

Caffeine gives athletes an edge

By Katherine Hobson, NPR

After winning the Tour de France last month, Vincenzo Nibali was tested for a bunch of performance-enhancing substances. But Nibali and his fellow competitors were welcome to have several cups of coffee (or cans of Red Bull), before their ride into Paris; caffeine is not on the World Anti-Doping Agency's banned list.

Still, the drug is definitely a performance booster. Just in the past few months, studies have shown that caffeine helps female volleyball players hit the ball harder and jump higher, rowers go farther, and cyclists go faster in a 20K time trial.

A large body of research shows caffeine helps in "pretty much every kind of endurance exercise," giving a performance advantage of 1.5 percent to 5 percent, says Mark Gleister, an exercise physiologist at St. Mary's University in Twickenham, U.K., and an author of the recent cycling study.

"Of all the legal supplements an athlete could take, it has the biggest effect on performance," he says. It's not clear why, but the suspicion is that caffeine increases the frequency or size of neural transmissions and suppresses pain, he says. It's not clear that it speeds very short sprints – Gleister is studying that – but it can help in any burst of activity that lasts longer than about a minute, he says.

Athletes see a benefit with a dose of between 3 to 6 mg. per kg. of body weight, which means that if a 140 pound cyclist were drinking an average cup of coffee, he'd get a lift after drinking about two to four cups.

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