Caffeine: The Effects on Physical and Mental Alertness

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Caffeine is a white, crystalline, bitter alkaloid. Caffeine is used as a stimulant to the central nervous system and also acts as a diuretic. This stimulant can be man-made or found in vegetation, with the same chemical formula C8H10N4O2. The effects on caffeine differ from person to person. For example, caffeine blocks adenosine from attaching onto adenosine receptors, allowing the person to become more alert. Through different biochemical pathways, eventually one starts to produce more dopamine, therefore allowing muscles to relax and one to be able to focus on certain tasks to be increased. In my study, I performed numerous tests on participants of the ages of seventeen. Through my analysis I found that caffeine affects females more than males, with the same dosage. Caffeine affects the brain in many ways. My tests have proved the previous statement to be true. In my tests, I had participants involved in physical activities. I concluded that caffeine affects some participants in speed, and all participants in endurance, as well as improving scoring on mental tests. Knowing this, caffeine can help people become more focused on certain tasks for a longer period of time, with the right dosage. The effects also lasted longer on some females than males. My results show that taking caffeine before a certain task like The ACT can help some people stay more focused and get a better score.

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