

HOW TO USE CAFFEINE TO YOUR ADVANTAGE

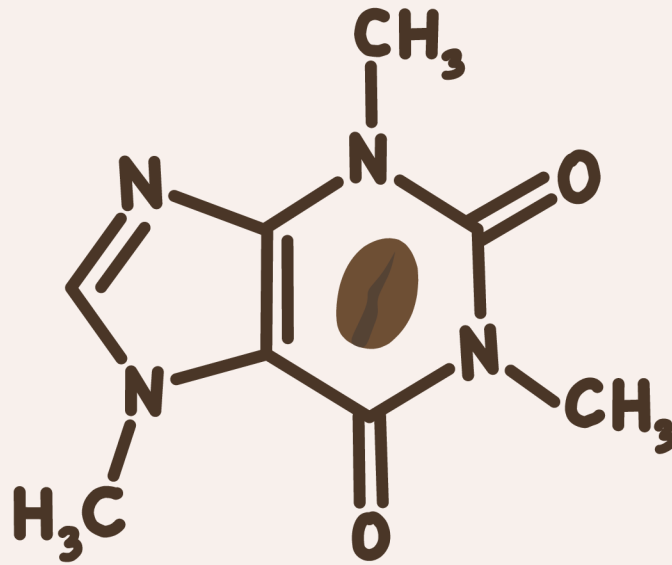


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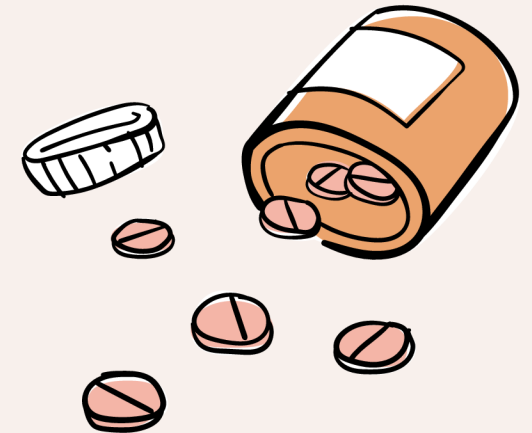
YOUR DAILY CAFFEINE FIX JUST GOT BETTER!

WHAT IS CAFFEINE?

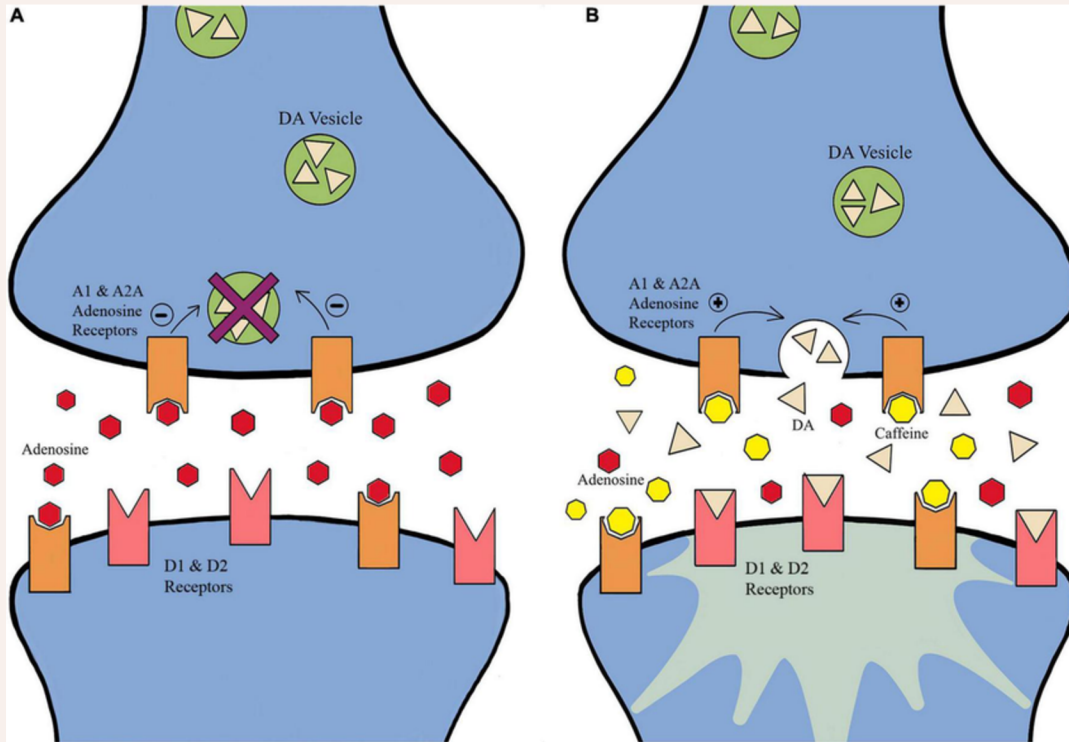
Caffeine is a central nervous system stimulant naturally found in coffee beans, tea leaves, and chocolate.



Caffeine can also be synthetically added to other things such as soda, energy drinks, over the counter pain relievers, and prescription drugs



HOW CAFFEINE WORKS



Caffeine is an antagonist which blocks the effects of adenosine neurotransmitters. Adenosine plays a crucial role in energy metabolism, cell signaling, inflammation, sleep regulation, and other physiological processes.

(A) Adenosine binds to adenosine receptors and inhibits dopamine activity. (B) Caffeine blocks adenosine binding to adenosine receptors, enhancing dopamine activity. The mechanism increases neuron excitability, promotes neurotransmitter release, and increases brain activity,



CAFFEINE BY THE NUMBERS

Mayo Clinic recommends that adults do not consume more than 400mg of caffeine per day.

With that in mind, it's important to be aware of how much caffeine is in readily available products that we consume on a daily basis.

WANT TO KNOW MORE ABOUT THE CAFFEINE IN YOUR FAVORITE SPECIFIC DRINKS? →



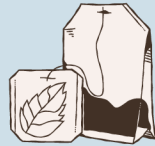
CAFFEINE CONTENT IN COMMON PRODUCTS

COFFEE



An 8-oz cup of black coffee contains about 96mg of caffeine. For espresso-based beverages (lattes, cappuccinos, americanos, etc), each 1-oz shot of espresso contains 63mg of caffeine.

TEA



An 8-oz cup of black tea contains about 48mg of caffeine. A typical 8-oz cup of green tea has 29mg of caffeine. It's important to be aware of servings; an 18.5-oz bottle of Pure Leaf Tea contains 84mg.

SODA



While many sodas like Mug Root Beer and Sprite don't have caffeine, there are plenty that do! A 12-oz can of Diet Coke has 46 mg of caffeine, and a regular Coke has 34 mg.

ENERGY DRINKS



Energy drinks are highly variable in caffeine content. An 8.4-oz can of Red Bull contains 80mg, A 12-oz Celsius contains 200mg, and a 16-oz Bang or C4 contains 300mg of caffeine!

MEDICATIONS



Even over the counter drugs often have caffeine. Two caplets of Excedrin (for migraines) contain 130mg, and two caplets of Midol contain 120mg.

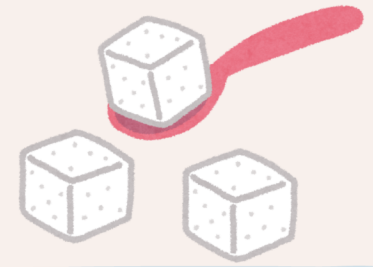
POSITIVE EFFECTS OF CAFFEINE



Research has shown that caffeine may make you less likely to experience heart failure. Drinking coffee can help weaker hearts pump blood through the body.



We see most of caffeine's benefits in our brain health and cognitive processes. In addition to increased energy, elevated mood, more alertness, and better memory in the short-term, we also see long-term benefits! Caffeine consumption lowers the risk of Alzheimer's disease, stroke, and Parkinson's disease. It also slows general cognitive decline by antagonizing adenosine receptors!



Some studies have found that type 2 diabetes is less commonly developed in people who drink more coffee. Caffeine may contribute to more efficient processing of glucose!



Overall, caffeine, especially in the form of coffee, may contribute to a longer life by decreasing the risk of developing many serious, life-threatening conditions!

NEGATIVE EFFECTS OF CAFFEINE

There are certainly many benefits of caffeine when consumed in moderation. But what happens if we have too much, or have it at the wrong time of day?



Our respiratory, renal, cardiovascular, and nervous systems are all affected by caffeine. High caffeine has been linked with cardiovascular events, and caffeine overdose is common in the United States. Being able to recognize symptoms of caffeine toxicity in yourself and others is vital.

Acute caffeine toxicity, caused by caffeine in high doses, can cause jitters, tremors, anxiety, agitation, heart palpitations, and seizures. It can even be fatal in some cases.

Caffeine addiction is real! If you consume too much regularly, you may experience depression or anxiety when you stop. Caffeine can also seriously affect your sleep!

It's important to listen to experts and not exceed the recommended dosage! Too much caffeine can cause more harm than good.

CAFFEINE & SLEEP



RELEVANT FACTORS:

- Amount of caffeine
- Time of consumption
- Individual Sensitivity
- Frequency of consumption

HOW CAFFEINE IMPACTS SLEEP:

- Delays sleep onset
- Reduces sleep duration
- Disrupts sleep patterns (REM and deep sleep)
- Increases nighttime awakenings



Caffeine DOES NOT replace the benefits of sleep

CAFFEINE NORMS

Mean daily caffeine consumption for college students in the U.S., including non-consumers, was 159 mg/d with a mean intake of 173 mg/d among caffeine users



Students provided multiple reasons for caffeine use including: to feel awake (79%); enjoy the taste (68%); the social aspects of consumption (39%); improve concentration (31%); increase physical energy (27%); improve mood (18%); and alleviate stress (9%)



90% of Carleton Students reported having 4 or fewer energy drinks in the past 30 days.

CAFFEINE FACTS + TIPS

- Caffeine peaks within 30-60 minutes but has a half-life of 5-7 hours
- Caffeine is a diuretic
- Regular use of caffeine at consistent levels will eventually dull its effects
- 400 mg is the recommended maximum daily caffeine intake
- Caffeine can mask the depressant effects of alcohol, but doesn't change how drunk you are



- Stop drinking beverages with caffeine after 3 pm.
- For every 100 mg. of caffeine, drink a full cup of water
- Drink caffeine in small, irregular doses
- Check nutrition labels to see how much caffeine is in a product – It may be more/less than you think!
- Don't mix caffeine with other substances like alcohol or other drugs