found in multi-ingredient products that contain banned ingredients or are at high risk of being contaminated. Therefore, they are not recommended for use





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