

# CAFFEINE

## What is caffeine?

Caffeine is a stimulant found in coffee, tea, chocolate, and cola and energy drinks – making it one of the most widely used drugs in the world.

Caffeine concentration varies according to the plant variety, the growing conditions and the strength of the given brew. Coffee beans of the arabica strain, grown primarily in Central and South America contain approximately 1% caffeine. Robusta coffee beans, grown in Africa and Indonesia, contain about 2%. The caffeine content of tea leaves can be as high as 5%.

Although tea leaves generally contain more caffeine by weight than coffee beans, there is usually more caffeine in a cup of coffee than in a cup of tea because more coffee beans than tea leaves are used to make each regular cup. Also tea is infused, not boiled.

Most researchers now agree that there is little risk of harm when a person consumes less than 600 mg of caffeine a day. At times of anxiety or stress, or during pregnancy, many doctors now recommend consumption of less than 200 mg a day.

| Beverage/Item                           | Container/Size | Typical caffeine content |
|---|----------------|--------------------------|
| Coffee Instant                          | 150 ml cup     | 60-100 mg                |
| Percolated/Drip                         | 150 ml cup     | 100-150 mg               |
| Espresso                                | 150 ml cup     | 90mg                     |
| Decaffeinated                           | 150 ml cup     | 2-4 mg                   |
| Tea                                     | 150 ml cup     | 30-100 mg                |
| Cocoa                                   | 150 ml cup     | 30-60 mg                 |
| Cola Soft Drink                         | 250 ml         | 35 mg                    |
| Energy Drink                            | 250 ml         | 80 mg                    |
| Chocolate Bar                           | 30 gm bar      | 20-60 mg                 |
| Prescription/over-the-counter medicines | tablet         | 20-100 mg                |

There has been a great deal of media interest in the range of energy drinks recently introduced into the market which contain caffeine. In general, the concentration of caffeine per ml in soft drinks or energy drinks is considerably lower than in coffee. A single serving of one of the many energy drinks available is equivalent to a cup of coffee.

## How many people use caffeine?

Worldwide per capita caffeine consumption (including that of children) is estimated to be 70 mg per day, or approximately equivalent to one cup of coffee. Average intake for Americans is believed to be about 200 mg per day. Most Australians consume caffeine in one way or another. A survey conducted in Sydney in the mid 1980s found that the average daily intake of caffeine was about 240 mg – the equivalent of about four cups of instant coffee.

## What are the short-term effects of caffeine?

The short-term effects of using caffeine may include:

- increased body temperature
- increased urination
- increased alertness
- irritability and restlessness

The use of coffee to sober up a person after drinking alcohol is not effective. It does not improve impaired motor coordination but may make the person more alert. It simply makes the intoxicated person more awake.

### What are the long-term effects of caffeine?

Daily use of caffeine in low to moderate doses in most healthy adults does not appear to produce any harmful effects. Substantial daily doses – and in some people even as little as 250 mg per day – can lead to unpleasant effects such as:

- **restlessness**
- **nervousness**
- **insomnia**
- **flushed face**
- **increased urination**
- **stomach upsets**
- **muscle twitching**

Fatal overdose with caffeine is extremely rare, but it is possible. The lethal dose in humans appears to be 5 to 10 grams, although toxic symptoms may appear with lower doses. Some symptoms of caffeine poisoning include tremors (involuntary shaking), nausea, vomiting, irregular or rapid heart rate and confusion. In extreme cases, individuals may become delirious or have seizures. In these cases, death may be caused by seizures that results in an inability to breathe. In less severe cases, high doses have been associated with panic attacks.

In small children toxic effects may be observed with much smaller doses, i.e. drinking about seven cups of strong coffee.