

## Tea Can Help You to Focus

L-theanine in combination with caffeine is likely responsible for these effects.



- Drinking tea may:
  - Help maintain focus
  - Improve alertness throughout the day
- L-theanine is an amino acid found primarily in tea of the *Camellia sinensis* species such as black, green, oolong and white tea (not herbal teas).
- Tea contains 40-60 mg caffeine per cup.
- Tea contains 5-23 mg of L-theanine per cup.
- 50 mg of L-theanine, an amount found in 2-3 cups of brewed tea, can increase alpha brain wave activity at rest. Increased alpha wave activity at *rest* is associated with a *relaxed yet alert state of mind*.
- During performance of *cognitive tasks*, high levels of L- theanine modulate alpha brain wave activity which is associated with *attention processes*.
- Research suggests that consuming 2-3 cups of brewed black tea over 1-2 hours providing 45 mg L-theanine and 100 mg of caffeine can help maintain focus and improve alertness.

## References

1. Durlach PJ. The effects of a low dose of caffeine on cognitive performance. *Psychopharmacol* 1998;140:116-119.
2. Hindmarch I, Quinlan PT, Moore KL, Parkin C. The effects of black tea and other beverages on aspects of cognition and psychomotor performance. *Psychopharmacol* 1998;139:230-238.
3. Hindmarch I, Rigney U, Stanley N, Quinlan P, Rycroft J, Lane J. (2000) A naturalistic investigation of the effects of day-long consumption of tea, coffee and water on alertness, sleep onset and sleep quality. *Psychopharmacol* 2000;149:203-216.
4. Cartwright RA, Roberts EAH, Wood DJ. Theanine an amino acid of N-ethyl amide present in tea. *J Sci Food Agric* 1954;5:597-599.
5. Finger A, Kuhr S, Engelhardt UH. Chromatography of tea constituents. *J Chromatogr* 1992;624(1-2):293-315.
6. Rogers PJ, Deroncourt C. Regular caffeine consumption: a balance of adverse and beneficial effects for mood and psychomotor performance. *Pharmacol Biochem Behav* 1998;59:1039-1045.
7. Smith A. Effects of caffeine on human behaviour. *Food Chem Toxicol* 2002;40:1234-1255.
8. Juneja LR, Chu DC, Okubo T, Nagato Y, Yokogoshi H. L-theanine: A unique amino acid of green tea and its relaxation effect in humans. *Trends in Food Sci Technol* 1999;10:199-204.
9. Nobre AC, Rao AR, Owen GN. L-theanine, a natural constituent in tea, and its effect on mental state. *Asia Pac J Clin Nutr* 2008;17:167-168.
10. Gomez-Ramirez M, Higgins BA, Rycroft JA, Owen GN, Mahoney J, Shpaner M, Foxe JJ. The deployment of intersensory selective attention: a high-density electrical mapping study of the effects of theanine. *Clin Neuropharmacol* 2007;30:25-38.
11. Gomez-Ramirez M, Kelly SP, Montesi JL, Foxe JJ. The effects of L-theanine on alpha-band oscillatory brain activity during a visuo-spatial attention task. *Brain Topogr.* 2009 Jun;22(1): 44-51. Epub 2008 Oct 9.
12. De Bruin EA et al. Submitted 2009.

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