# Caffeine and Athlete **Performance**

#### Athlete Scenario

I usually have a couple of cups of coffee before my long bike rides. My riding partners swear that caffeine gives them a competitive edge and tell me that I should be consuming more. Is all of the hype about caffeine true, and if so, how much is safe?

#### **Potential Benefits:**

- There is evidence that caffeine may enhance performance in endurance athletes (e.g. cyclists, runners, swimmers and rowers) and speed endurance athletes (e.g. mid-distance runners, and soccer, rugby and hockey players).
- Caffeine does not appear to increase weight loss but may delay fatigue and improve mental sharpness.

## **Potential Risks:**

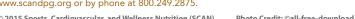
- Side effects include: anxiety, jitteriness, rapid heartbeat, upset stomach, and insomnia.
- Caffeine is an addictive substance. Tolerance may minimize benefits, and withdrawal symptoms can negatively impact performance.
- Caffeine, in high amounts (>15 ug/mL in the urine), is a banned substance by the NCAA. For most individuals, more than 500mg right before competition may result in a positive test.

### **Strategies for Caffeine Consumers:**

- Timing: ~1 hour pre-competition, but practice during training first
- Amount: Tolerance depends on the individual, but 2 6 mg/kg body weight (no more than 9 mg/kg) is adequate.
- Type: Researchers suggest that caffeine, in pill form, may be more effective than drinking coffee and is better tolerated.

Caffeine Source	Amount (mg)
Brewed Coffee (8 oz.)	60 – 150
Energy Drinks / Energy Bars (varies depending on size & brand)	80 – 200+
Pills (1 tablet)	100
Soda / Tea (8 oz.)	40 – 60

Written by SCAN registered dietitian nutritionists (RDNs) to provide nutrition guidance. The key to optimal meal planning is individualization. Contact a SCAN RDN or a Board Certified Specialist in Sports Dietetics (CSSD) for personalized nutrition plans. Access "Find a SCAN RDN" at www.scandpg.org or by phone at 800.249.2875.





## Tips to Take With You

- 1. Know what you're putting in your body. Some caffeine-containing products may have additional additives that could impair performance.
- 2. In moderation, caffeine does not cause dehydration or electrolyte imbalance, but athletes should rely on noncaffeinated beverages when rapid hydration is necessary.
- 3. Meet with a sports RD to determine if caffeine is appropriate for you.

Contact SCAN

www.scandpg.org 800.249.2875