

# GETTING A JUMP-START

**C**affeine is no longer simply the ingredient in your coffee that gets you ready for another day. It's now one of the most popular preworkout supplements on the market. What's that? You don't take caffeine before workouts, you say? Think again, compadre. Even if you aren't popping pills from a bottle clearly labeled *caffeine* or hitting Starbucks before training, you're probably getting your caffeine from another source — such as most nitric oxide boosters. Obviously, the jolt you get from caffeine can aid your energy and drive in the gym, but there's another benefit from taking caffeine prior to your workout — increased strength.

Researchers from the University of Nebraska-Lincoln reported that weight-trained men who took a supplement containing about 200 milligrams of caffeine before working out increased their one-rep max on the bench press by about 5 pounds, which, alone, would be

very impressive for an immediate increase in strength. But the good news doesn't end there. Researchers from the University of Georgia (Athens) found that when a test group consumed caffeine about an hour before intense cycling exercise — exercise designed to make their thighs sore — the subjects experienced significantly less pain than when taking a placebo.

You're not thinking about entering the Tour de France anytime soon, so why does this concern you? Well, caffeine could help you deal with the muscle pain that causes you to stop a grueling set, allow you to get more reps and, therefore, prompt more muscle growth. Caffeine may also help to decrease delayed-onset muscle soreness and blunt the muscle pain after an



**Be a lean bean workout machine.**

intense workout, as the same Georgia research team discovered after putting subjects through a leg workout that employed negative reps.

**DOSAGE** Make sure you get in about 200–400 mg of caffeine about 30 minutes to two hours before workouts to boost strength, get more reps and help alleviate the postworkout pain that follows.

— **Jim Stoppani, PhD**

**References:** T.W. Beck et al., “The acute effects of a caffeine-containing supplement on strength, muscular endurance, and anaerobic capabilities,” *Journal of Strength and Conditioning Research*, August 2006, 20(3):506-10. P.J. O'Connor et al., “Dose-dependent effect of caffeine on reducing leg muscle pain during cycling exercise is unrelated to systolic blood pressure,” *Pain*, June 2004, 109(3):291-98.

## A STACK

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### Whey + Soy

*Stack these two proteins for the perfect preworkout mix*

■ **Whey** We know, we know. We're like an overbearing father repeatedly bragging about what a great baseball player his 11-year-old son is. But whey protein really *is* that good, so we simply can't help ourselves. It's the fastest-digesting protein available, so it's perfect to take before workouts — it rapidly supplies your body with critical amino acids. Whey is high in the

branched-chain amino acids leucine, isoleucine and valine, which are critical for muscle growth. In addition, whey contains peptides (small protein fragments) that enhance blood vessel dilation, leading to greater blood flow to exercising muscles and an enhanced muscle pump.

■ **Soy** A great protein to take in addition to whey, not only does soy enhance muscle growth as well as

whey does, but it also has no negative effects on hormone levels. Soy digests almost as rapidly as whey and is close to whey in BCAA content, making it a great addition to your preworkout shake. Plus it has the highest amount of arginine — the nitric oxide-boosting amino acid — of any protein, meaning soy will further enhance blood flow to muscles. Soy also has a high antioxidant

component, and research shows that when it is taken around workouts, there may be less muscle damage and recovery may be enhanced.

■ **Stack it like this** For the perfect preworkout protein stack, mix approximately 10–15 grams of whey protein powder and 10–15 g of soy protein powder in water, and drink it about 30 minutes before workouts.

— **Jim Stoppani, PhD**