



### Questions patients ask

#### Q: Can coffee improve my performance when I'm exercising?

A: Yes. Several published research papers over many years have shown that caffeine in coffee is an 'ergogenic aid' – which means it can enhance physical performance.

#### Q: Is the beneficial effect of coffee down to caffeine?

A: Yes, the effects of coffee consumption on sports performance are linked to the caffeine in coffee. There is clear evidence that caffeine can improve physical performance.

#### Q: What are the benefits of coffee/caffeine for endurance exercise?

A: Recent studies have shown that in low intensity exercise over a longer duration such as running, cycling or rowing, caffeine improves time-trial performance (the time to complete a set distance) and increases time to exhaustion<sup>1</sup>, and may also reduce muscle pain<sup>2</sup>.

#### Q: What are the benefits of coffee/caffeine for high-intensity exercise?

A: In short-term, high-intensity exercise, caffeine may help maintain and improve short distance sprinting and jumping performances<sup>3</sup>. This may be beneficial in sports such as football and rugby, which contain short bursts of these types of activities. However, more research is needed to confirm these effects.

#### Q: How long does the beneficial effect last?

A: Once consumed, the effect of caffeine will be experienced after about 20 minutes. The benefits gradually wear off as the body breaks down caffeine<sup>4</sup>.

#### Q: How much coffee do I need to drink to experience this effect?

A: Studies have looked at caffeine consumption in trained athletes and found that low to moderate amounts (3-6mg/kg body weight) are effective for enhancing sport performance<sup>5</sup>. This equates to 2-4 cups of coffee. For recreational exercisers, no set amount has been established.

#### Q: Do other caffeinated drinks also improve sports performance?

A: Research has shown that the effects of coffee consumption on sports performance are linked to caffeine. It is, therefore, likely that other caffeinated drinks will also improve sports performance.

#### Q: How does caffeine help to boost my performance?

A: Research suggests that caffeine stimulates the production of adrenaline<sup>1</sup>. This, in turn, boosts energy production and improves blood flow to the muscles and the heart. As a result, caffeine may moderate fatigue and influence ratings of exertion, perceived pain and energy levels, all of which are likely to lead to improvements in performance.

#### Q: I have heard that coffee is a diuretic and should be avoided before exercise. Is this true?

A: Although caffeine may have a mild, short-term diuretic effect, recent research shows that moderate consumption of caffeine does not increase the risk of dehydration during exercise<sup>6</sup>. EFSA concluded that single doses of caffeine up to 200 mg do not raise safety concerns for adults, even if consumed less than two hours prior to intense physical exercise<sup>7</sup>.



### References

- <sup>1</sup> Ganio M. S. et al. (2009) Effect of Caffeine on Sport-Specific Endurance Performance: A Systematic Review. *J Strength and Conditioning Research* 23(1):315-24.
- <sup>2</sup> Gliottoni R.C. et al. (2009) Effect of Caffeine on Quadricep Pain During Acute Cycling Exercises in Low Versus High Caffeine Consumers. *Intern. J. Sport Nutrition Exercise Metabolism*, 19, 150-161.
- <sup>3</sup> Gant N. et al. (2010) The Influence of Caffeine and Carbohydrate Coingestion on Simulated Soccer Performance. *Intern. J. Sport Nutrition Exercise Metabolism*, 20, 191-197.
- <sup>4</sup> Astorino T.A. et al. (2010) Effect of Two Doses of Caffeine on Muscular Function during Isokinetic Exercise *Medicine & Science in Sports & Exercise*, 42(12).
- <sup>5</sup> Goldstein E.R. et al. (2010) J. International Society of Sports Nutrition Position Stand: caffeine and performance 7:5.
- <sup>6</sup> Ganio M.S. et al (2007). Evidence-based approach to lingering hydration questions. *Clinical Sports Medicine* 26, 12-16
- <sup>7</sup> EFSA NPA Panel (EFSA Panel on Dietetic Products, Nutrition and Allergies). (2015) Scientific Opinion on the safety of caffeine. *EFSA Journal*