## Fatigue and Shiftwork: Caffeine Use

## Combating fatigue with caffeine: wisdom or foolishness?

Sleep deprivation? Double Latte! Midshift? Espresso! Burnout? Energy Drink! Exhaustion? Soda! Afternoon crash? Sports drink! Fadeout? More coffee! Is this caffeine consumption wisdom? Maybe, maybe not. When used strategically, caffeine can provide fast-acting, short-term relief from symptoms of fatigue, but the difference between caffeine wisdom and foolishness lies in being informed and taking action.

## Does caffeine improve alertness and performance?

Yes. Caffeine improves alertness and performance temporarily. Caffeine is an effective short-term countermeasure to fatigue, but too much caffeine can hurt your health, performance and safety.

## How much caffeine is too much?

While individual body chemistry and sensitivity differs, a good guideline is to limit daily caffeine intake to about 200-300 milligrams (mg). How much caffeine are you consuming in relation to the guideline? $160 z$ can of Energy Drink: 160mg 12 oz (tall) Coffee: 260mg 8 oz can of Energy Drink: 80 mg 12 oz can of Caffeinated Soda: $30-70 \mathrm{mg} 2$ oz Concentrated Energy Shot: 200 mg Caffeine is only a temporary fatigue alertness solution. The best route to boosting your energy level includes a healthy diet, regular exercise, and 7 to 9 hours of sleep daily.

## What about risks? Am I setting myself up?

If you are proactive about moderating your caffeine consumption and intentional about the timing of it, you will reap the short-term benefits of caffeine. However, overuse of caffeine can have adverse effects:

- Overreliance on caffeine. Instead, enhance alertness by focusing on meeting your daily sleep need first.
- Cardiovascular or gastrointestinal issues and negative interactions with some medications.
- Increased tolerance leads to more use to get the same results...making that cup of coffee less effective.
- Inability to fall sleep or disruption of sleep cycles impacting sleep quality and deepening your sleep debt.


## What about energy drinks? Good, bad or ugly?

Do these drinks really provide you with energy? Well, because you can drink an energy drink faster than sipping a cup of hot coffee, the caffeine impact is more immediate. So, are energy drinks good, bad or ugly? It depends on you---whether or not you apply knowledge to make wise choices about how much and when you consume caffeine. Be careful that you don't consume more than 300 mg of caffeine a day. Although the FDA limits caffeine content of colas to 71 mg per 12 ounces, energy drinks are not FDA-regulated and may opt out of displaying caffeine or DMAA, an ingredient the FDA warns against.


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## What does strategic use of caffeine look like? What can I do?

- Use caffeine only when you need it-when your body clock is at a circadian low (late afternoon, earlymorning).
- Avoid caffeine several hours before bed—it can lead to disturbed sleep or difficulty falling asleep.
- Reach for a glass of water instead of caffeine. Dehydration affects cognitive abilities such as alertness, math skills, short-term memory, and visual tracking. Maybe you're simply thirsty?
- Don't super-size. While caffeine temporarily improves concentration and increases alertness, there is a point of diminishing returns. It is far better to "super-size" your sleep rather than your caffeine.
- For a strategic pick-me-up, drink coffee before a 15-20 minute nap to receive benefits from the nap and reduce post-nap sleep inertia.


## Myth: I can count on caffeine to overcome my fatigue.

Fact: Caffeine does not overcome fatigue, it masks it. If used wisely, caffeine is effective for short-term improvements in performance and alertness, but the temporary effects of caffeine can be misleading. The antidote for fatigue is sleep! Moving to the Next Level of Safety

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