Alertness Effects of Caffeine

Caffeine, which occurs naturally in tea and coffee, has been extensively researched. Numerous studies have looked at the effects of caffeine on mental alertness and physical performance and have shown that caffeine can have beneficial effects. Results have shown: sustained attention during after-lunch dip (22); improved alertness and performance on a variety of tasks at night (23); improved attention, psychomotor, memory test results after strenuous exercise (24); reversed changes caused by sleep-deprivation such as decreased in vigor, fatigue and confusion (25, 26); and improved success in overcoming sleeplessness (27). Caffeine has also been shown to significantly increase wakefulness, vigor, energy, feeling “full of go” and feeling efficient (9). Increases in cognitive performance (20, 21) and in alertness, energy, and well being (10,11) have been shown at levels of caffeine equivalent to those found in one cup of tea.

Tea vs. Coffee

In a study comparing tea and coffee, both beverages had similar effects on alertness, but tea produced more consistent levels during the day and appeared to have a more gentle reviving effect (32). A cup of regular black or green tea has about half the caffeine as a comparable cup of regular brewed coffee. In a study in which participants drank tea and coffee continually all day in the same amounts, both beverages produced similar effects on alertness, despite tea's lower levels of caffeine. In addition, those people drinking tea said they got to sleep more easily, and rated their quality and actual sleep time as being better than those drinking the same number of cups of coffee (33). Together with other research conducted on caffeine and sleep (34, 35, 36, 37), these studies suggest that tea provides the potential beneficial effects of caffeine on performance during the day without disrupting sleep at night.

Physiological Effects of Caffeine

Studies have also examined the physiological effects of caffeine in tea and coffee. Findings show that the caffeine acts as a mild stimulant slightly increasing blood pressure and heart rate 30-60 minutes after drinking coffee or tea (13), at an increase comparable to climbing a flight of stairs (48). Various studies have also shown that caffeine before exercise can delay fatigue (1-4). For example, caffeine improves the racing performance of cross-country skiers (1); enables subjects to cycle significantly longer (2), improves performance on a treadmill test (3) and increases tennis success in women (4). In addition, caffeine during exercise has been shown to enhance endurance performance (5, 6, 7). Caffeine consumption has also been shown to increase metabolic rate and the rate of fat breakdown (discussed further under Tea and Weight Loss)(2, 15, 16, 17).

Research on Caffeine and Health

Caffeine is a naturally occurring compound found in over sixty species of plants. Extensive research shows that moderate caffeine intake of about 300 mg per day (eight cups of brewed hot or iced tea, or three cups of brewed coffee) is not a health risk (48). In addition, there is no link between moderate caffeine consumption and risk of cancer, cardiovascular disease or osteoporosis. However, as with some other foods and beverages, pregnant women are advised to consume caffeine in moderation and to limit their daily intake of caffeine to no more than 300 mg/day (48).
Decaffeinated Tea

Decaffeinated teas or coffees are not completely caffeine-free. Decaffeinated tea has about 4 mg of caffeine per serving about one-tenth the amount in regular tea. LIPTON Teas are decaffeinated using a natural process that retains the flavonoid antioxidants in tea.

Beyond Caffeine and Theanine

Investigations into the effects of tea on physiology, mood, cognitive and psychomotor performance have indicated that other factors about tea, in addition to caffeine and theanine, may play a role in tea’s restorative effects. Natural factors about hot beverages and tea such as aroma and other sensory attributes or other natural occurring substances in tea may be in part responsible for tea’s positive health effects (38, 65). In addition, the psychological nature, such as context and past experiences with a hot beverage or tea could also play a part in tea’s restorative effects (11, 12, 13).

*While tea is a naturally rich source of antioxidants, it is not a substitute for fruits or vegetables which provide a wide range of antioxidants and essential vitamins and minerals. Please consult your doctor regarding a diet/nutritional plan that is right for you.