

Caffeine

Caffeine is a naturally occurring compound found in the leaves and fruits of certain plants. Caffeine is found in coffee, tea, cocoa, cola soft drinks and energy drinks. It may also be found in chocolate bars, energy bars and some over-the-counter medications, like cough syrup and slimming tablets.

As a stimulant, caffeine acts on the brain and nervous system. In small doses, it can make you feel refreshed and focused. In large doses, you are likely to feel anxious and have difficulty sleeping.

Like many other drugs, it is possible to develop a tolerance to caffeine, which means ever greater doses are needed to achieve the same effect.

A short burst of energy

Stimulants like caffeine work on the body in similar ways to the hormone adrenalin. The adrenal glands are located near the kidneys. When we are frightened or stressed, the adrenal glands squirt adrenalin directly into the bloodstream. The results are dramatic and instantaneous, with an increase in breathing and heart rate, accompanied by a short burst of physical energy.

Some of the signs and symptoms of excessive amounts of caffeine include:

- A rise in body temperature
- Frequent urination and dehydration
- Dizziness and headaches
- After the energy burst, an even greater feeling of fatigue
- Rapid heart beat (palpitations)
- Restlessness and excitability
- Anxiety and irritability
- Trembling hands
- Sleeplessness.

Addiction and withdrawal

Like many other drugs, it is possible to build up a tolerance to caffeine, which means you need to take larger doses to achieve the same effect. Over time, your body might come to depend on caffeine in order to function at its best.

Withdrawal symptoms can include tiredness, crankiness, a persistent headache, sweating and muscle pain. The easiest way to break caffeine dependence is to cut down gradually, giving your nervous system time to adapt to functioning without the drug.

How much is too much?

Your susceptibility to caffeine depends on your body mass, state of health, metabolism, and whether or not your body is used to getting regular doses of caffeine. Generally speaking, 500mg per day or less is considered an acceptable dose of caffeine.

Approximate caffeine levels per serve include:

- Chocolate drinks – 30 to 60mg
- Instant coffee – 60 to 100mg
- Drip or percolated coffee – 100 to 150mg
- Espresso coffees – such as espresso or latte – 90 to 200mg
- Cola drinks – 35mg

- Decaffeinated coffee – around 3mg
- Tea – 30 to 100mg, depending on the type and strength of the brew (both black and green tea contain caffeine)
- Energy or sports drinks – such as Red Bull or 'V' – 80 to 90mg
- Dark chocolate bar – 40 to 50mg per 55g serve
- Guarana – can contain up to 100mg per one gram of guarana
- Caffeine tablets – such as No-Doz – 100mg per tablet.

Special considerations

Some people need to take special care with caffeine:

- **Pregnant women** – limit your caffeine intake to 200mg per day or less, or avoid it altogether. Consuming high amounts of caffeine may increase your risk of miscarriage, experiencing a difficult birth and having a baby with a low birthweight.
- **Athletes** – caffeine is not classified as a prohibited substance under the World Anti-Doping Code 2005 Prohibited List. However, you should check the anti-doping rules of your particular sport to ensure caffeine is not specified as a restricted drug for that sport.
- **Children** – at present there are no guidelines for children's intake of caffeine. Caffeine intake should be investigated if children are showing symptoms of irritability, inability to sleep, interrupted sleep or stomach upsets. Remember that caffeine is present in many soft drinks and chocolate, not just coffee and tea.

Energy drinks

Energy drinks contain caffeine as well as ingredients such as taurine and guarana (a natural source of caffeine). Guarana and taurine are marketed as increasing energy, but clinical evidence for this has not been clearly established. Energy drinks are of concern due to their high caffeine and sugar content – children and pregnant women should avoid them.

Where to get help

- Your doctor
- Pharmacist
- An Accredited Practising Dietitian, contact the Dietitians Association of Australia

Things to remember

- Caffeine is a stimulant drug that acts on the brain and nervous system.
- Like many other drugs, it is possible to become dependent on caffeine.
- Pregnant women, athletes and children should limit their intake of caffeine.
- Energy drinks typically have more caffeine and sugar than soft drinks.

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