Energy & Focus features ingredients selected for their role in promoting energy, alertness, and enjoyment whether support is needed in the classroom, the gym, or the work world. Theacrine promotes mental and physical energy, stamina, focus, and motivation; taurine calms the sympathetic nervous system and may moderate the effect of caffeine; and Purenergy supports sustained energy levels and alertness.*

All Formulas Meet or Exceed cGMP Quality Standards

Clinical Applications
- Promotes Mental and Physical Energy and Motivation to Exercise*
- Promotes Concentration and Focus*
- Supports Sustained Energy Level and Alertness*
- Provides an Alternative to Ordinary Caffeine*

Discussion

Energy & Focus is an alternative for individuals seeking support for sustained energy, alertness, and motivation but commonly turn to caffeine, a widely consumed central nervous system stimulant. In small quantities, caffeine may boost energy, alertness, and even athletic performance; however, larger amounts of caffeine can cause jitters and even more serious problems, such as arrhythmias and changes in blood pressure.\(^7\) Energy & Focus contains less caffeine than an average cup of coffee and is combined with a targeted blend of key ingredients designed to promote lasting mental and physical energy and fuel motivation without the undesirable effects of ordinary caffeine.*

PURENERGY™
Purenergy is an innovative patent-protected ingredient that combines caffeine with pTeroPure® pterostilbene—a highly bioavailable analog of resveratrol—to form a unique cocrystal structure. Initial reports suggest that the caffeine in Purenergy may be absorbed more slowly and stay in the body longer than regular caffeine, which may help sustain energy longer. In a preliminary four-week, single-blind, crossover human study (n = 12) that compared 232 mg of Purenergy (providing 99.76 mg of caffeine) to 100 mg of ordinary caffeine, the absorption of caffeine from Purenergy was approximately 30% slower and Purenergy delivered 30% more caffeine to the bloodstream. Furthermore, at six hours, 51% more caffeine from Purenergy was detected in serum compared to ordinary caffeine.\(^8\) These data point to a potential for reducing total caffeine intake. Additionally, the extended half-life and slower absorption rate of caffeine from Purenergy may produce a more moderated and gradual finish, thereby preventing the “crash” associated with regular caffeine containing energy products. While the results of these studies are promising, larger studies are needed to validate the findings and determine if these findings translate into a lengthened energy effect.*

Taurine
Taurine is a cysteine-derived amino acid that is synthesized in the body and has various functions. It is a major constituent of bile. Studies suggest it is cardioprotective, and it seems to prevent exercise-induced oxidative stress.\(^6,4,6\) Although clinical studies evaluating its effects are limited, taurine appears to inhibit the potential adverse effects of caffeine. In a double-blind study in college students (N = 14) that investigated the combined effects of the co-administration of caffeine and taurine, researchers observed no effect on short-term memory but did observe a significant decline in heart rate and an increase in mean arterial blood pressure.\(^7\) Another study explored the impact of an energy drink containing caffeine and taurine on myocardial contractility in healthy volunteers (N = 32) using cardiac magnetic resonance-based strain analysis. Peak systolic strain was measured at baseline and one hour after consumption of the energy drink; later, a subset (n = 10) consumed a caffeine-only drink. While the caffeine-only drink did not seem to produce any significant cardiovascular effects, individuals who consumed the drink with caffeine and taurine registered a significant increase in peak systolic strain.\(^8\) Additionally, a review of the literature on the effect that taurine and caffeine have on cardiovascular function concluded that taurine can neutralize several untoward effects of caffeine excess.*

TeaCrine® (Theacrine)
Theacrine is a purine alkaloid found in certain coffee and tea species. Its chemical structure is similar to caffeine, yet it has very different physiological effects. Both caffeine and theacrine inhibit adenosine activity via the A1 and A2A receptors, but caffeine is known to act as an orthosteric inhibitor whereas theacrine is likely to act as an indirect, allosteric modulator of these receptors and contribute to differences in habituation. Inhibitory action of the adenosine receptors plays a role in the biochemical processes that prevent fatigue. Additionally, theacrine is a dopamine D1 and D2 receptor agonist, and its actions help increase dopamine signaling associated with attention, movement, task initiation and completion, mood, learning, and the brain’s “reward center.”

Whereas caffeine habituation typically occurs within as few as five days of consumption, a significant attribute of theacrine is the lack of habituation or tachyphylaxis (decrease in response). Following an eight-week study with subjects (N = 60) receiving either 200 mg or 300 mg of TeaCrine or placebo, participants demonstrated no signs of the rapid tachyphylaxis typically associated with caffeine and other stimulants. Baseline values for energy, focus, concentration, anxiety, motivation to exercise, and a Profile of Mood States (POMS) questionnaire remained stable across the entire eight-week study period. Additionally, all values for clinical safety markers were within normal limits.\(^8\)
### References


