

The impact of caffeine on mood, cognitive function, performance and hydration: a review of benefits and risks

The reputed benefits of moderate caffeine consumption include improvements in physical endurance, cognitive function, particularly alertness and vigilance, mood and perception of fatigue. In contrast, there are concerns that excessive intakes increase the risks of dehydration, anxiety, headache and sleep disturbances. This paper is a review of double-blind, placebo-controlled trials published over the past 15 years to establish what range of caffeine consumption would maximize benefits and minimize risks for cognitive function, mood, physical performance and hydration. Of the 41 human studies meeting the inclusion criteria, the majority reported benefits associated with low to moderate caffeine intakes (37.5 to 450 mg per day). The available studies on hydration found that caffeine intakes up to 400 mg per day did not produce dehydration, even in subjects undergoing exercise testing. It was concluded that the range of caffeine intake that appeared to maximize benefit and minimize risk is 38 to 400 mg per day, equating to 1 to 8 cups of tea per day, or 0.3 to 4 cups of brewed coffee per day. The limitations of the current evidence base are discussed.

10th April, 2008