

# CAFFEINE

## ITS ACTION IN THE BODY AND COMMON SOURCES

Caffeine is a drug used by millions of people daily. Its stimulant qualities are known and are generally enjoyed by the people who consume caffeine. Many people may experience undesirable effects of caffeine stimulation of the body and mind.

The following information on the effects and sources of caffeine is provided to help you and your clinician determine if there is a level of caffeine consumption which is not detrimental to you.

### General

Caffeine stimulates a person's "fight or flight" reaction. Mental activity and feelings of alertness are increased and generally the body is prepared for quick action. This is generally why caffeine is taken. These are the primary effects. However, "What goes up must come down." The down is the rebound of caffeine consumption which occurs after the last dose wears off. This is caffeine's secondary effect. Symptoms of the secondary effect are generally those for which caffeine was consumed for the first time. The rebound mental dullness, sleepiness and physical sluggishness may cause a person to desire another dose. This is the cycle of stimulant use. The up and down cycles place excessive stress on the systems of the body and can become addictive.

Some of the adverse primary effects of caffeine stimulation on specific body systems are listed below:

### Central nervous system

Stimulation which can cause behavioral changes, insomnia, restlessness, nervousness, anxiety, ringing in the ears, muscular tremor, headaches, lightheadedness.

### Cardio-vascular system

Rapid heart rate, irregular heart rate, palpitations, increased or decreased blood pressure, decreased blood flow to the brain, cold hands and feet.

### Digestive System

Increased gastric secretion, gastric irritation, ulcers, stomach pain, nausea, vomiting, diarrhea and anal itching.

### Immune system

Decreased immune function, decreased thymus gland size, decreased levels of circulating antibodies.

### Urinary tract

Kidney and bladder irritation, diuresis, increased frequency of urination, burning on urination.

### Secretory glands

Increased sweating, fibrocystic breast changes.

### Metabolic

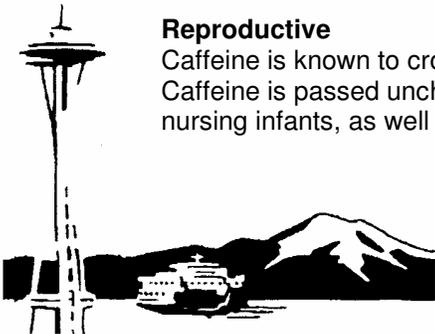
Increased blood lipids, increased or decreased blood sugar levels, pancreatic cancer, depletion of minerals and water soluble vitamins, and dehydration.

### Bone health

Depletion of minerals causing bone loss and weak bones. Increased possibility of fracture.

### Reproductive

Caffeine is known to cross the placenta; the safety of caffeine exposure before birth is still unknown. Caffeine is passed unchanged through breast milk and is known to contribute to nervous irritability of nursing infants, as well as the above-listed symptoms.



### Withdrawal

After discontinuing caffeine consumption, opposite (secondary) effects, as well as headaches may result for a short while until the body re-equilibrates.

### COMMON SOURCES OF CAFFEINE

<b>Beverages</b>	<b>Serving Size</b>	<b>Caffeine (mg)</b>
coffee, drip	8 oz	175-245
coffee, perk (and espresso)	8 oz	95-200
coffee, instant	8 oz	65-170
coffee, decaffeinated	8 oz	3-8
tea, 5-minute steep	8 oz	65-160
tea, 3-minute steep	8 oz	30-80
hot cocoa	8 oz	3-16
caffeinated soft drinks	12 oz	35-55+

<b>Foods</b>	<b>Serving Size</b>	<b>Caffeine (mg)</b>
milk chocolate	1 oz	1-15
bittersweet chocolate	1 oz	5-35
chocolate cake	1 slice	20-50

<b>Over-the-Counter Drugs</b>	<b>Dosage</b>	<b>Caffeine (mg)</b>
Anacin, Empirin, Midol	2	65
Excedrin	2	130
NoDoz	2	200
Aqua-Ban (diuretic)	2	200
Dexatrim (weight control aid)	1	200

### Note

Other sources of caffeine are Yerba mate, Guarana leaves, Yon pon and Kola nut. These ingredients are in many herbal energy and weight loss formulas, so it is important to read labels. Green tea, while it has about 35 mg per serving, has many healthful benefits, including large amounts of protective bioflavonoids. "Decaf" products can vary dramatically in the amount of caffeine, from almost the full amount to less than half. There are many marketing ploys out there with respect to "decaf", so beware. (Decaf just means "maybe-less-caf")



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