

Healthy Body - *Filtering out the facts* page 24

HEALTHY VIBE

HEALTHY BODY

Filtering out the facts

Caffeine is one of the most widely used stimulants in the world, but in many cases it does more harm than good.

Caffeine is a stimulant found in coffee, tea, chocolate, cola and soft drinks. Global caffeine consumption is estimated at 120,000 tonnes each year. That's the equivalent of one caffeine-containing drink a day for each of the planet's five billion plus inhabitants.

Benefits

Most researchers now agree that there is little risk of harm when an adult consumes less than 600mg of caffeine a day.

The short-term effects of caffeine include increased body temperature, increased urination, increased alertness, irritability and restlessness.

A Harvard University study examined 126,000 people over an 18-year period and found that people who drank one to three cups of coffee a day were up to nine per cent less likely to contract diabetes. In those who drank six or more cups of coffee per day, men slashed their chances of contracting diabetes by 54 per cent, and women by 30 per cent.

Other studies have shown that regular coffee drinkers are 80 per cent less likely to develop Parkinson's Disease. Also, two cups a day gives you 20 per cent less risk of colon cancer, as well as causing an 80 per cent drop in cirrhosis, and preventing gallstone development by 50 per cent.

Negative effects

According to the National Drug and Alcohol Centre, during times of anxiety or stress or pregnancy, doctors now recommend caffeine consumption of less than 200mg a day.

And caffeine should be avoided by some people, for example, it may cause the body to lose calcium, and that can lead to bone loss over time.

Fatal overdoses of caffeine are extremely rare, but they are possible. The lethal dose in humans appears to be 5 to 10 grams, although toxic symptoms may appear with lower doses.

Withdrawal symptoms from caffeine can include headache, irritability, an inability to concentrate, drowsiness, insomnia and pain in the stomach, upper body and joints.

These may appear within 12 to 24 hours after the last caffeine intake and peak at about 48 hours after. They usually last from one to five days.

Caffeine can aggravate certain heart problems. It may also interact with some medications or supplements. If you are stressed or anxious, caffeine can make these feelings worse.

Energy and soft drinks

A range of energy drinks recently introduced into the market contains caffeine, but in general the concentration of caffeine per millilitre in soft drinks or energy drinks is considerably lower than in coffee. Likewise, there is usually more caffeine in coffee than in tea.

In small children, toxic (poisonous) effects may be observed with much smaller doses (for example, by drinking about seven cups of strong coffee).

An addiction?

Consuming as little as 100mg of caffeine a day can lead a person to become "dependent" on caffeine. This means that someone may develop withdrawal symptoms if they quit caffeine suddenly.

In the brain, caffeine constricts the cerebral blood vessels. It is also linked to the chemical *adenosine*. To a nerve cell, caffeine looks like adenosine, however, instead of

slowing down because of the adenosine's effect, the nerve cells speed up.

Caffeine also causes the brain's blood vessels to constrict, because it blocks adenosine's ability to open them up.

The increased neuron-firing in the brain causes the pituitary gland to release hormones that tell the adrenal glands to produce adrenaline (*epinephrine*). Adrenaline is the "fight or flight" hormone, and it has a number of effects on your body and explains why, after consuming a big cup of coffee, your hands get cold, your muscles tense up, you feel excited and you can feel your heart beat increasing. Caffeine is also linked to increasing levels of *dopamine*, which makes you feel good.

The problem with caffeine is that once the adrenaline wears off, fatigue and depression can set in. So what do many people do? They consume more caffeine to get the adrenaline going again. This and the avoidance of other withdrawal symptoms can lead to caffeine dependence or addiction.

How much caffeine?



Instant 150ml cup	60-100mg
Percolated/Drip 150ml cup	100-150mg
Espresso 150ml cup.....	90mg
Decaffeinated 150ml cup	2-4mg
Tea 150ml cup	30-100mg
Cocoa 150ml cup	30-60mg
Cola soft drink 250ml	35mg
Energy drink 250ml	80mg
Chocolate bar 30gm	20-60mg
Caffeine tablet	20-100mg

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ACTIVITY 1 BUILDING READING SKILLS

- skimming and scanning for information
- reading headings, text boxes and pictures
- reading for meaning
- making connections between the text and your world

There are three levels of comprehension questions:

- | | |
|-----------------|---|
| Literal | The answer is located in one sentence in the text. |
| Inferred | You need to make links between sentences and graphics (such as illustrations, maps and tables) and what you already know. |
| Applied | The answer is in your background knowledge, what you already know or feel. |



Shade one bubble.

1. The text box at the bottom right corner of the page tells us (inferred)

- there is 35mg of caffeine in 250ml of cola.
- percolated coffee has less caffeine than espresso coffee.
- not to drink coffee.
- there is more caffeine in a chocolate bar than a cup of tea.

2. Which of these is not true? (inferred)

- Caffeine is a stimulant.
- One symptom of caffeine withdrawal is headaches.
- The level of caffeine in energy drinks is considerably higher than in coffee.
- There is more caffeine in coffee than in tea.

3. Which of these diseases may be prevented by drinking coffee ? (inferred)

- Parkinson's Disease
- insomnia
- heart disease
- pregnancy

4. According to the text, what are some of the short-term effects of caffeine? (literal)

5. The way this text is written leads the reader to

- want to drink lots of coffee.
- think about the health problems that may come from drinking too much caffeine.
- help the community.
- understand why people may become addicted to caffeine. (applied)



ACTIVITY 2 LANGUAGE CONVENTIONS - SPELLING

The spelling mistakes in these sentences have been underlined.

Write the correct spelling for each word in the box.

1. How much caffeen do you drink?

2. Their may be some benefits of caffeine.

3. They're are some negative effects.

Each sentence has one word that is incorrect.

Write the correct spelling of the word in the box.

1. There is usually more caffeine in coffey than in tea.

2. Caffeine may cause the body to loose calcium.

3. Caffeine restricts the vessels in the brane.



ACTIVITY 3 LANGUAGE CONVENTIONS - GRAMMAR

Shade one bubble.

1. Which word correctly completes the sentence?

Caffeine causes the brain's blood vessels to _____.

- constricts
- constricting
- constrict
- constricted

2. Which word or words does it refer to in this sentence?

You should avoid drinking too much coffee because it may lead to bone problems.

- drinking too much coffee
- smoking
- you
- some people

3. Which words correctly complete this sentence?

They _____ drinking too much coffee if they knew the health risks.

- would stop
- will stop
- will have stopped
- would stopped



ACTIVITY 4 LANGUAGE CONVENTIONS – PUNCTUATION

Shade one bubble.

1. Some commas (,) have been left out of this sentence. Which sentence has the commas in the correct place?

- Drinking coffee can lessen the risk of getting colon cancer, diabetes and gallstones.
- Drinking coffee, can lessen the risk of getting colon cancer diabetes and, gallstones.
- Drinking coffee can, lessen the risk of getting colon cancer diabetes and gallstones.
- Drinking, coffee can lessen the risk of getting, colon cancer diabetes and gallstones.

2. Which sentence has the apostrophe (') in the correct place?

- Our bodies' do not need too much caffeine.
- We do'nt think about how much damage caffeine causes.
- If you're drinking too much caffeine, you could damage your health.
- There's a lot of toxins in coffee.



ACTIVITY 5 WRITING A DISCUSSION

A Discussion is a type of Argument text that argues two points of view about an issue. Discussions begin by stating the Issue, and then give different Sides to the debate, concluding with a Resolution, judging which side is more valid.

Argument	Social purpose	Stages	Phases
Discussion	Argues both sides of an issue	Issue Side 1 Side 2 Resolution	Preview Evidence Statistics Quotes Examples Elaborations Review Conclusions

The health benefits of caffeine far outweigh the health problems associated with it.

Write a Discussion to argue your ideas for and against this statement.

Think about:

- examples, statistics, elaborations and other evidence to support your ideas.

Remember to:

- research your topic and plan your writing
- choose your arguments carefully
- give reasons for your arguments
- give examples to support your arguments
- write in sentences
- pay attention to your spelling and punctuation
- use a new paragraph for each new idea
- choose your words carefully to convince a reader of your opinions
- check and edit your writing so that it is clear for a reader.