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# Caffeine is a natural compound that has diverse affects upon our bodies. Its sources include coffee beans, tea leaves, the kola nut and cacao beans. This means it occurs naturally in coffee, tea, soft drinks and chocolate. Caffeine is a common additive to other foods and some medications such as pain relievers and dietary supplements. There is no difference between naturally occurring caffeine and synthetic caffeine; they both affect your body in the same way.

***Caffeine***

**Benefits**

Caffeine’s most obvious benefit is increased alertness, improved mood and reaction times.

Studies have shown that for a number of reasons, including increased metabolic rates and energy expenditure, caffeine helps control body weight/obesity. Hence, caffeine can play an important role in controlling and/or preventing Type 2 diabetes, insulin resistance, high blood glucose, etc.

Some research indicates that it can decrease the effects of Parkinson’s disease. Parkinson’s is a neuro-degenerative disease that results in tremors and the loss of motor function.

Recent studies have shown that caffeine has anti-inflammatory effects.

**Risks**

Although the FDA generally regards caffeine as safe there are side effects associated with its use/abuse.

Caffeine can disrupt sleep cycles and the body’s normal restorative and reparative systems.

Excessive caffeine consumption can lead to symptoms of ‘intoxi-cation’ that include tachycardia, anxiety, restlessness and tremors.

Those who regularly consume caffeine can experience with-drawal symptoms when they stop taking it including anxiety, cravings, depression, constipation, diarrhea and dizziness.

Those with heart disease should limit their caffeine intake as it can exacerbate high blood pressure and hypertension.

**Caffeine’s Effects**

Although caffeine affects a number of different organs; its primary target is the central nervous system (CNS). One thing to keep in mind is that although caffeine serves as a CNS stimulant, it is not a source of energy.

Caffeine has a molecular structure very similar to that of adenosine. Adenosine is neurotransmitter involved in the body’s sleep cycle: throughout the day, levels of adenosine increase and it occupies adenosine receptor sites throughout the brain making you feel tired and sleepy.

Caffeine occupies those adenosine receptor sites, but does not trigger them. Due to this inhibitory effect, you tend to feel more alert and awake even as the day progresses. This also explains why caffeine can disrupt your normal sleep cycle.

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| **Source** | **Serving Size** | **Amount of Caffeine (mg)** |
| Coffee1 | Small cup (5 oz) | 60-150 |
| Coffee (decaf)1 | Small cup (5 oz) | 2-5 |
| Tea1 | Small cup (5 oz) | 40-80 |
| Coca Cola2 | Can (12 oz) | 64 |
| Mountain Dew2 | Can (12 oz) | 55 |
| Starbucks Pike Place3 | Grande (16 oz) | 330 |
| Starbucks Coffee Frappuccino3 | Grande (16 oz) | 95 |
| Starbucks Caffe Mocha2 | Grande (16 oz) | 175 |
| Starbucks Iced Coffee3 | Grande (16 oz) | 165 |
| Rockstar (double strength)4 | Can (8 oz) | 80 |
| Red Bull4 | Can (8.4 oz) | 83 |
| Monster4 | Can (8 oz) | 92 |
| 5-Hour Energy4 | Can (1.9 oz) | 215 |
| Rockstar Energy Shot4 | Can (2.5 oz) | 229 |
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