

The Role of Caffeine in Sport

Never Stand Still

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Presentation Overview

- A Brief History of Caffeine
- A Brief Overview of Caffeine in Society
- The Role of Caffeine in Sport
- Understanding Substances in Sport
- Understanding Caffeine in Sport
- Caffeine Related Deaths in Sport
- Using Caffeine

A Brief History of Caffeine

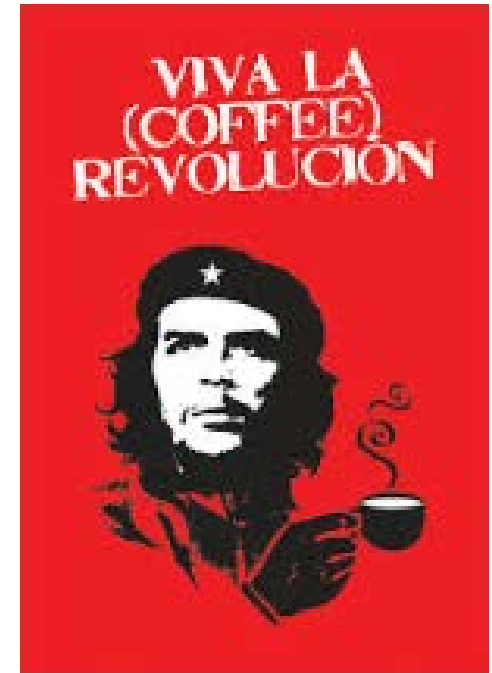
- Bug eats plant – PLANT FIGHTS BACK!
- Cacao emerges in South America 1900 BCE
- Tea emerges in China 1000BCE – 300BCE
- Coffee berries emerge Arabia 900 CE
- Coffee emerges 1500s Arabia, Europe 1600s
- Alcohol loses support, Enlightenment ensues



Source: Fredholm (2011). Hdbk Exptal
Pharmacol, and a bit of Wikipedia...

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



Source: Fredholm (2011). Hdbk Exptal Pharmacol, and a bit of Wikipedia...

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

	Use	Misuse	Abuse
Supplements	Weight control Immune function Dietary deficiency	Work Altered states Compensation	Dependency Overuse
Prescriptions	Injury recovery Medical condition	Work Getting high Some is good...	Addiction
Illicit Substances	Stress/Anxiety Pain management Self-medication	Work Social Numbing	Addiction
Doping*	Injury recovery Medical condition	Work Training Image	Addiction

* 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

