OWIA SUPPLEMENT POLICY
Version 6

POLICY OBJECTIVES
The Policy aims to provide guidance in keeping with the AIS Supplement Framework to:

- Reduce the risk of a WADA breach for any OWIA/SA contracted athlete
- Minimise the risks to health (acute and long term) and performance associated with supplement use
- Educate OWIA/SA athletes on the risk and evidence assessment required prior to use of any supplement
- Define OWIA's commitment to evidence-based practice
- Demonstrate OWIA's commitment and care for athlete wellbeing

THE POLICY APPLIES TO
The OWIA Supplement Policy applies to all Olympic Winter Institute of Australia (OWIA) and Snow Australia (SA) contracted athletes, coaches and support team personnel (OWIA/NIN/SA employees and contractors). It also provides a framework for developing and emerging winter athletes and their National Sporting Federations, to help guide them with the required assessment of evidence for use and risk prior to use of any Sports Foods or Supplements.

POLICY STATEMENT
The philosophy of the OWIA and SA is to place emphasis on real foods and promote the importance of eating a well-planned performance-focused diet to support training and competition, as well as the long-term health of the athlete. This Policy acknowledges the minor role that supplements may play, as an addition to a well-planned whole food diet, in meeting the increased demands of training and sporting performance.

This Policy aims to educate winter sport athletes and support personnel about supplements and the assessment of risks associated with use. It defines the OWIA's commitment to evidence-based practice and obligation to upholding the values of clean sport and the wellbeing of OWIA/SA athletes.

ATHLETE RESPONSIBILITY & STRICT LIABILITY
In accordance with the World Anti-Doping Agency (WADA) and Sports Integrity Australia (SIA), all OWIA/SA contracted athletes are responsible for any prohibited substance (or markers of) found in a bodily specimen or in their possession and will be held strictly liable for any anti-doping rule violation, whether the substance was intentionally ingested or otherwise.

SUPPLEMENT DEFINITIONS
Supplements include any synthetic or natural chemical in the form of a formulated food, tablet, capsule, gummy, liquid, tincture, or powder that is ingested for the intended purpose of enhancing health and function, including athletic performance. Supplements can be defined within the following categories:

a) **A formulated Sports Food or Beverage** designed to provide specific nutrients often found in food in a

conveniently packaged form that can be consumed before, during or after exercise for the intended purpose of enhancing exercise capability, promoting recovery / adaptations, and / or performance (e.g., sports drink, carbohydrate bars, protein powders, protein bars and sports gels).

b) **A Medical Supplement** designed to prevent or reverse a known nutrient deficiency, such as iron or vitamin D; or to reduce the risk of illness during periods of travel (e.g., probiotics); or to assist in the treatment of injury and rehabilitation (e.g. fish oils).

c) **A Performance Supplement** covers all products that claim to provide a direct enhancement of sports performance by mechanisms other than meeting the goals of everyday nutrition (e.g., creatine, caffeine and sodium bicarbonate).

AUSTRALIAN INSTITUTE OF SPORT (AIS) SUPPLEMENT FRAMEWORK

The OWIA supplement policy adopts the AIS Supplement Framework to guide its practice. The goal of the AIS Supplement Framework is to implement clear guidelines for athletes under its governance to ensure that their use of supplements and sports foods is safe, effective and legal.

The Framework provides:

- A classification system, ranking Sports Foods and supplement ingredients into four categories based on scientific evidence for use, level of risk and legality of use (A, B, C and D).
- An ever evolving, evidence-based resource convened by the AIS Sports Supplement Panel and key stakeholders
- A practice guide that aims to minimise the risk of an anti-doping rule violation arising through the use of supplements and sports foods.

SUPPLEMENT INDUSTRY

The supplement industry is poorly regulated; products available on the market may not be scientifically proven to provide benefit in sport, may vary in quality, may contain substances not listed on the ingredient panel which may lead to doping and / or potential risks to health and performance.

As part of their supplement risk minimisation strategy, OWIA encourages batch testing of supplements for WADA banned substances by an independent ISO 17025 accredited laboratory such as HASTA and Informed Sport. OWIA strongly supports batch testing by ISO accredited labs for supplements including formulated Sports Foods that contain manipulated ingredients (e.g. protein powders, bars containing protein powders, or added herbal ingredients), performance supplements and any medical supplement not produced under pharmaceutical grade practices (designated in Australia by the TGA as Aust-R). Although batch testing does not remove the risk completely, it decreases risk associated with ingestion of these supplements.

SUPPLEMENT PROVISION

Supplements and Sports Foods deemed low risk, with peer-reviewed scientific evidence to support their efficacy, may be provided to OWIA/SA athletes by the OWIA Sports Dietitian or OWIA CMO. With the provision of lower risk, evidence-based supplements, OWIA respects and endorses the rights of the athlete to make their own decision as to whether they choose to use an OWIA provided supplement. In cases where supplement provision is not possible, and athletes decide to purchase these items, specific brands and / or specific batch tested products may be suggested by an

OWIA Sports Dietitian or OWIA CMO with the aim of minimising the risk of inadvertent doping. Extreme caution must be taken when purchasing supplements both within and outside of Australia (including internet purchases).

FOODS FORTIFIED WITH 'SUPPLEMENTAL' INGREDIENTS

The food industry is increasingly manufacturing foods that are fortified with ingredients commonly considered supplements within the general community. This may include vitamins & minerals, but also isolated proteins and even botanicals. Protein fortified foods (PFFs) present a potential risk of contamination with WADA prohibited substances. Commercially manufactured foods in Australia are considered to present minimal risk (Protein-Fortified-Foods-Report.pdf (ais.gov.au)), like other processed foods with mixed ingredients. In contrast, "home made" and "made to order" PFFs prepared and sold at cafés, gyms and restaurants have an unknown risk of contamination due to uncertainty regarding the source of protein or other ingredients. Products to be wary of include protein smoothies, truffles, balls, juices, acai bowls, vegan cookies and chocolate brownies. It is important to avoid such foods, particularly if they are marketed as "protein-fortified". The fortification of foods with other 'supplemental' ingredients other than protein, vitamins and minerals is likely to continue to evolve and the risk profile will likely depend on the specific 'supplemental' ingredient, and the manufacturer. Food manufacturing regulations vary between countries, therefore caution may be warranted when traveling for training and competition.

Additionally, foods containing hemp protein may naturally contain tetrahydrocannabinol (THC) which is a WADA prohibited substance. It is best to avoid any foods that contain hemp protein.

ATHLETE RESPONSIBILITY & SUPPLEMENT RECORDING

It is the responsibility of each individual OWIA/SA athlete to keep an up-to-date record of batch numbers of all supplements used, together with product brand names, frequency and dose. Note all athletes are strongly encouraged to store this information on the Athlete Management System (AMS). This is so that a clear and descriptive record of all supplement use is readily available to athletes in the event of being tested.

SUPPLEMENTS & JUNIOR / DEVELOPING ATHLETES

It is OWIA's philosophy that junior (18 and under) and developing athletes should focus on whole foods to meet their nutrition and training demands and in turn, facilitate gains in sports performance. In general, the OWIA does not recommend supplement use for junior and / or developing athletes.

The use of Sports Foods and beverages *may* be suitable for OWIA/SA junior and development athletes, but only under the strict guidance of an OWIA or NIN Sports Dietitian or the OWIA CMO. Only in exceptional cases, will the OWIA CMO or Sports Dietitian recommend the use of performance supplements for junior and developing athletes.

A Medical Supplement prescribed to reverse a clinically demonstrated deficiency, to optimise immune function, or to assist in the treatment of injury or illness, is exempt from this statement, but this must only be administered under the guidance of a medical practitioner with the approval of the OWIA CMO.

ATHLETE RESPONSIBILITY & SUPPLEMENT SPONSORSHIP

Any OWIA/SA contracted athlete seeking or offered supplement or sports food sponsorship (for product or financial gain) must first gain the approval of the OWIA Supplement Advisory Panel. Please note the OWIA Supplement Advisory Panel will only consider approval of evidence-based supplements that are in keeping with this policy and the batch testing requirements.

SANCTIONS

- Any OWIA contracted athlete or personnel (employees and contractors) found to breach this Policy (including, without limitation, Appendix A) may face disciplinary action by the OWIA Board. The OWIA Board may recommend the following sanctions:

- A warning;
- Suspension from OWIA-organised training;
- Suspension from competition for a specified period;
- Suspension or termination of contract.

Note: an assembled OWIA disciplinary panel, guided with information from the Supplement Advisory Panel, will determine all cases.

- All OWIA athletes and personnel are also bound by the following policies, as applicable. These include:
  - World Anti-Doping Code
  - WADA Prohibited list
  - Australian National Anti-doping Policy
  - Australian Ice Racing Sports Science and Sports Medicine Policy
  - FIS Anti-Doping

For additional support:

- Sports Integrity Australia

OWIA SUPPLEMENT ADVISORY PANEL MEMBERS

- OWIA Chief Medical Officer
- OWIA Medical Services and Rehabilitation Manager
- OWIA Nutrition Lead & OWIA Sport Dietitians
- OWIA Lead Physical Preparation Coach
- OWIA/SA Athlete Representative
- External Expert-AIS Supplement Framework Representative (Prof Louise Burke)

The role of the OWIA Supplement Advisory Panel is to:

- Ensure the OWIA's Supplement Policy and practices remain ethical, compliant with the World Anti-Doping Code and the AIS Sports Supplement Framework and uphold the health of the athlete as a priority;
- Review the OWIA Supplements Policy annually;
- Research and review industry best-practice nutrition and supplement use;
- Seek opportunities to direct winter sport-specific nutrition and supplement research;
- Report annually to the OWIA CEO on any proposed changes to the Supplement Policy.

CHANGES TO THIS POLICY

The OWIA reserves the right to vary or replace this Policy at any time. Changes are effective upon posting on the OWIA website. It is the responsibility of all athletes and personnel to remain informed of any variances to this Policy. It is recommended to visit the OWIA website to view the current OWIA Supplements Policy.

DOCUMENT HISTORY

Version	Adopted by OWIA	Content reviewed / purpose
One	23/12/14	
Two	16/02/15	▪ Added information on supplements sold by network marketing companies ▪ Letterhead updated ▪ Order of sections of this Policy updated
Three	30.09.2019	▪ Updated to reflect changes in AIS Supplement Framework. ▪ Athlete responsibilities highlighted as a check list to be initialled by athletes annually- See Appendix A. ▪ External expert from AIS and athlete representative added to OWIA Supplement Advisory Panel ▪ Re-write of policy objectives
Four	10.03.2021	▪ ASADA to SIA
Five	10.02.2023	▪ Reviewed with update to WADA code ▪ Addition of Appendix B. Vitamin D supplement considerations ▪ Ski and Snowboard Australia to Snow Australia
Six	TBF	▪ Reviewed with update to WADA Prohibited List date ▪ Addition of statements regarding protein-fortified foods and Aust-R requirements ▪ Addition of Appendix C – Iron Protocol

APPENDIX A – OWIA SUPPLEMENT POLICY

ATHLETE RESPONSIBILITIES (*athletes to initial next to each check box*)

- ☐ **Strict liability:** In accordance with the World Anti-Doping Agency (WADA) and Sport Integrity Australia (SIA) authorities, all OWIA/SA athletes are responsible for any prohibited substance (or markers of) found in a bodily specimen or in their possession and will be held strictly liable for the anti-doping violation, whether the substance was intentionally ingested or otherwise.

- ☐ All OWIA/SA contracted athletes must first consult with the OWIA CMO or an OWIA Sport Dietitian prior to commencing use of any supplement or sports food.

- ☐ It is the responsibility of each individual OWIA/SA athlete to keep an up-to-date record of batch numbers of all supplements used, together with product brand names, frequency of use and dose. Note all athletes are strongly encouraged to store this information on the Athlete Management System (AMS).

- ☐ Under no circumstance, shall an OWIA/SA contracted athlete share any supplement they may be taking with any other OWIA/SA athlete.

- ☐ Any OWIA/SA contracted athlete seeking or offered supplement or sports food sponsorship (for product or financial gain) must first gain the approval of the OWIA Supplement Advisory Panel. Please note the OWIA Supplement Advisory Panel will only consider approval for evidence-based supplements that are in keeping with this policy and the batch testing requirements.

- ☐ It is the responsibility of the athlete to review the updated WADA code for any updates annually.

OWIA/SA athlete name (IN PRINT): _____

Date OWIA Supplement policy read and responsibilities understood: ____/_____/_____

OWIA/SA athlete signature: _____

APPENDIX B – OWIA SUPPLEMENT POLICY

Vitamin D considerations for athletes travelling to latitudes > 35^{O} North between November & March.

This Appendix has been developed with guidance from the AIS Supplement Framework - Vitamin D Fact Sheet in collaboration with AIS Medical, the OWIA CMO and OWIA Sport Dietitians.

OWIA acknowledges the unique risk profile that Australian Winter athletes face when it comes to maintaining optimal levels of Vitamin D given the reality of chasing winter around the globe. We also acknowledge the importance of maintaining Vitamin D levels for bone, immune and muscle health as well as the implications these factors may have on athlete availability. Blood tests for iron and Vitamin D status should be undertaken upon return home from and 1 month prior to return to International competition season.

AIS categorisation as per framework	Vitamin D – serum levels	Proposed batch-tested Vitamin D supplementation
Deficiency	< 50 nmol/L	**Correction of deficiency** 3,000 IU to 4,000 IU per day for 1-2 months*
Insufficiency	50-75 nmol/L	**Correction of deficiency** 2,000 IU per day for 1-2 months*
Sufficiency/Ideal	75-120 nmol/L	**Preventative measure** 1,000 IU per day for the northern hemisphere winter season only (November – March)^
Beyond	>120 nmol/L	**No supplementation indicated**

*depending on time of year and athlete latitude.
^Only whilst the athlete is at latitudes > 35^{O} North where UVB exposure is very limited.

Latitudes of countries that commonly hold competition events or are used as training locations that are > 35^{O} North[#]	
Finland	62.0^{O} North
Belgium	50.5^{O} North
Austria	47.5 ^{O} North
Germany	61.3 ^{O} North
Switzerland	47.0 ^{O} North
Italy	42.0 ^{O} North
France	46.2 ^{O} North
Canada	56.0 ^{O} North
USA	37.0 ^{O} North (Utah 39.0 ^{O} North)
Norway	60.5^{O} North

[#]Not an exhaustive list. Please check the latitude of the country you are travelling to if during the months of November through to the end of March.

APPENDIX C – OWIA SUPPLEMENT POLICY

Iron Protocol

Iron is essential for athletic performance and wellbeing and is one of the most common nutrient deficiencies in athletes. Suboptimal iron levels result in fatigue, lethargy, recurrent illness and mood disturbances in addition to potentially reducing training capacity and performance. Evidence- based and consistent management of iron is ideal for athlete wellbeing and coach/athlete confidence.

Athletes are at higher risk of iron deficiency than non-athletes due to a higher turnover of red blood cells. Additional risk factors include being female, engaging in endurance or high impact sports, frequent training and competition at altitude, eating a vegan or vegetarian diet, previous iron deficiency diagnosis, being a regular blood donor, and having low energy intakes / requirements. Since a combination of these factors often occurs in winter sport athletes, OWIA/SA recommend testing iron levels twice a year, with those shown to have low iron status being tested more regularly to assess response to management.

This protocol has been developed with guidance from the AIS Supplement Framework - Iron Fact Sheet and the AIS Iron deficiency best practice guidelines, in collaboration with AIS Medical, the OWIA CMO and OWIA Sport Dietitians.

ASSESSMENT

Blood tests for iron and Vitamin D status should be undertaken upon return home from and 1 month prior to return to International competition season. Blood tests for iron status must include haemoglobin, ferritin and transferrin saturation. It is recommended to also include c-reactive protein since ferritin is an acute-phase reactant and may be influenced by illness or prior intense exercise.

If recurrent iron deficiency despite dietary change and iron supplementation for at least 3-6 months then consider and investigate for coeliac disease, inflammatory bowel (particularly if family history and/or GIT symptoms), blood loss, other causes.

Instructions for athletes prior to blood testing should include:

1. Stopping any iron supplementation one week prior to the test.
2. Attending the blood test at least 48hr after intense/strenuous or eccentric exercise, ideally in a fasted and hydrated state.
3. Athletes who are unwell are advised to wait until their illness resolves before getting the blood test done, if practical.

MANAGEMENT

All athletes diagnosed with suboptimal iron levels should be referred to a sports dietitian for dietary assessment and recommendations since diet is the first line of management in all instances.

Treatment guidelines based on Ferritin levels.
An OWIA/NIN sports physician should direct the treatment approach in consultation with the athlete's sports dietitian.

Normal iron status **Ferritin > 35**: In conjunction with a sports dietitian, continue to optimise dietary sources of iron, energy and carbohydrate availability, and avoid 'iron inhibitors' when consuming iron-rich foods. Oral iron supplementation should be considered for athletes whose ferritin is <50 and have a history of iron deficiency during times when they are training and / or competing at altitudes higher than 1500m.

Stage I: Iron Deficient Non-Anaemia (Stage 1 IDNA) **Ferritin 20-35**:
Dietary management plus oral iron supplementation is the first choice. An infusion should not be considered.

Stage II: Iron Deficient Non-Anaemia (Stage 2 IDNA) **Ferritin 12-19**:
Dietary management plus oral iron supplementation is the first choice. An infusion may be appropriate if oral supplements are not tolerated, or upcoming travel or competition limits time to benefit from oral supplements.

Stage III: Iron Deficiency Anaemia (IDA) **Ferritin <12**:
Dietary management and oral supplementation are still first consideration, particularly if never trialed before. Iron infusion should be considered particularly if significant symptoms and time pressure to perform as infusion will restore iron more quickly.

Oral supplementation

- Ideally a ferrous sulphate form of supplement, such as Ferrogradumet C - should be TGA "Aust R".
- If substantial gastrointestinal side effects, consider slow release supplement such as Maltofer.
- 100mg elemental iron: daily or 2nd daily for 8-12 weeks and then retest.
- For best absorption: consumed in the morning, and either before or in close proximity (30 min) to exercise cessation.
- Alternate day dosing may be an effective strategy to combat GIT upset.

IV iron considered when:

i) Oral iron is not tolerated (e.g., GIT upset or trialled and inadequate increase in iron after 6 months of proven compliance with oral iron supplement).
ii) Competition within next month (possibly also hypoxic training, but this may be able to be delayed).
iii) Iron deficiency anaemia (IDA) impacting significantly on athlete's health & wellbeing and ability to train.

Iron Infusion considerations

***Side effects*: these can be significant. An iron infusion is a medical procedure that comes with some risks:**

i) Allergic reaction: can range from itchy/hives to full blown anaphylaxis which is potentially life threatening. For this reason, **a doctor MUST be present for iron infusions**. Previous allergic reaction means either iron

infusions cannot be performed in the future or must be performed in a hospital setting.

ii) Skin staining: This is not common and may be related to technique, but it does still occur even when great care is taken and can involve large areas of brown staining on the whole arm that cannot be removed. Athletes are shown pictures during the consent process to ensure they clearly understand the risk.

iii) Headache/unwell. Almost every athlete feels mildly unwell in the days following the infusion and can take at least a week to feel the benefit. Therefore, a significant competition within a week of the infusion means the infusion is probably a detriment rather than a benefit.

iv) *Anti-doping*: volume > 100ml requires TUE from ASDMAC but No TUE required if performed in a hospital setting or <100ml

v) *Cost:* if done off site – range from $280-500+

Note: *Preferred option*: Ferric carboxymaltose (i.e. "Ferrinject) – well tolerated, can be done in <100ml

***Note*:** IM iron is not recommended due to side effects

The following table summarises the stages of iron deficiency, the blood parameters which will be consistently tested, and the management recommendations supported by the OWIA/SA.

Iron-deficiency stage		**Stage 1: IDNA**	**Stage 2: IDNA**	**Stage 3: IDA**
Pathology	Ferritin (ug/L)	<35	< 20	< 12
Include C-reactive protein in test parameters	Transferrin saturation	> 16%	<16%	<16%
	Haemoglobin (g/L) female/male	>120/>135	> 120/>135	< 120/<135
Management	Dietary advice	Yes	Yes	Yes
	Oral supplement 100 mg elemental iron, 8-12 wks	Yes	Yes	Consider
	IV Ferric carboxymaltose	No	In some circumstances	Consider (<100 mL)