

# Inquiry into the Practice of Sports Science in Australia

## Australian Sports Commission Submission

### June 2013

#### ***Introduction***

The Australian Sports Commission (the Commission) is committed to a high performance system that is about winning with integrity and recognises our leadership role in this regard. The Commission's investment in sport will reinforce this and will be dependent on sports, athletes, coaches and support personnel demonstrating the highest possible standards of integrity in sport.

Accordingly, we welcome the opportunity to provide a submission to this inquiry and make representatives from the Commission available as witnesses should the Committee decide to hold a public hearing.

The Commission is committed to upholding the integrity of Australian sport. Released in November 2012, *Australia's Winning Edge* is the Commission's strategy for high performance sport over the next decade. The Investment Principles underpinning *Australia's Winning Edge* highlight the fundamental importance of integrity:

*Australian Sports Commission investment is dependent on sports, athletes, coaches and support personnel demonstrating the highest possible standards of integrity in sport, including anti-doping, that will enhance the reputation of Australia internationally and provide a positive example to all Australians.*

Recent events, including the Australian Crime Commission's report 'Organised Crime and Drugs in Sport', reinforce the need for the whole sports sector to improve its approach to protecting integrity. Sports science is one such area where improvements are necessary.

Notwithstanding this, the Commission believes that the vast majority of sport scientists working in high-performance sport do so in a very professional and ethical manner. The Commission also recognises the outstanding contribution sports scientists have made to Australia's sporting success over many decades.

On Wednesday, 29 May 2013, the Commission released the AIS Sports Science/Sports Medicine (SSSM) Best Practice Principles. The Principles outline the AIS' approach to sports science policies and practices and should assist sports to ensure that appropriate governance protocols and processes lead the implementation of integrity based sports science activities. These are provided at Attachment A.

The Commission is an active advocate of good governance in sport and believe that improved supervision by sports over sports science practices is necessary.

As the leading employer of sports scientists, we will also continue to show leadership, including in the area of supplementation, which we have for over a decade with research and advice provided freely via the Commission's website for sports and athletes.

The SSSM Principles are provided to the Committee as they reflect the AIS' approach to the application of SSSM in sport. They have been developed as they reflect AIS practice, and provided to sports for guidance. The AIS will be consulting with sports on their content over the coming months.

## ***Defining Sports Science***

There is no question that sports science has a legitimate and important role in high performance sport, particularly in an increasingly competitive international environment where incremental efforts can be the difference between gold and silver. However, the development and application of sports science must occur within strict guidelines that protect the integrity of sport.

The sports sector does not have an agreed and universal definition of the sports science profession or the role and qualifications of a 'sports scientist'. It has recently been evident that the title is being adopted by individuals who are not sufficiently qualified and whose practices are not scientific.

The true sports science profession is small and somewhat dispersed, without a clear overarching body accrediting and regulating the profession. Exercise and Sports Science Australia currently has some role in this respect however, its membership base is much broader than just sports scientists.

The AIS ultimately views 'sports science' as the application of science in the sporting context. Therefore, AIS sports scientists are, first and foremost, scientists who have undergone specific scientific training - almost universally a PhD. These studies teach the principles of the scientific method and discovery. For the AIS sports medicine sits alongside sports science.

For decades the AIS has been a leader in promoting and implementing a best practice approach to sports science and sports medicine. With approximately 100 scientists, practitioners and PhD students, the AIS is the largest single employer of specialised support staff for high performance sport.

To support coaches to develop athletes, the AIS employees scientists and other practitioners across a range of disciplines including physiotherapy, soft tissue therapy, medicine, physiology, nutrition, recovery, psychology, biomechanics, performance analysis, strength and conditioning, skill acquisition, data analytics, statistics and computer science.

AIS sports scientists work in three key areas:

- **Assistance in training and competition settings.** Much of the role is to monitor athlete progression through measurements of fitness, technique, fatigue and wellness. The AIS was, for example, an integral member of a government funded and regulated research consortium that developed GPS technologies for sport. Today, many elite sports throughout the world use GPS tracking to monitor training and competition loads that help tailor training programs and reduce the risk of injury to our athletes. Research and Development in this area continues today. The AIS partners with Australia's leading research organisations to develop new technology using machine vision science and radio frequency tracking.

- **Applied research to solve real-world questions for coaches, athletes and practitioners.** Many research projects have resulted in improvements to daily training environments and refined methods that better prepare athletes for competition. For example, pioneering research into how an athlete responds to living and/or training at high altitudes has led to improvements in fitness, even for our most elite athletes. This kind of peer-reviewed and published basic science is conducted with experienced real-world support staff working directly with coaches and athletes, and has led to Australia’s formidable international reputation in sports science and its application.
- **Education of coaches, athletes, peer professionals, and other sports industry partners.** The AIS has developed a number of programs that are safe for athletes to engage in, are scientifically proven to have a positive effect on performance, and are compliant with international laws and standards. For example, the AIS Supplements Program provides advice to sports on supplements (e.g. sports drinks, calcium, Vitamin D) that can be appropriate to use because they are safe and proven effective through science.

### ***Oversight of sports science in a sporting organisation***

A key aspect of *Australia’s Winning Edge* revolves around improving the governance of Australia’s sporting organisations. It is uncontested that governance structures significantly affect the performance of sporting organisations— good governance doesn’t guarantee success, but its absence almost certainly guarantees failure. Recent reviews into various sports have identified governance shortcomings as central reasons for failures in competitive, business or ethical standards.

In 2012 the Commission published revised *Sport Governance Principles*, which are based on best practice in Australian corporate governance. The Principles contain guidelines within which the Commission believes a sporting organisation’s Board members should operate and enact their role.

Building on these principles, the Commission recently released a set of mandatory governance requirements, initially applying to the seven sports receiving the highest level of government investment (swimming, cycling, athletics, sailing, rowing, hockey and basketball). One of the mandatory requirements applying to these sports is that:

*Boards should have in place proper investigation, supervision and reporting practices in relation to the sports science practices in use in their sport. These should be either direct to the Board or through no other person than the CEO. ‘Don’t ask, don’t tell’ will not be a satisfactory position for Boards to adopt; they will have a positive obligation to inform themselves about sports science practices and to supervise them in a manner consistent with ASADA, ASC and Australian Government policies.*

To support the activities of all sporting organisations in this area, the Commission has recently released the ***AIS Sports Science and Sports Medicine Best Practice Principles*** (a copy of the ‘SSSM principles’ is provided at Attachment A).

The Principles can be categorised under five key areas:

1. Staff integrity and capability
2. SSSM policy framework
3. Education
4. Detection and enforcement
5. Oversight and reporting

The SSSM principles have been developed by the AIS as a practical guide to assist boards and senior management of sporting organisations in performing their oversight function in relation to SSSM practices. The AIS will consult with the sports sector on these Principles and will work closely with the National Integrity of Sport Unit and all sport partners to provide practical assistance to improve and strengthen the integrity of sport.

### ***Duty of care***

As stated earlier, the Commission recognises that the vast majority of sports scientists operate in a professional and ethical manner.

The AIS prides itself on placing athlete welfare above all other considerations and all its sports scientists have a duty of care to athletes. This duty of care includes but is not limited to:

- Ensuring that any dietary or nutritional supplements provided or prescribed are safe and efficacious.
- Not using athletes as experimental models for untested practices or substances, without an appropriate research framework.
- Ensuring that any research involving athletes conforms with accepted standards of scientific and ethical rigour.
- Avoiding any methods or substances which expose the athlete to the possibility of an anti-doping rule violation.

Sports scientists have ethical obligations to maintain integrity of sport. This involves maintaining standards of ethical and professional behaviour such that there is no danger of sport being brought into disrepute.

Adoption of the AIS SSSM principles will assist all sports and sporting organisations in maintaining athlete safety and the protecting the integrity of sport.

## ***Regulation of the profession***

On this issue the AIS refers to the Submission by the DRALGAS which canvasses the options for greater regulation of high performance sports science practitioners. The AIS will work closely with the National Integrity in Sport Unit (NSIU) which has carriage of this issue. The AIS notes that there is currently no single accreditation/registration body for the broad grouping of 'sports scientists' in high performance sport in Australia. A number of disciplines within the 'sports science' area do have well established and highly credentialed accreditation/registration bodies (e.g. Sports Medicine and Physiotherapy). The AIS strongly recommends that action is taken to ensure that any individual working in high performance sports science in a sport/club/sports institute meets acceptable professional standards of accreditation. This will complement the AIS' principles around employment/contracting of SSSM staff and remove the existing gap in accreditation systems.

## Attachment A

### **AIS Sports Science/Sports Medicine Best Practice Principles**



Australian Government  
Australian Sports Commission

# AIS Sports Science/Sports Medicine *Best Practice Principles*



AUSTRALIAN  
INSTITUTE OF SPORT

# Introduction

For the Australian Sports Commission (**ASC**) and Australian Institute of Sport (**AIS**), integrity in sport is paramount. Accordingly, the ASC has included in its High Performance Investment Principles that ASC investment is dependent on *sports, athletes, coaches and support personnel demonstrating the highest possible standards of integrity in sport, including anti-doping, that will enhance the reputation of Australia internationally and provide a positive example to all Australians.*

In this regard, it is important for each national sporting organisation to have in place a strong anti-doping framework. The components of such a framework may, and in some cases must, include the following measures:

- 1 An anti-doping policy that conforms with the World Anti-Doping Code.
- 2 An anti-doping education strategy and program developed in consultation with the Australian Sports Anti-Doping Agency (**ASADA**).
- 3 Processes for reporting required information to ASADA to facilitate athlete testing.
- 4 A clear and confidential process for reporting suspected doping violations.
- 5 A requirement for board members, staff, athletes and coaches to provide anti-doping declarations.
- 6 A program allowing searches of athlete accommodation provided by the organisation.
- 7 An illicit drugs policy.

Many of the above measures are mandated by ASADA and required under ASC funding agreements.

Sporting organisations should also have a code of conduct which binds all athletes, coaches, staff and board members and, at a minimum, requires awareness of and compliance with the organisation's:

- > values and goals
- > anti-doping policy
- > sports science/sports medicine (**SSSM**) policies.

The code of conduct should be regularly promoted within an organisation by its CEO and Director of High Performance. It should be highly visible and any breaches of the code should be enforced.

A further measure to reduce a sporting organisation's risk of an anti-doping violation and to protect athlete wellbeing is the implementation and enforcement of clear processes and policies in relation to SSSM practices within the organisation.



## Overview of SSSM Best Practice Principles

Monitoring and oversight of a sporting organisation's SSSM activities are essential elements of the respective roles of the organisation's board and senior management. In performing this function, **risk management processes are critical**. Oversight of SSSM practices must form part of the organisation's risk management process, specifically, understanding risks to the organisation and to the health of athletes and developing appropriate integrity safeguards to mitigate these risks.

These SSSM Best Practice Principles have been developed by the AIS as a practical guide to assist boards and senior management of sporting organisations in performing their oversight function in relation to SSSM practices.

The Principles can be categorised under five key areas:

- 1 Staff integrity and capability
- 2 SSSM policy framework
- 3 Education
- 4 Detection and enforcement
- 5 Oversight and reporting.

These SSSM Best Practice Principles are intended to operate in conjunction with, and without limitation of, the other components of an organisations's anti-doping framework.



# 1

## Staff integrity and capability

**Principle 1:** Sporting organisations should ensure that all SSSM staff members are appropriately qualified, supervised and subject to the organisation's SSSM policies, anti-doping policy and code of conduct.



### Commentary and guidance

Employment of SSSM staff should be by an open and competitive process with high selection standards. There should be adequate checks to exclude individuals with current or past anti-doping rule violations or a history of inappropriate conduct in relation to supplements and/or medications.

All SSSM staff should be bound to comply with the organisation's SSSM policies, anti-doping policy and code of conduct.

Any independent contractors engaged to provide SSSM services should be obliged under a service agreement to comply with the organisation's SSSM policies, anti-doping policy and code of conduct.

SSSM staff should:

- > attain minimum standards for professional qualifications and, if applicable, professional accreditation, that will be discipline specific
- > undergo constant peer-review including annual peer-review of new and existing practices and procedures
- > work to written and approved protocols in relation to ethical research
- > adhere to industry quality assurance standards and actively engage in continual professional development, thereby reducing:
  - isolation of practitioners working in the field
  - potential conflicts of interest for practitioners embedded entirely within a sport.

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**There is currently no accreditation body for sports scientists, although some disciplines of SSSM do have accreditation (for example, sports medicine). The National Integrity of Sport Unit (NISU) will lead any work to establish accreditation or other regulation systems for sports scientists agreed by the Australian Government following the current Senate inquiry on sports science.**

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**Principle 2:** Sporting organisations should implement, periodically review and enforce a robust SSSM policy framework, including the following SSSM policies:

- 1 Supplementation policy (including a Supplementation Panel and Supplementation Provision Protocol)
- 2 Medication policy
- 3 Injection policy.



### Commentary and guidance

The SSSM policies should require any new SSSM procedures and practices to be subject to peer review utilising a panel of experts and/or an ethics panel.

### Supplementation Policy

Athletes are vulnerable to inadvertent anti-doping rule violations if they obtain supplements from their own sources.

Sporting organisations should have a written Supplementation Policy, incorporating a Supplementation Provision Protocol approved by the organisation's Supplementation Panel, which governs the use of supplements by athletes. The AIS has in place best practice protocols for each supplement which, combined with the publicly available AIS Supplementation Group Classification System, delivers world's best practice for the use of sports supplements. Sports may wish to utilise these publicly available AIS resources when developing their own approach.

Sporting organisations, within the parameters of the Supplement Provision Protocol approved by their Supplementation Panel, should wherever possible provide appropriate supplements to their athletes to remove any requirement for athletes to obtain supplements from other sources.

Athletes should not be permitted to obtain supplements from sources external to their sporting organisation, without first receiving written permission to do so from their Supplementation Panel.

The Supplementation Provision Protocol should be overseen by a Supplementation Panel of at least three appropriately qualified stakeholders, including medical staff, sports nutrition staff, sports science staff, coaching and conditioning staff. The organisation's Supplementation Panel should have at least one independent member, and seek guidance where appropriate from the AIS Supplementation Panel.

The Supplementation Provision Protocol should:

- > utilise the AIS Supplement Group Classification System
- > permit the use of all supplements in Group A and Group B of the AIS Supplement Group Classification System
- > permit limited use of supplements in Group C of the AIS Supplement Group Classification System where there is specific approval from the organisation's Supplementation Panel
- > prohibit the use of all supplements in Group D of the AIS Supplement Group Classification System
- > be based on the core principles of:
  - athlete safety
  - evidence-based science
  - compliance with the World Anti-Doping Agency (WADA) Prohibited List
- > be agreed upon after careful consideration by the organisation's Supplementation Panel
- > not be altered except by agreement with the organisation's Supplementation Panel
- > draw on external supplementation or anti-doping expertise, where there is any doubt about the capacity of the organisation to deliver such a protocol
- > be applied consistently, regardless of personnel changes within the coaching, nutrition, science, medical or strength and conditioning staff.

## Medication Policy

Athletes frequently require medication for the treatment of illness or injury. Such medications may include prescription medication or over-the-counter medication.

Sporting organisations should have a written Medication Policy, approved by the organisation's advising medical practitioner, which governs the use of prescription and over-the-counter medication by athletes.

The Medication Policy should:

- > require athletes to only use medication as directed by the organisation's medical practitioner
- > require athletes to report to the organisation's medical practitioner when they have obtained or used medication from sources other than the organisation's medical practitioner
- > include appropriate protocols for the use of anti-inflammatory, pain relieving and sleep inducing medications
- > include appropriate protocols for handling or provision of medication by personnel other than the medical practitioner (physiotherapist, sports scientist, strength and conditioning coach etc), in the absence of the medical practitioner.

## **Injection Policy**

There is no role for injection of substances as a routine part of any supplementation program.

Sporting organisations should have a written Injection Policy which prohibits athletes self injecting and prohibits individuals other than a medical practitioner administering injections to an athlete. Such a policy should specifically prohibit any unauthorised individual from being in possession of hypodermic needles.

No substances should be injected into athletes except where the treatment of a documented medical condition requires such injection.

No injectable substances should be administered to an athlete by any individual other than a qualified medical practitioner. An exception to this rule may be made where the athlete has a well-documented medical condition (for example, diabetes, anaphylaxis-risk), in which case the medical practitioner may provide written permission for the athlete to self inject within specific parameters.

A register should be kept of any athletes in the organisation who have permission to self inject for medical purposes.

Athletes may be provided with written permission to possess needles for medical reasons, as outlined above.

The Injection Policy forbidding possession of needles would not include acupuncture needles. Acupuncture needles are solid needles used for treatment of soft tissue injuries. They are not used for injection of substances.

# 3

## Education

**Principle 3:** Sporting organisations should educate athletes, coaches and staff in relation to the organisation's SSSM policies, specifically in relation to the appropriate use of prescription medications and supplements.



### Commentary and guidance

The most valuable integrity safeguard is to prevent incidents from occurring in the first place. This is best achieved through effective education programs to underpin strong and current SSSM policies containing highly visible consequences for their breach.

Such education should be included in induction policies for all new athletes, coaches, SSSM staff and other relevant staff.

Sporting organisations should maintain an accurate register of all athletes, coaches and relevant staff that have/have not been provided with appropriate education, and an appropriate induction process, including familiarisation with relevant policies.

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**In consultation with the NISU, the AIS will develop a suite of practical education support tools to assist sports and athletes in understanding the role of SSSM and how to avoid inappropriate practice.**

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# 4

## Detection and enforcement

**Principle 4:** Sporting organisations should ensure that SSSM policies are enforced, including appropriate sanctions for breaches, and that confidential processes are available to allow reporting of suspected breaches.



### Commentary and guidance

Sporting organisations should ensure that they have in place robust processes for dealing with any alleged or suspected breaches of any of their SSSM policies. The organisation should have formal investigation and disciplinary processes applicable to SSSM policy breaches by employees and athletes (for example, under the organisation's code of conduct). Breaches by contractors should be addressed via the provisions of their contract.

Appropriate sanctions should be available to the organisation where an individual is found to have breached a policy. Sanctions should reflect the seriousness of the breach.

Sporting organisations should implement and promote a confidential process to allow the reporting of a suspected breach of a SSSM policy (or anti-doping policy) or alleged unethical or inappropriate SSSM practices (for example, under a whistleblower procedure). Such process might include direct reporting to the CEO of the organisation to ensure confidentiality and that any suspected breaches of policy are raised at the most senior level within the organisation.

Investigations of alleged anti-doping violations will be covered under the organisation's anti-doping policy. Where applicable, the organisation must refer a matter directly to ASADA or relevant law enforcement agency as appropriate.

**Principle 5:** Sporting organisations should implement a reporting framework to assist their board and senior management to discharge their obligations to be informed about and to oversee the organisation's SSSM practices.



### Commentary and guidance

The board and senior management of a sporting organisation both have a positive obligation to inform themselves as to SSSM practices of the organisation, to ensure they are best practice, promote a culture of integrity and to comply with legislative and regulatory requirements. *'Don't ask, don't tell'* is not an acceptable position to adopt. Accordingly, boards should ensure that appropriate reporting processes are in place.

### Responsibilities of the Board

Sporting organisations must establish a periodic reporting system whereby the board (possibly through its audit and risk committee) is provided with information detailing the use of supplements and prescription medications by athletes over the reporting period, and any variances over the preceding 12 months. The reporting period may vary based on the size and risk profile of the organisation, but should be quarterly for larger and/or high risk organisations and at least annually for smaller and/or low-risk organisations.

At a minimum, the board should seek the following information from management:

- > How many new board members, employees, coaches and athletes have commenced with the organisation over the reporting period and of those, how many have undergone an induction process including familiarisation with the SSSM policies and anti-doping policy.
- > Any change in key personnel involved in the organisation's SSSM program.
- > If all SSSM staff, including consultants, have had full background checks before being hired.
- > If all SSSM staff are appropriately qualified and, if applicable, accredited by an industry accreditation body.
- > If all SSSM staff are employed on either employment agreements making them bound by the organisation's SSSM policies, or engaged under contracts requiring them to comply with the SSSM policies and including a right of termination in the event of breach.
- > If any external SSSM consultants have been engaged, and if so in what capacity.
- > Where a search program exists, how many searches have been conducted over the reporting period on athlete accommodation.
- > If any policy breaches have been detected in the reporting period.



- > Identification of any reports of suspected breaches and subsequent management action taken during the period.
- > If current information on the SSSM policies is up to date and available.
- > How many athletes are currently listed on the organisation's self-injection register.
- > If information on the Supplementation Protocol is accurate and up to date.
- > A listing of supplements/medication being overseen and distributed by the organisation during the reporting period, and identification of variances in year to year usage.
- > A summary of any Therapeutic Use Exemption (**TUE**) administered during the reporting period, including the circumstances of their use and sign-off by the administering doctor, and identification of variances in year to year TUE usage.
- > Financial analysis of organisational expenditure on supplements/medication.

In addition, the board should at least annually ask specific questions of management for independent assurance on SSSM integrity.

The report should detail any other matters of known or suspected issues in relation to the organisation's SSSM policies, anti-doping policy and/or reported misuse of prescription medication.

This report should be signed off as true and accurate by management on the same basis as financial reporting, with an assurance that all SSSM practices during the period have complied with the organisation's SSSM policies and anti-doping policy.

## **Responsibilities of management**

To facilitate the board's oversight function, management should have an appropriate process in place to collect and provide relevant information to the board on a periodic reporting basis.

This process should be communicated to athletes and relevant staff as applicable, including:

- > a reminder of supplement/medication program principles and goals
- > expected practice (including a statement reminding all athletes and staff not to engage in the process of taking or acquiring supplements/medications from sources external to the organisation without consulting and receiving documented approval from the organisation)
- > key documents required from each tier of the organisation
- > personnel responsible for specific signoffs and authorisation at each tier of the organisation
- > a confidential reporting process that encourages a culture of openness and overall athlete wellbeing as a top priority of the organisation.

# Appendix: AIS Supplement Group Classification System

In the Australian Institute of Sport (AIS) Sports Supplement Program, supplements are classified into four groups according to their effectiveness and safety.

## Group A

***Supplements are supported for use in specific situations in sport and provided to AIS athletes for evidence-based uses.***

These sports foods and supplements:

- 1 provide a useful and timely source of energy or nutrients in the athlete's diet; or
- 2 have been shown in scientific trials to benefit performance, when used according to a specific protocol in a specific situation in sport.

## Group B

***Supplements are deserving of further research and considered for provision to AIS athletes only under a research protocol or clinical monitoring activity.***

These sports foods and supplements:

- 1 have received some scientific attention, sometimes in populations other than athletes, or have preliminary data which suggest possible benefits to performance
- 2 are of particular interest to athletes and coaches.

## Group C

***Supplements have little proof of beneficial effects and are not provided to AIS athletes.***

This category includes the majority of supplements and sports products promoted to athletes. These supplements, despite enjoying a cyclical pattern of popularity and widespread use, have not been proven to provide a worthwhile enhancement of sports performance. Although we can't categorically state that they don't 'work', current scientific evidence shows that either the likelihood of benefits is very small or that any benefits that occur are too small to be useful. In fact, in some cases these supplements have been shown to impair sports performance, with a clear mechanism to explain these results. We have named many of the products that belong in this category, but others that have not been named in our supplement system more than likely belong here.

## Group D

***Supplements should not be used by AIS athletes.***

These supplements are banned or are at high risk of being contaminated with substances that could lead to a positive drug test.

Further information on the classification system is available at the ASC's website at [ausport.gov.au/ais/nutrition/supplements](http://ausport.gov.au/ais/nutrition/supplements).