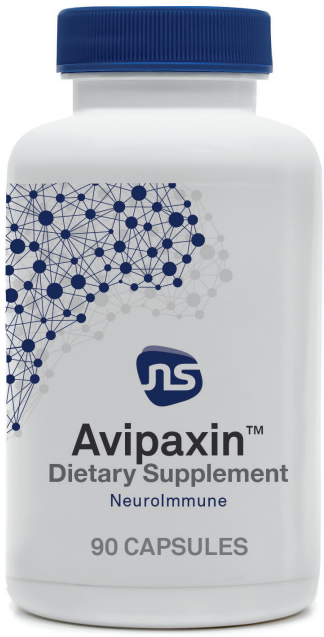
NeuroScience®



Avipaxin

Studied blend of ingredients proven to reduce pro-inflammatory cytokine activity and promote mental acuity*

Key Ingredients

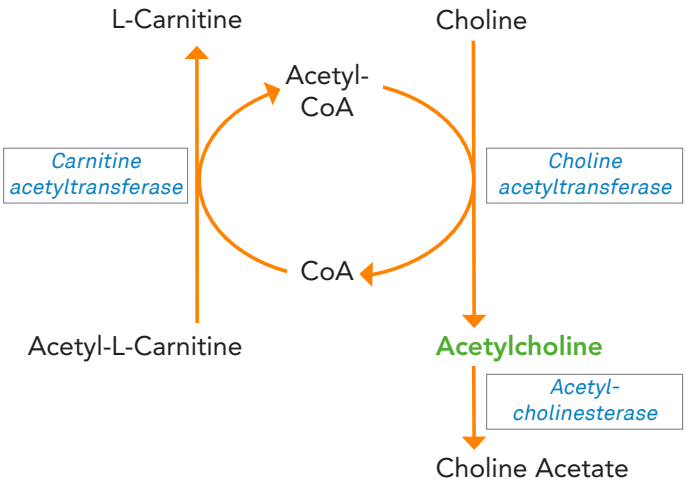
Acetyl-L-carnitine (ALC)	■ Provides an acetyl group required for **acetylcholine synthesis**[1]* ■ Derivative of L-carnitine shown to increase plasma and brain levels of L-carnitine[2,3]* ■ L-carnitine facilitates energy production in the mitochondria and provides antioxidant protection by scavenging reactive oxygen species and metal ions[3-5]*
Alpha-glyceryl-phosphoryl-choline (AGPC)	■ Choline donor and **precursor to acetylcholine**[6,7]* ■ A randomized, double-blind, placebo-controlled study found that alpha-GPC **improved cognitive scores** as measured by multiple standards[8]
Huperzia serrata (standardized to 1% huperzine A)	■ Acetylcholinesterase breaks down acetylcholine in the synapse[4] ■ Huperzine A is a potent and selective **acetylcholinesterase (AChE) inhibitor** which helps to decrease acetylcholine breakdown[9]* ■ A randomized, double-blind, placebo-controlled study found that huperzine A **significantly improved mini-mental status exam (MMSE) scoring**[10]*

The Science

- Acetylcholine is a neurotransmitter found throughout the peripheral and central nervous systems known for its importance in **attention**, **learning**, and **memory**[11]
- Acetylcholine released by the vagus nerve is essential to immune health due to its ability to **downregulate cytokine expression** in the spleen, liver, and gastrointestinal tract[12]

Acetylcholine Pathway

Green = Biomarker
Blue = Enzyme



*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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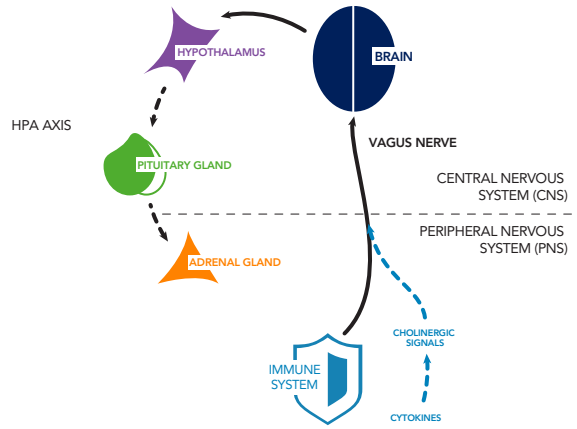
MORE SCIENCE BEHIND AVIPAXIN

Figure 1. Cholinergic Signaling



Connecting the brain and immune system

In the central nervous system, cholinergic signaling is involved in many critical processes[11]

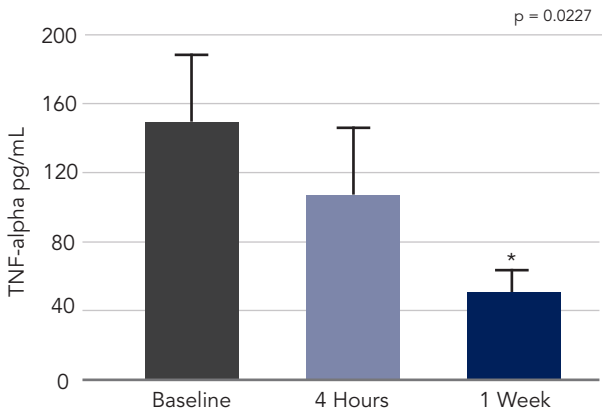
- These include mental acuteness through aspects like attention, learning, memory, and the stress response[11]
- Additionally, acetylcholine is vital for immune health and regulation[12]

Cholinergic signaling from the vagus nerve facilitates communication between the brain and immune system[12]

- Afferent vagal nerve fibers detect cytokines in the periphery and signal to the central nervous system about immune activation[12]
- Integration of vagal signals in the brain activates the HPA axis, completing the communication loop between the PNS and CNS[3]

Avipaxin contains precursors ALC and AGPC along with *Huperzia serrata* to support acetylcholine and balance the immune system[1-7]*

Figure 2. Avipaxin Lowers TNF-Alpha Levels*



Impactful results in pre-clinical trials

Avipaxin supports immune function by decreasing six pro-inflammatory markers[13]*

- In a controlled pre-clinical trial, Avipaxin was tested in eleven healthy subjects for immune function and cognitive support[13]*
- Significant decreases were seen for six major pro-inflammatory markers, including TNF-alpha (Figure 2.)[13]*

Pre-clinical trial participants reported improved mental acuity with Avipaxin[13]*

- Subjects of the pre-clinical trial reported feeling more clear-headed, more focused, and waking refreshed and alert[13]*

Avipaxin has been shown in a pre-clinical trial to support both immune function and mental acuity[13]*

NeuroScience®

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20040	90 Capsules	3 Capsules

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All NeuroScience products undergo rigorous third-party testing to guarantee label claims of each ingredient and the absence of heavy metals, pesticides, residual solvents, and microbes

1. White H and Scates P. Neurochem Res. 1990;15(6):597-601.
2. Parnetti L, et al. Eur J Clin Pharmacol. 1992;42(1):89-93.
3. Rebouche C. Ann N Y Acad Sci. 2004;1033:30-41.
4. Pekala J, et al. Curr Drug Metab. 2011;12(7):667-78.
5. Gulcin I. Life Sci. 2006;78(8):803-11.
6. Wallace J, et al. Br J Nutr. 2012;108(7):1264-71.
7. Ueland P. J Inherit Metab Dis. 2011;34(1):3-15.
8. De Jesus Moreno Moreno. Clin Ther. 2003;25(1):178-93.
9. Tun M and Herzon S. J Exp Pharmacol. 2012;4:113-23.
10. Xu Z, et al. Cell Biochem Biophys. 2012;62(1):55-8.
11. Ferreira-Vieira T, et al. Curr Neuropharmacol. 2016;14(1):101-15.
12. Tracey K. Nat Rev Immunol. 2009;9(6):418-28.
13. Data on File. 2009. NeuroScience, Osceola, WI 54020.

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