Caffeine for performance

url: https://www.opss.org/article/caffeine-performance  
  
  
Caffeine is the most widely-used stimulant in the world. It s in coffee, tea, soda, energy drinks, and energy shots, as well as some sports gels, dietary supplements, over-the-counter medications, and combat rations (pudding, gum, and mints). In moderate doses, caffeine can boost physical and mental performance. However, too much caffeine can have negative consequences, so be careful how much you consume. Dietary supplements sometimes can add significant amounts of caffeine to your daily intake, so pay special attention to what s on the labels.  
  
How much caffeine is safe?  
Up to 400 mg per day of caffeine is considered safe for healthy adults, excluding women who are pregnant or lactating. Less than that won t likely cause serious side effects, but sensitivity to caffeine differs from person to person. Common side effects include headaches, dizziness, nervousness, restlessness, and trouble sleeping.  
  
Higher doses can lead to more serious side effects. In fact, 150 200 mg/kg body weight about 10 14 grams for the average person can be fatal. In fact, the Food and Drug Administration (FDA) warns against pure and highly concentrated caffeine, which are readily available. Just one teaspoon of pure powdered caffeine has as much caffeine as 28 cups of coffee!  
  
How much caffeine should I use for performance?  
Caffeine can help improve some types of mental performance such as vigilance, attention, and alertness during long activities such as patrolling at night or when you re low on sleep. For physical performance, caffeine helps endurance more than short-term, high-intensity, or strength activities.  
  
The amount of caffeine that can help performance is different for each person, and some respond better than others. In general, up to 200 mg (about the amount in 2 cups of 8 12 oz of brewed coffee) at any one time is appropriate. Caffeine takes about an hour to reach peak blood levels, so consume it about 30 60 minutes before a workout, training session, work shift, or mission for best results. You might need another dose of caffeine after 3 4 hours to help you stay alert or active for a long period of time. However, add up all the sources of caffeine you consume from beverages, foods, and supplements, and do not exceed 600 mg of caffeine per day (or 800 mg for sustained operations).  
  
How can I tell if my supplement contains caffeine?  
If your supplement is marketed for weight loss, energy, or pre-workout, it probably contains caffeine. To see if it does, look at the Supplement Facts panel. Caffeine and caffeine anhydrous are the terms that appear most often on dietary supplement labels, but they re basically the same thing.  
  
Other names you might see include caffeine citrate, dicaffeine malate, and pterostilbene-caffeine. These combine caffeine with other substances (sodium citrate, malic acid, and pterostilbene, respectively). Because the caffeine is combined with other substances, the amount of caffeine is less than the ingredient amount on the label. For example, caffeine citrate is about 50% caffeine, so if a label lists 50 mg caffeine citrate, then it contributes about 25 mg caffeine.  
  
Other times the caffeine might be hidden in ingredients such as:  
  
Cocoa (cacao, Theobroma cacao)  
Coffee or coffea  
Green coffee bean  
Guarana  
Kola nut  
Methylxanthine  
Tea (Camellia sinesis)  
Trimethylxanthine  
Xanthine  
Yerba mat   
Sometimes the total amount of caffeine is listed on the Supplement Facts panel. If the caffeine is part of a proprietary blend, you might not be able to tell how much caffeine is in a serving. The amount might be listed elsewhere on the container, or not listed at all, so be sure to read the entire product label.  
  
What else should I know about caffeine?  
If you choose to use caffeine, make sure you try it before the day of an event or mission to assess your tolerance. Caffeine can sometimes help, but you might not need it.  
More caffeine won t improve your performance, and the negative side effects of higher doses might make things worse.  
Try to avoid caffeine for at least 6 hours before bedtime, so it doesn't interfere with your sleep.  
Caffeine can boost mental performance temporarily, but it s not a substitute for sleep.  
Watch out for supplements that have caffeine along with other stimulants. Very little information exists about the safety of combining such ingredients.  
For additional information about caffeine:  
Caffeinated gum: Q&A about the gum in your MREs  
Caffeine and performance infographic  
HPRC s Caffeine facts  
FDA s Spilling the beans: How much caffeine is too much?