

EDUCATING COACHES ON SPORT INTEGRITY

Project Partners

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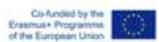
Coaching Portugal (Portugal)

Saval (Finland)

Code Fair Play (Greece)

Doping in Sports II

Nutritional Supplements & Doping



Briefly discuss the concept of doping in relation to nutritional supplement use. Discuss the concept of performance enhancement and the possible associations between doping and nutritional supplements.

Estimated time: 3 min

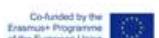
Slide 2: Nutritional supplements (NS)

Nutritional supplements (NS)

- Legal to purchase
- Intended to support one's daily dietary habits
- >70% of young people who exercise use nutritional supplements daily



(Braun et al., 2009; Dietz et al., 2014; Malik & Malik, 2010)



In contrast to banned or illegal substances, nutritional supplements (NS) represent legal performance and appearance enhancement substances that are currently uncontrolled by national laws or international anti-doping and sporting organizations, and there is little evidence associating the use of NS with adverse health effects. Therefore, NS can be freely distributed via online or offline markets, and be purchased and used without any legal sanctions. Moreover, the NS market is not overseen by regulatory authorities such as the Food and Drugs Administration. The most commonly used nutritional supplements include protein powders and shakes, amino-acids, (multi)vitamins and minerals, carbohydrates, creatine, and a wide range of herbal products or derivatives that are assumed to have ergogenic and performance and appearance enhancing properties (de Hon & Coumans, 2007; Lazuras & Barkoukis, 2014).

Estimated time: 5 min

Slide 3: The association between NS and doping

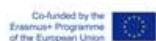
The association between NS and doping 1/2

Contaminated NS and inadvertent doping

- Several studies have shown that NS can be contaminated with prohibited substances, such as anabolic steroids, stimulants (e.g., ephedrine), and beta₂ agonists



(Geyer et al., 2008; van Thuyne, Eeno, & Delbeke, 2006)



Discuss with students that not all nutritional supplements are safe. Present instances of athletes found positive in doping controls due to contaminated substances. Introduce the issue of contamination of nutritional supplements.

Estimated time: 3 min

Slide 4: Contamination of supplements

Contamination of supplements

- A report showed that ~33% of supplements failed quality assurance test
 - No active ingredients were reported
 - Banned substances (e.g., steroids, testosterone, stimulants) were included
- In the UK, 44% of anti-doping rule violations were associated with inadvertent use of sport supplements



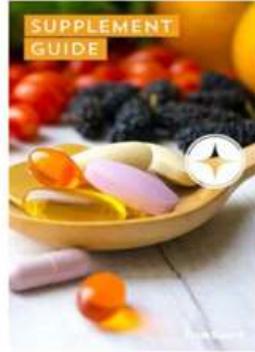
Present existing evidence on contamination of nutritional supplements. Discuss the consequences of using contaminated supplements (report examples relevant to your country and sport). Explain the main reasons for nutritional supplements being contaminated [i.e., a) mistakes in the production, b) intentional use of prohibited substances to increase the effectiveness of a supplement]

Estimated time: 5 min

Slide 5: Risk Awareness by USADA

Risk Awareness by USADA

- The United States Anti-Doping Agency (USADA) has dedicated resources to inform users about the safety and risks of NS use
- Visit Supplements 411 at:
<https://www.usada.org/substances/supplement-411/>



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Present the example of USADA's website (or relevant to your country and sport material) notifying athletes that "the answers are not straightforward. No resource can protect you completely. The reality is that the use of dietary supplements can be risky, and that awareness, caution, education, and common sense must be exercised when considering their use." An informative video by USADA can be accessed here: https://www.youtube.com/watch?time_continue=5&v=7HlvIIM-35w

Estimated time: 10 min

Slide 6: The association between NS and doping

The association between NS and doping 2/2

Meta-analyses & systematic reviews

- Supplement use as a leading risk factor for doping use and intentions in both amateur and elite sports

(Nicholls et al., 2017; Ntoumanis et al., 2014)

Theory

- 'Shared mental representation' hypothesis: NS and doping substances are represented as a unitary concept of chemically-assisted performance enhancement in our brain

(Backhouse et al., 2013; Petroczi, 2013; Petroczi et al., 2011)

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Present existing evidence on the association between nutritional supplements and doping. Highlight the high correlation between them but the absence of data on the cause and effect relationship. Briefly present the concept of the shared mental representation hypothesis.

Estimated time: 5 min

Slide 7: Gateway VS Safe Alternative

Gateway VS Safe Alternative



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Ask trainees/students think about the benefits and the risks of using nutritional supplements. Should supplements be considered "gateway substances" that lead to doping or safe alternatives against it? Why?

Estimated time: 10 min

Slide 8: Make informed choices

Make informed choices

- Assess the need
- Assess the risk
- Assess the consequence



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Describe the three steps developed by UKAD on how to make informed choices about nutritional supplement use. Use relevant information from your country.

Estimated time: 3 min

Slide 9: Assess the need



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Assess the need

- Before using supplements, an athlete should first look to optimise their diet, lifestyle and training.
- Athletes should also consult an expert (e.g., dietician, nutritionist or medical expert) to assess the need and benefit in taking supplements



Discuss with students that need for athletes to have an optimal lifestyle and how this would cover their energy needs. Discuss with students the need to consult an expert when a decision to use nutritional supplements is to be made.

Estimated time: 3 min

Slide 10: Assess the risk



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Assess the risk

- Is the supplement safe (<https://www.youtube.com/watch?v=r0Zu-IJ30M0>)?
- Is the supplement effective?
- How can you find out the answer to each of these questions?



Watch the video and discuss with students evidence presented earlier on contamination of nutritional supplements. Discuss its implications in the decision to use nutritional supplements. Introduce the concept of checking and monitoring nutritional supplements.

Estimated time: 3 min

Slide 11: Informed Sport

Informed Sport

- Risk minimisation only
- Not all banned substances are tested for
- Specific products only – not brands
- Need to buy from the same batch to minimise the risk

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Explain students that if an athlete does make the decision to use supplements, they should minimise the risk. However, the risk cannot be entirely eliminated.

Present Informed Sport, a website showing a list of supplement products that have been batch tested and checks into how they are produced, so there is less risk in using these than buying supplements that have had no checks.

Informed Sport is useful for risk minimisation only – not elimination

Not all banned substances are tested for – just most likely ones to contaminate e.g. steroids and stimulants.

Specific products only – not a whole range (for e.g. you can't just search a brand name, has to be the individual product)

Search for supplements in the site

Estimated time: 10 min

Slide 12: Assess the consequences



Assess the consequence

Sanctions if tested positive as standard.
A reduction or suspension can be obtained if:

- Prove unintentional use
- Prove No Significant Fault or Negligence
- Provide substantial assistance in discovering/establishing other ADRVs
- Make a prompt admission of the ADRV

Health side effects

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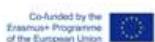
Present students the consequences of careless use of nutritional supplements. Remind them the concept of Strict Liability discussed in the previous session. Discuss the possible health side effects of the prolonged use of contaminated supplements.

Estimated time: 3 min

Slide 13: Case study

Case study

- J. M. is a professional MMA fighter. In April 2018 during an unexpected doping control he tested positive for Oxandrolone, an anabolic androgenic steroid (AAS) whose use is prohibited at all times, in and out of competition.
- J.M. publicly announced that he never used prohibited PEDs and that the positive test was probably due to the ingestion of contaminated nutritional supplements.
- He was sanctioned with a £150.000 fine and his licence to compete was revoked by the governing body that oversees his sport.



This case study is fictitious but is based on real facts. Present the facts to the students.

Estimated time: 3 min

Slide 14: How should we protect athletes from inadvertent doping?

How should we protect athletes from inadvertent doping?

Facts J.M. provided in support of his case

- He only used nutritional supplements from "trusted" brands
- The supplements he used were batch-tested and "clean" certified by Informed Sport

Your task - Debate Questions

- IS J.M. responsible for his accidental use of prohibited PEDs?
- How could he be safeguarded against inadvertent doping?
- Whose responsibility is inadvertent doping?



Run the exercise with the students. Discuss the consequences of inadvertent doping.

Estimated time: 10 min

Summary

- Nutritional supplement (NS) use in sports
- Inadvertent doping
- Gateway vs safe alternative hypothesis
- Assessing the need vs. risks/consequences of NS use



Briefly summarize the most important topics discussed in this session; nutritional supplement use in sports, inadvertent doping, checking supplements and medication, gateway vs safe alternative hypothesis.

Estimated time: 3 min

Disclaimer notice

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