

Caffeine in Pregnancy

Caffeine is a stimulant found in many foods, beverages and some medications. Caffeine is naturally produced by a variety of plants. It also is added to some foods and beverages for flavor. The main source of caffeine for most adults is coffee.

Most experts agree that small amounts of caffeine (equal to about one to two 8-ounce cups of coffee a day) appear safe during pregnancy (1). The safety of larger amounts is controversial. Some studies suggest that high caffeine intake (equal to about 3 or more cups of coffee a day) may increase the risk of miscarriage and of having a low-birthweight baby (less than 5½ pounds) (2). However, there is no solid proof that caffeine causes these problems. Until more is known, women should limit their caffeine intake during pregnancy.

What foods and beverages contain caffeine?

Caffeine is found in coffee, tea, some soft drinks and chocolate. Coffee-flavored products, such as yogurt and ice cream, contain caffeine, as do products such as chocolate syrup and hot cocoa.

The amount of caffeine in foods and beverages varies widely. How coffee or tea is prepared and the type of beans or leaves used also affects caffeine content. In general, brewed coffee contains the highest amounts of caffeine, with an average of 137 milligrams (mg) per 8-ounce cup (3). Instant coffee contains about 76 mg per 8-ounce cup (3). A 12-ounce can of caffeinated soda contains about 37 mg (3). Chocolate generally contains low amounts of caffeine. (See table below for more specific values.) Most experts believe that consuming less than about 300 mg of caffeine (the amount in about two 8-oz. cups of brewed coffee or about seven 12-ounce sodas) per day appears safe in pregnancy (2).

Caffeine Content of Foods and Beverages

Foods and Beverages	Milligrams of caffeine	
		(average)
<i>Coffee (8 oz.)</i>		
Brewed, drip		137 mg
Instant		76 mg
<i>Tea (8 oz.)</i>		
Brewed		48 mg
Instant		26-36 mg
Caffeinated soft drinks, such as cola (12 oz.)		37 mg
Hot cocoa (12 oz.)		8-12 mg
Chocolate milk (8 oz.)		5-8 mg
<i>Candy</i>		
Dark chocolate (1.45 oz bar)		30 mg
Milk chocolate (1.55 oz bar)		11 mg
Semi-sweet chocolate chips (1/4 cup)		26-28 mg
Chocolate syrup (1 oz.)		3 mg
Coffee ice cream/frozen yogurt (1/2 cup)		2 mg

Source: U.S. Department of Agriculture, 2000

What medicines contain caffeine?

Some medicines used for pain relief, migraines, colds and delaying sleep contain caffeine. The Food and Drug Administration (FDA) requires that the labels of medications list the amount of caffeine they contain. Pregnant women generally should avoid medications containing caffeine, and should always check with their health care provider before taking any medication (including over-the-counter medicines) in pregnancy.

Some herbal products, such as guarana, contain caffeine (4). The FDA does not require that herbal products carry a label saying how much caffeine they contain, so amounts can vary greatly. Pregnant women should avoid herbal products because their safety in pregnancy has not been studied.

How does caffeine affect the body?

Caffeine is a stimulant that increases alertness. It slightly increases blood pressure and heart rate and increases urine production

Some individuals are more sensitive to caffeine than others. Pregnant women may be especially sensitive to it because they take longer to clear caffeine from the body than individuals who are not pregnant (2). Caffeine may cause some individuals to feel jittery, have indigestion or have trouble sleeping

During pregnancy, caffeine crosses the placenta and reaches the fetus. Studies suggest that caffeine may affect the fetal heart rate and breathing patterns, though these changes are not believed to be harmful (2).

Does caffeine consumption affect fertility?

Small amounts of caffeine probably don't reduce a woman's chances of becoming pregnant. Most studies have found no effect on fertility when women consume less than 300 mg of caffeine a day. A few studies have found that women who consume more than 300 mg may be more likely to have trouble conceiving (2). But, again, this has not been proven.

Does caffeine consumption contribute to miscarriage?

Most studies have found that low levels of caffeine consumption (less than 300 mg per day) probably don't increase the risk of miscarriage (2). Other studies have found that women who consume large amounts of caffeine (500 mg a day or more) may be twice as likely to miscarry as women who consume less (5, 6). However, some studies have reported no increased risk, even with high caffeine intake.

A recent study that examined 15 studies on caffeine and miscarriage found problems with methods used in many of these studies (7). Most of the studies showed a link between caffeine consumption during pregnancy and miscarriage, at least at higher doses. However, the authors concluded that the evidence was not strong enough to prove that caffeine causes miscarriage. In some cases, the results might be explained by other factors, such as smoking. More studies are needed to find out for sure whether or not large amounts of caffeine contribute to miscarriage

A 2003 Danish study suggested that women who drink four or more cups of coffee a day may be at increased risk of having a stillborn baby (8). Women who drank eight or more cups a day had a 3 times higher risk of stillbirth than women who drank no coffee.

Does caffeine affect the newborn?

Some studies suggest that high levels of caffeine consumption may slightly reduce a baby's birthweight (2, 9). However, if caffeine consumption does affect a baby's birthweight, the effect is likely to be very small (2, 9, 10).

Babies of women who consume large amounts of caffeine (more than 500 mg/day) may be more likely to have faster breathing and heart rates and to sleep less in the first few days of life (11).

Is it safe for a woman to consume caffeine while breastfeeding?

The American Academy of Pediatrics considers it safe for a woman to consume caffeine while breastfeeding (12). However, a small amount of caffeine does get into breastmilk, so women should limit their consumption. Breastfeeding babies of women who drink more than 2 to 3 cups of coffee a day may become irritable or have difficulty sleeping (12).