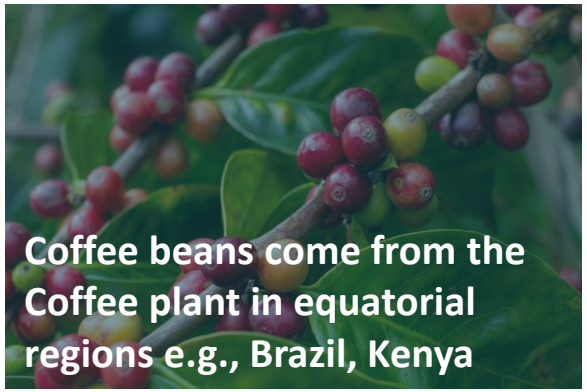


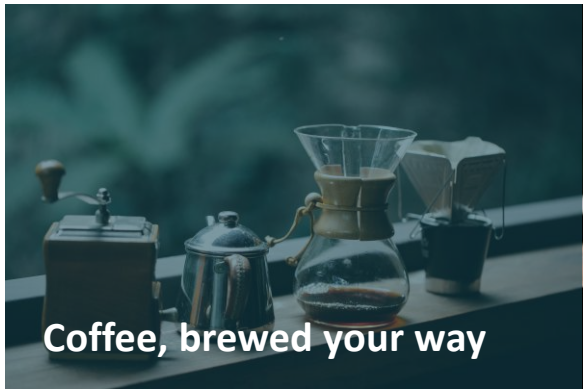
Coffee in the diet

All about coffee

From plant to cup







A unique sensory experience

Aroma and flavour make coffee a distinctive experience, often enjoyed as part of a healthy, balanced diet.

Bioactive components

Coffee contains several bioactive compounds, including caffeine which supports alertness and concentration, and chlorogenic acids, whose potential health effects continue to be studied.

A social ritual – ‘Meet for a coffee’

Coffee plays a key role in many cultures – an occasion for friends, family and colleagues to connect.

The European Food Safety Authority (EFSA) concluded that moderate caffeine consumption, of around 400 mg of caffeine per day from all sources (up to approx. 5 cups of coffee), can be enjoyed as part of a healthy balanced diet and an active lifestyle for healthy, non-pregnant adults.

European Food Safety Authority Panel on Dietetic Products, Nutrition and Allergies (NDA) (2015)

Coffee composition

Macronutrients

- Black coffee is predominantly water (>95%).
- It contains no significant amounts of the macronutrients (fat, carbohydrate and protein) making it a low-calorie beverage.
- Adding milk, sugar or syrups changes the nutritional profile.

Micronutrients

- Coffee contains a range of micronutrients at differing levels depending on several factors, including the coffee bean variety, roast level, grind size and brewing method.

Guide values for black coffee per 100 mL

Macronutrient	Strong filter coffee (69g/L)	Instant coffee (8.9g/L)
Fat	Trace	Trace
Carbohydrate	0.3 g	Trace
Protein	0.2 g	0.0 g

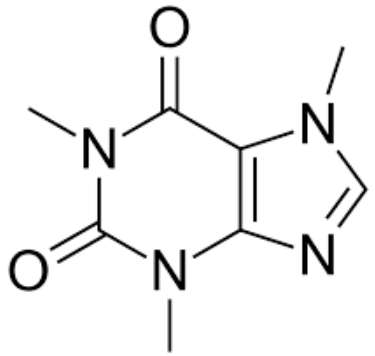
Guide values for black coffee per 100 mL

Micronutrient	Strong filter coffee (69g/L)	Instant coffee (8.9g/L)
Potassium	120 mg	33 mg
Magnesium	10 mg	3 mg
Phosphorus	8 mg	3 mg
Niacin	0.9 mg	0.2 mg

Public Health England (2021). Farias-Pereira R. (2019). Kobylińska Z. et al. (2025). Farah A. & de Paula Lima J. (2019).

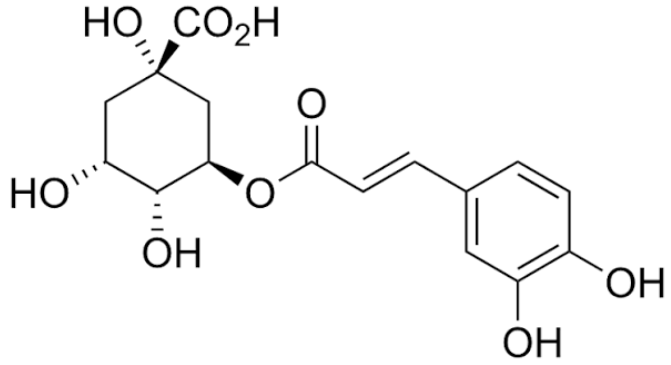
Bioactive compounds

Coffee contains naturally occurring bioactive compounds, including caffeine, chlorogenic acids, trigonelline, and diterpenes such as cafestol and kahweol. Content varies depending on several factors, including the coffee bean variety, roast level, grind size and brewing method.



Caffeine

- **50-380 mg/100 mL**
- Cup of black tea 23 mg / 100 mL
- Can of cola 10 mg / 100 mL



Chlorogenic acids

- **50-200 mg/100 mL**
- Main antioxidant compounds in coffee
- Degrade on heating so light roasts retain higher levels, although other factors affect this

Farias-Pereira R. (2019). Kobylińska, Z. et al. (2025). Farah A. & de Paula Lima, J. (2019). Heckman M.A. et al. (2010). Coca-Cola.

Coffee in our lives



Hydration – *contributes to fluid balance*

Coffee contains over 95% water. Daily intake of 300mg of caffeine (approximately 3 regular cups of coffee) induces only a mild, short-term diuretic effect, with no significant effect on overall fluid balance.



Alertness – *increased attention and alertness*

EFSA concluded that a cause-and-effect relationship has been established between a 75mg serving of caffeine (approximately 1 regular cup of coffee) and both increased attention (concentration) and alertness, mainly in situations of low arousal[1].



Physical performance – *supports endurance performance and capacity*

EFSA concluded that there is an association between caffeine consumption and an increase in endurance performance, endurance capacity and a reduction in the rated perceived effort or exertion during exercise.

Silva A. M. et al (2013). Killer S. C. et al (2014). EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA) (2011) 2054. EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA) (2011).

EFSA Scientific Opinion on the Safety of Caffeine

- Habitual caffeine intake from all sources up to 400 mg per day and single doses of 200mg do not raise safety concerns for healthy, non-pregnant adults[1].
- In pregnant women, habitual caffeine consumption of up to 200mg per day from all sources does not give rise to safety concerns for the foetus[1].
- In lactating women, single doses of caffeine and habitual caffeine intakes up to 200 mg do not give rise to safety concerns for breastfed infants[1].
- A cup of coffee typically contains 75-100mg caffeine.

European Food Safety Authority Panel on Dietetic Products, Nutrition and Allergies (NDA) (2015)

References

1. EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA) (2015) Scientific Opinion on the Safety of Caffeine. *EFSA Journal*, 13(5):4102. doi:10.2903/j.efsa.2015.4102.
2. Public Health England, 'McCance and Widdowson's Composition of Foods Integrated Dataset (CoFID)'. Available at: https://www.gov.uk/government/publications/composition-of-foods-integrated-dataset-cofid
3. Farias-Pereira R. et al. (2019) Mechanisms of action of coffee bioactive components on lipid metabolism. *Food Science and Biotechnology*, 28(5):1287-1296. doi:10.1007/s10068-019-00662-0.
4. Kobylińska Z. et al. (2025) Coffee as a Source of Antioxidants and an Elixir of Youth. *Antioxidants (Basel)*, 14(3):285. doi:10.3390/antiox14030285.
5. Farah A. and de Paula Lima J. (2019) Consumption of Chlorogenic Acids through Coffee and Health Implications. *Beverages*, 5(1):11. doi:10.3390/beverages5010011.
6. Heckman M.A. et al. (2010) Caffeine (1, 3, 7-trimethylxanthine) in foods: a comprehensive review on consumption, functionality, safety, and regulatory matters. *J Food Sci*, 75:R77-87. doi:10.1111/j.1750-3841.2010.01561.x.
7. Coca-Cola, 'How much caffeine is in a Coca-Cola?'. Available at: https://www.coca-cola.com/xe/en/about-us/faq/how-much-caffeine-is-in-a-cocacola
8. Silva A.M. et al. (2013) Total body water and its compartments are not affected by ingesting a moderate dose of caffeine in healthy young adult males. *Applied Physiology, Nutrition, and Metabolism*, 38:626-632. doi:10.1139/apnm-2012-0253.
9. Killer S.C. et al. (2014) No Evidence of Dehydration with Moderate Daily Coffee Intake: A Counterbalanced Cross-Over Study in a Free-Living Population. *PLoS ONE,* 9(1):e84154. doi:10.1371/journal.pone.0084154.
10. EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA) (2011) Scientific Opinion on the substantiation of health claims related to caffeine and increased fat oxidation leading to a reduction in body fat mass (ID 735, 1484), increased energy expenditure leading to a reduction in body weight (ID 1487), increased alertness (ID 736, 1101, 1187, 1485, 1491, 2063, 2103) and increased attention (ID 736, 1485, 1491, 2375) pursuant to Article 13(1) of Regulation (EC) No 1924/2006. *EFSA Journal*, 9(4):2054. doi:10.2903/j.efsa.2011.2054.
11. EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA) (2011) Scientific Opinion on the substantiation of health claims related to caffeine and increase in physical performance during short-term high-intensity exercise (ID 737, 1486, 1489), increase in endurance performance (ID 737, 1486), increase in endurance capacity (ID 1488) and reduction in the rated perceived exertion/effort during exercise (ID 1488, 1490) pursuant to Article 13(1) of Regulation (EC) No 1924/2006. *EFSA Journal*, 9(4):2053. doi:10.2903/j.efsa.2011.2053.