# **Rapid Mental Energy**

RAPID-ACTING WORKING MEMORY SUPPORT (IN AS LITTLE AS ONE HOUR)\*

Rapid Mental Energy combines two clinically studied extracts, Alpinia galagna (enXtra) and American ginseng (Cereboost®), to support alertness and sharpen working memory.<sup>1-5</sup> While enXtra supports alertness, Cereboost<sup>®</sup> provides fast-acting support for acute visuospatial and verbal short-term (working) memory.1-5\*



Sharpens working memory



Supports cognitive performance



Supports alertness

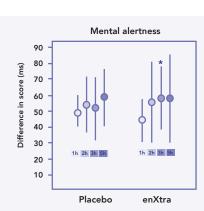
### WHO IS THIS SUPPLEMENT FOR?

- Patients seeking as-needed support for working memory<sup>\*</sup>
- Patients seeking a non-stimulant option to support alertness that is not known to interfere with sleep
- Coffee drinkers who need extra support for alertness that's safe to take with caffeine<sup>‡</sup>

#### **RESEARCH HIGHLIGHTS<sup>‡</sup>**

#### enXtra enhances alertness.

In a randomized, double-blind, placebo-controlled crossover study of 59 participants, a single 300 mg dose of enXtra (Alpinia galanga extract) increased mental alertness scores from baseline over a 5-hour period (all p<0.5 compared to baseline; Figure 1). Mental alertness was significantly greater in the enXtra group compared to placebo (p=0.04) at 3 hours post-dose (Figure 2). enXtra had no impact on heart rate or sleep (data not shown).1\*



Stimulant free

with caffeine

and not known to

interfere with sleep<sup>4</sup>

Can be used in combination

Figure 1. Effects of enXtra (Alphinia galanga) on mental alertness scores 3 h after a single 300 mg dose in healthy subjects. \*p=0.04 compared to placebo.

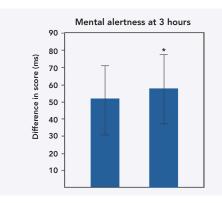


Figure 2. Effect of enXtra (Alpinia galanga) on mental alertness scores 3 h after a single 300 mg dose in healthy subjects. \*p=0.04 compared to placebo.

\*This statement has not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.





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Energy

**Dietary** Supplement 30 CAPSULES

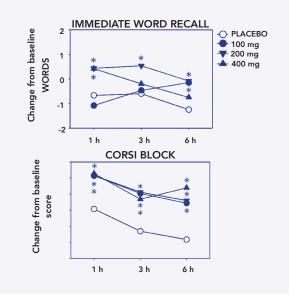
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#### Cereboost® supports short-term working memory.\*

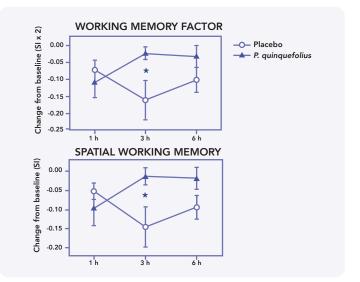
In a randomized, double-blind placebo controlled crossover trial, 52 healthy middle-aged volunteers (40-60 years old) were randomized to receive a single dose of 200 mg Cereboost<sup>®</sup> or placebo. Memory was assessed at baseline and at 1, 3 and 6 hours post-dose using the Cognitive Drug Research battery and the Computerized Mental Performance Assessment System. Cereboost<sup>®</sup> enhanced mean working memory scores at 3 hours compared to placebo (p=0.022) with a trend towards improvement at 6 hours (p = 0.058). Cereboost<sup>®</sup> also significantly enhanced spatial short-term working memory at 3 hours (Figure 3).<sup>21</sup>

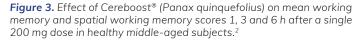


**Figure 4.** Effects of Cereboost<sup>®</sup> on cognitive function. Significant differences from placebo are shown (\*p<0.05). Data represent mean change-from-baseline scores following 100, 200 and 400 mg.<sup>3</sup>

## Cereboost<sup>®</sup> supports attention network test (ANT) performance.<sup>+</sup>

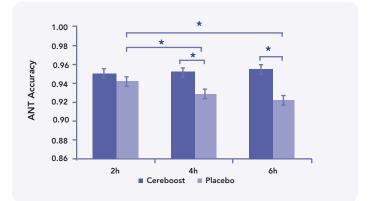
In a randomized controlled trial of 59 subjects, a single 200 mg dose of Cereboost® improved attention network test performance, which reflects the ability to direct mental resources to a specific task (Figure 5).<sup>‡</sup>





### Cereboost<sup>®</sup> supports short-term verbal recall and spatial memory within 1 hour, and up to 6 hours after a single dose.<sup>‡</sup>

In a randomized, double-blind, placebo-controlled, crossover trial, 32 healthy, young adult volunteers received a single dose of Cereboost® or placebo. Memory was assessed at baseline and at 1, 3 and 6 hours post-dose. Cereboost® (200 mg) improved working memory (immediate word recall) and visuo-spatial information retrieval (Corsi block score) at 1 hour post-dose. These memory improvements were sustained over a 6 hour testing period (Figure 4).<sup>3+</sup>



**Figure 5.** Effect of a single dose of Cereboost<sup>®</sup> on attention network (ANT) accuracy over a 6 hour testing period. Significant differences are noted (p<0.05).<sup>4</sup>

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### **MECHANISMS OF ACTION**

Preliminary data suggest that some of the phytoconstituents of Alpinia galagna may interact with acetylcholinesterase, the enzyme that degrades acetylcholine, but more research is needed.

Preliminary data suggest that the ginsenosides in Cereboost<sup>®</sup> support cholinergic (acetylcholine-mediated) neurotransmission in the hippocampus and prefrontal cortex, key brain regions involved in learning and memory (Figure 6).5+

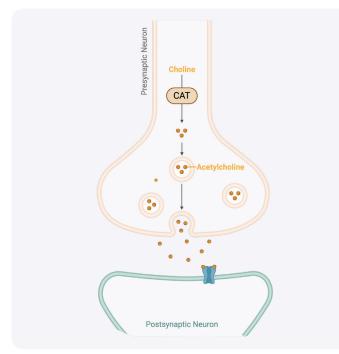


Image created with BioRender.com

Figure 6. While the mechanism of action is unclear, preliminary data suggests that Cereboost® may enhance cholinergic (acetylcholinemediated) neurotransmission by supporting choline acetyltransferase (CAT), the enzyme that synthesizes acetylcholine.

Help your patients overcome a lack of focus and power through the midday slump with Rapid Mental Energy. This formula delivers two clinically studied extracts, Alpinia galanga and American ginseng, to support alertness, cognitive performance and sharpen working memory without known impacts on sleep.‡



Supplement Fact	S
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1 capsule as needed, with or between meals.		
One (size 00) capsule contains:		
enXtra greater galangal	300 mg	
(Alpinia galanga) extract (rhizome)		
Cereboost® American ginseng	200 mg	
(Panax quinquefolius L.) extract (root)		
(standardized to contain 10% ginsenosides)		
Ginkgo (Ginkgo biloba) extract (leaf)	80 mg	
(standardized to contain 24% ginkgoheterosides		
and 6% terpene lactones)		
Other ingredients: vegetarian capsule (cellulose, water),		
hypoallergenic plant fiber (cellulose), hydroxypropyl cellulose		
Cereboost® is used under license from Givaudan Flavors Corporation.		

enXtra is a licensed trademark of OmniActive Health Technologies Ltd.



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#### REFERENCES

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- Skobleva d, Malnehad M, Mayage K, et al. Human Psychopharmacol. 2015;30(2):108-122. Scholey A, Ossoukhova A, Oven L, et al. Psychopharmacology. 2010;212(3):345–356. Bell L, Whyte A, Duysburgh C, et al. Eur J Nutr. 2022 Feb;61(1):413-428. 2
- 4.
- 5 Shin K, Guo H, Cha Y, et al. Regul Toxicol Pharmacol. 2016 Jul;78:53-8.

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