



Discussing decaf

October 2009

Decaffeinated coffee

Ever wondered about the health aspects of decaffeinated coffee? How coffee is decaffeinated? What happens to coffee when it is decaffeinated? We answer some of your coffee questions below:

What is caffeine?

Caffeine is a slightly bitter alkaloid with no smell. It makes up about 3% of the mass of every coffee bean.

How much caffeine?

When brewed, there is about 100 to 150 milligrams of caffeine in an average cup of coffee and 80 to 120 mg in espresso. Tea, on the other hand, has about 40 mg, a chocolate bar 20 to 60 mg and the average cola 50 mg. A lethal dose is estimated to be 10 grams or the equivalent of 100 cups of coffee consumed in one sitting.

How does caffeine make you feel?

Caffeine is a stimulant which counters drowsiness and gives a perceived relief from fatigue. It increases mental alertness and the ability to concentrate. However, it can also cause insomnia, shakiness, anxiety and even diarrhoea. Caffeine tolerance differs from person to person.

Can coffee cure a hangover?

Nope, coffee does not cure a hangover as it is also, like alcohol, a diuretic.

Any long-term health risks?

- **Pregnant women:** Women who are pregnant should know that caffeine is transferred to the fetus. It takes longer to metabolise caffeine during pregnancy. Therefore, pregnant women should reduce their coffee intake by 50% or avoid coffee altogether if they are uncertain.

- **Men and gallstones:** It was found that men who drink 2 to 4 cups of coffee per day reduced their chances of gallstones by about 45%.
- **Cancer, heart disease and high blood pressure:** No research has conclusively implicated caffeine as the culprit.
- **Cholesterol:** Only one study indicated a link to high cholesterol in some individuals who drink coffee that has been boiled excessively. However, if filtered after boiling, the cholesterol-raising oils seemed to be eliminated.

How is coffee decaffeinated?

Coffee is decaffeinated in the green bean stage (before roasting which brings out hundreds of aromatic oils). While various methods exist, only a few are used:

The Solvent Method (MC)

- **Direct Solvent Method:** The beans are steamed and then soaked in the solvent which combines with the caffeine. Next, the beans are steamed again to remove the solvent residues and then dried.
- **Indirect Solvent Method:** The beans are soaked in near boiling water for a few hours. The water and beans are then separated so that the solvent can be added to the water to combine with the caffeine. The combined solvent and caffeine are skimmed from the water and the latter, still full of the aromatic oils, are returned to the beans. The solvent originally used most widely, methylene chloride (MC), was banned in Europe in 1995 due to concerns about the ozone layer. Ethyl acetate, derived from fruit, is now more commonly used.

The Carbon Dioxide Method (CO2)

Used since the early 20th century, this is probably the oldest method. The beans are steamed and then soaked in CO2 which has been compressed to an almost liquid state. The caffeine is then removed from the CO2 by way of charcoal filtering. The advantage of this process is that at no stage do the aromatic oils leave the bean.

The Swiss Water Method (SW)

This method, which is probably the most expensive, uses no solvents. The beans are soaked in hot water so that the caffeine and other aromatic oils can migrate to the water. The caffeine is then removed from the water by means of carbon filters. The water is returned to the beans so that the aromatic oils can be re-introduced. Some critics argue that this method loses more flavour compared to the other methods.

Can you taste the difference between decaf and regular?

After decaffeination about 3% of the original caffeine remains in the bean. Also, the claim by some critics that decaffeination alters the taste of coffee has not been proven conclusively.

A study was conducted in the UK where professional tasters compared three coffees over several weeks: MC decaf, SW decaf and regular coffee. The coffees came from the same plantations and crops in Kenya, Brazil and Colombia. The results proved that tasters could often not tell the difference. However, when differences were tasted, the tasters could not tell which coffees were decaf and which were regular.

Where does this leave you?

Moderation is the answer

It is evident that you can enjoy coffee in moderation without fear of short-term or long-term risks. Treat coffee with the love and respect it deserves by enjoying it responsibly.

People with low tolerance for caffeine can still enjoy decaffeinated coffee without sacrificing the satisfaction of a good cup of coffee.

Experts agree that 300 milligrams of caffeine intake per day (3 cups) can even have long-term benefits. Why then bother with anything else than freshly roasted coffee blended to your personal liking?

Did you know?

- Soluble (instant) coffee is often blended with Robusta which has roughly double the amount of caffeine compared to Arabica. It is agreed that coffee brewed with paper filters contain slightly less caffeine.
- Decaf can be blended with regular coffee to reduce overall caffeine intake.
- High-quality speciality Arabica coffees (the only coffees that **Moka Coffee Roasters** specialise in) contain less caffeine than commercial coffees which are often blended with Robusta.

Let's talk over a cup of coffee

As specialty coffee roasters and blenders we would like to help you find the coffee that's perfect for you. So ask us about freshly roasted quality coffee, hand-blended according to your taste – in regular or decaf.

Coffee greetings

Theunis Delport