Good cup *bad cup*

For those of us who need our morning heart-starter, the news may not be all bad. JOANNA McMILLAN PRICE says the reputation of coffee has been muddied for too long

I love coffee. Actually, I'll qualify that by saying I love *good* coffee. But why is it that this feels like a confession? Because coffee is bad for us ... isn't it?

The public perception is that coffee is bad, while tea is generally considered good. Coffee has been anecdotally linked to numerous health problems from anxiety, heartburn and insomnia to heart disease and cancer. But is there evidence to show that coffee really is to blame or are these accusations unjust?

First up, in coffee's favour is the fact that it's not a new drink, having been enjoyed for several centuries. The name is probably derived from Kaffa — a region in Ethiopia where coffee trees are believed to have originated.

At first, it was eaten as a food, but at some point native people discovered a rich, aromatic brew could be made from the dehulled and roasted bean. The drink became popular in the Arab world in the 15th century with coffee houses emerging in Egypt, Saudi Arabia, Iran and Turkey. Even in those days, the drinking of coffee divided opinion and it was forbidden among orthodox and conservative imams because of its stimulant effect.

Conversely, in 1538, one the first Westerners to describe coffee, a German physician named Léonard Rauwolf, noted the potential for medicinal effects, describing it as: "A beverage as black as ink, useful against numerous illnesses, particularly those of the stomach."

Coffee didn't become popular in Europe until the 17th century when cafes soon became meeting places for social and business purposes. The famous insurance firm, Lloyds of London, actually started life as a coffee house.

So coffee has long been a social drink, enjoyed — at least in part — for its stimulatory effect. This can be attributed almost entirely to the presence of caffeine, the most widely consumed pharmacologically active substance in the world. A mild stimulant of the central nervous system, it accounts for the changes we associate with coffee, such as increased alertness and decreased sleepiness. But does coffee do us any harm? Well, the evidence is not nearly as damning as you might think and coffee may even be doing us some good.

Without doubt, caffeine can affect sleep — both the time it takes to fall asleep and the duration of it. But we're not all affected to the same degree. While some can drink a cup of coffee at bedtime without adverse effect, others can have a coffee at breakfast and find themselves tossing and turning that night. This can partly be explained by habituation — the more coffee you drink, the less it affects you. For most of us, however, avoiding caffeine in the evening will help prevent any unwanted effect on sleep.

Caffeine can make you anxious, but only at high doses. Studies to date conclude that consuming more than 600mg of caffeine can increase anxiety. Since a typical cup of coffee contains 80-140mg of caffeine, that equates to several cups of coffee a day.

Normal intakes of caffeine equivalent to 2-3 cups of coffee a day have not been shown to increase anxiety in either healthy subjects or those with existing anxiety disorders. There is even some evidence to show that small amounts of caffeine can reduce anxiety. So a cup of coffee before that all-important presentation may well help to calm your nerves.

It may also improve your performance. Caffeine has been shown to increase several aspects of mental performance, including the ability to process new stimuli and increase the amount of information processed. In research studies, subjects have been shown to perform better on tasks requiring concentration, such as driving, after consumption of caffeine. (Note: this doesn't mean you can sober up enough to drive by drinking a couple of strong espressos. You may well feel more alert, but coffee does nothing to speed up the rate at which you metabolise alcohol.)

There may also be a longer-term benefit, at least for women. One study measured the cognitive function of more than 1500 elderly men and women, using 12 standard tests. They found that women with a higher lifetime coffee consumption performed better in six of the tests.

Coffee may benefit the brain in other ways, too. Two studies — one a retrospective case-control study, the other a prospective study involving more than 1500 Canadians — have shown an inverse relationship between coffee consumption and Alzheimer's. Definitive conclusions cannot be drawn from only two studies, but these results have prompted further research.

There's better evidence for a link with

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Parkinson's disease. A recent meta-analysis of 13 studies to meet the inclusion criteria demonstrated a 31 per cent reduction in risk of developing Parkinson's in those who drank coffee compared with those who did not. This reduction in risk was even greater among men and the relationship was linear, meaning the more coffee they drank, the lower their risk.

In women, the picture was found to be complicated by whether or not hormone replacement therapy was used post-menopause. Consumption of coffee lowered the risk of Parkinson's in women who did not use HRT, but raised the risk in those who did. This suggests there may be some interaction between a component of coffee and exogenous oestrogen use, but we need more research before firm conclusions can be drawn. Nevertheless, taken together, these results tell a promising story for the benefits of coffee on the short- and long-term functioning of the brain.

Coffee has been shown to be of benefit in the treatment of asthma, probably by acting as a bronchodilator. As far back as the late 1800s, there are reports of caffeine being used to assist breathing in asthmatics. More recently, two large-scale population studies in Italy and the USA found the risk of asthma to be almost 30 per cent lower in coffee drinkers compared with non-coffee drinkers.

Much is made of the antioxidant content of tea, but coffee has been shown to have a greater total antioxidant power than other beverages, including green, black and herbal tea or cocoa. The types of antioxidants are, of course, different in each beverage and it's no known whether those characteristics of coffee really are protective against chronic diseases such as cardiovascular disease (CVD) and cancer.

Epidemiological studies have failed to come to definitive conclusions about associations between coffee consumption and cardiovascular disease. In part, this has been the result of confounding where coffee drinking acts as a marker for some other lifestyle factor known to increase risk, such as smoking.

Several studies have found coffee does increase blood levels of homocysteine (high levels can be a marker of CVD risk). But, while homocysteine levels were thought to be a risk factor, this has now been questioned and opinion is divided. Either way, since the effect of coffee is relatively minor, it seems unlikely there's any real effect on the risk of CVD.

As far as coffee consumption's relationship to cancer goes, there have been numerous case-control and cohort studies. A Year 2000 review concluded there was no evidence of a link between moderate coffee consumption and cancer. It seems clear there are far more important dietary changes to make than cutting out coffee.

The other significant chronic disease affecting Australians is type 2 diabetes and there may be good news for coffee lovers here. The famous Nurses Health Study in the US reported in 2006 that moderate consumption of both normal and decaffeinated coffee may lower the risk of type 2 diabetes in younger and middle-aged women. Caffeine could not explain the effect, so researchers are now looking at other constituents of coffee for possible answers. A second study found coffee consumption was linked to lower blood glucose levels and lower insulin levels. Over time, this might explain how coffee lowers diabetes risk. But not all studies agree and more research is needed.

You might think the effects of coffee on the gut are unquestionable. But even here there is conflicting evidence. Coffee can certainly exacerbate heartburn in some people, though not all. If you suffer heartburn regularly, you could try switching to decaf, as that seems to help some — but, again, the published research gives conflicting results. Since decaf affects others just as much as regular coffee does, it seems likely that some other constituent of coffee is the cause. On the plus side, there is no evidence that coffee increases the risk of stomach ulcers or causes indigestion, and two out of three of the best-quality prospective studies have shown coffee to protect against the development of gallstones.

Another commonly accepted fact about coffee is it's a diuretic. Well, while high doses of approximately six or more cups a day have been shown to increase urine output, this is not so at more usual levels of intake. You are, of course, taking in fluid along with the caffeine and, even if there's a small diuretic effect, there is still a net gain of fluid, particularly if you drink long coffees with milk.

There's even a benefit to the kidneys, as coffee drinking has been shown to lower the risk of kidney stones. The only negative may be for women with urge incontinence caused by instability of the bladder wall muscle (sometimes called detrusor muscle instability). Several studies have shown a worsening of symptoms after drinking coffee (or tea).

So, although much mud has been slung at coffee, not much sticks. Certainly, there's a mild stimulation of the central nervous system and it's not a good idea to provide too much stimulation. But when you need a boost to your mental performance, coffee might just do the trick. If you stick to no more than three cups a day, there'ss little evidence it does you any harm and it may even be doing you some good.

Fabulous. Make mine a skim flat white, no sugar, please.