The Role of Caffeine in Sport

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Presentation Overview

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• A Brief Overview of Caffeine in Society
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A Brief History of Caffeine

• Bug eats plant – PLANT FIGHTS BACK!
• Cacao emerges in South America 1900 BCE
• Tea emerges in China 1000BCE – 300BCE
• Coffee berries emerge Arabia 900 CE
• Coffee emerges 1500s Arabia, Europe 1600s
• Alcohol loses support, Enlightenment ensues

Source: Fredholm (2011). Hdbk Exptal Pharmacol, and a bit of Wikipaedia…
A Brief History of Caffeine

• Expanding trade routes (Dutch East India)
• Machine paced work needs machine paced humans
• Rise of natural science
• Late 20th century rise of coffee corporations
• 21st century supplements revolution – caffeine for all!
  • Snuck in as flavour enhancer

A Brief Overview of Caffeine in Society

• Caffeine is EVERYWHERE
• Most widely consumed psychoactive substance
• 75% US 7-12 year olds consume caffeine daily (Branum et al, 2014, Pediatrics, 133: 386-393)
• Comes in many, many forms:
  • Tea
  • Coffee
  • Chocolate
  • Cola
  • Inhalers
  • Pre-trainers
  • Creams
  • Soft drinks (sodas)
  • Supplements
  • Pills
  • Gum
  • Lollies
  • Post-trainers
A Brief Overview of Caffeine in Society

- Used to:
  - WAKE UP!!!!
  - Socialise
  - Concentrate
  - Endurance
  - Pain management
  - Blood pressure

- And of course…
The Role of Caffeine in Sport

- Caffeine enhances sports performance
- Most widely used performance enhancing drug in the world
- Originally on Prohibited List
- Moved to Monitoring List Jan. 2004
  - Performance enhancing
  - Health effects at high levels of abuse
  - Spirit of Sport?!?!?
- Chester (2011) speculates ban repeal administratively practical
# Understanding Substances in Sport

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* Technically doping is a subset of prescription substance misuse
Understanding Caffeine in Sport

• USE of caffeine in sport
  • Priority is using within medically defined safety limits
  • Secondary is the right amount to enhance performance

• MISUSE of caffeine in sport
  • Naïve use: if one is good, 10 must be better
  • Tablets in one hand, “sports drink” in the other

• ABUSE of caffeine in sport (and anywhere else too!)
  • Caffeine addiction
  • Caffeine toxicity
  • DEATH
Caffeine Related Deaths and Sport

• 44 y/o amateur body builder – 10 g pure anhydrous caffeine  Poussel et al. *Int J Cardiol* 166.3 (2013): e41-2.

• 16 y/o wrestler – 27 May 2014
Using Caffeine

1. Caffeine is a drug

2. Caffeine can be used or abused

3. Need to learn how to use it, and where boundaries lie