

Endurance athletes using caffeine to keep them going

By Murray Carpenter, NPR

The Ironman World Championship in Kona, Hawaii, is an extreme event – a 2.4-mile swim, followed by a 112-mile bike ride, topped off by a marathon.

Throughout the event, racers drink plenty of fluids and eat energy bars or gels. Most also take a performance-enhancing substance that is legal and effective – caffeine.

“While I’m racing, caffeine is actually a pretty important part of my day, particularly in the Ironman, where it’s such a long race,” says Sarah Piampiano, a professional triathlete.

She integrates calories and caffeine into her race-day diet using energy gels. Each contains 50 milligrams of caffeine, which Piampiano calls a “shot.”

“Before the race, I typically take one gel that has one shot of caffeine in it, and then when I get onto the bike, each hour I take one shot of caffeine,” explains Piampiano. In the last half of the marathon, she ups her dose to two shots every 20 minutes.

“Caffeine has been well-known to be a beneficial drug to use during sport. It’s been studied for many years over a variety of different types of sports; it will improve your performance,” says Matthew Ganio, director of the University of Arkansas Human Performance Laboratory.

But, he says, it is important to take the right dose.

“The general consensus is 3 to 6 milligrams per kilogram of body mass, and it can be quite a bit. The example being, an 80-kilo individual needing 6 milligrams per kilogram body mass

– that’s four strong cups of coffee,” says Ganio.

But instead of guzzling coffee, many athletes rely on products, such as energy gels, that allow them to better quantify their caffeine. Brian Vaughan is CEO of GU Energy Labs, which makes gels that blend carbohydrates, amino acids, electrolytes and caffeine.

“The top-end athletes, the pros, want to be able to meter out caffeine during the course of an endurance event. It’s always nice to have that second wind, late in the race, where you can energize the mind, stimulate the mind, with the central nervous system response of caffeine,” says Vaughan.

Some researchers urge restraint. University of Connecticut doctoral candidate Evan Johnson says caffeine works best when used judiciously.

“You find a lot of people who constantly ingest caffeine throughout the day and therefore need alcohol or some sort of sleep aid to get to bed, and then in the morning are so groggy they need caffeine again,” Johnson says. He calls it a “vicious cycle of supplementation.”

That’s what happened to players on England’s soccer team. They took caffeine pills to amp up for a recent World Cup qualifying game and then needed sleeping pills to wind down.

Some athletes say they avoid caffeine because it makes them jittery, or it bothers their stomachs. Others, like triathlete Sam Gyde of Belgium, take a less systematic approach.

“I have a very busy life and a very busy work, and I train a lot, so I just drink lots of coffee so I am naturally very caffeinated. During training and racing, I use gels, which contain caffeine, and it’s not with any purpose, but I’m more or less like a heavy caffeine user,” says Gyde.

It seems to work for Gyde; he has won his age group twice at

Kona. And you may not have to be an Ironman to benefit. A recent Australian study showed that caffeine enabled sedentary men to work out more vigorously.

The side effects of ingesting so much caffeine are still being elucidated, however. The Food and Drug Administration announced last week that the agency is investigating several deaths that could be linked to energy drinks.