

# Caffeine and Athletic Performance

## Athlete Scenario

*I usually have 2 – 3 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 the hype about caffeine true, and if so, how much is safe?*

## Potential Benefits:

- 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 may decrease pain, delay fatigue and improve mental sharpness.

## Potential Risks:

- Possible side effects include: anxiety, tremor, increased heart rate, upset stomach, and insomnia.
- Caffeine, in high amounts (>15 ug/mL in the urine), is a banned substance by the NCAA. For most individuals, more than 500 mg right before competition may result in a positive test.
- Caffeine should not be taken in combination with depressants (e.g. alcohol), other stimulants, and/or herbal supplements.
- Some caffeine products do not disclose caffeine dose or may contain other stimulants.

## Strategies for Caffeine Consumers:

- **Timing:** ~1 hour pre-competition, and adjust timing based on training experiences
- **Amount:** Tolerance depends on the individual, but 2 – 3 mg/kg body weight is usually adequate.
- **Type:** The caffeine in brewed beverages can vary depending on many factors (e.g. brew strength, roast type, bean variety, etc.). Ultimately, choose the type that works best for you.

Caffeine Source	Amount (mg)
Brewed Coffee (8 oz.):	75 - 175
Tea (8 oz.):	30 - 80
Soda (12 oz.):	35 - 55
Energy Drinks/Energy Bars (varies depending on size & brand):	50 - 200+
Pills (1 tablet):	200

## Tips to Take With You

1. Know what you're putting in your body. Some products do not disclose the caffeine dose and may have additional additives that could impair performance.
2. In moderation, caffeine does not cause dehydration or electrolyte imbalance, but athletes should rely on non-caffeinated beverages when rapid hydration is necessary.
3. Meet with a sports registered dietitian nutritionist (RDN) to determine if caffeine is appropriate for you.

## Contact SCAN

[www.scandpg.org](http://www.scandpg.org)  
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Written by SCAN registered dietitian nutritionists (RDNs) to provide nutrition guidance. The key to optimal meal planning is individualization. For personalized nutrition plans contact a SCAN sports dietitian or Board Certified Specialist in Sports Dietetics (CSSD) by accessing "Find a SCAN Dietitian" at [www.scandpg.org](http://www.scandpg.org) or by phone at 800.249.2875.