**Glutamine**
Precursor for the calming neurotransmitter GABA (gamma-aminobutyric acid) that affects mood, focus and hyperactivity; Disruption of the glutamine-containing neurotransmission systems may cause ADHD.\(^{21,22,23}\)

**Choline**
Precursor to neurotransmitter acetylcholine, which regulates memory focus and muscle control (hyperactivity).\(^{24,25,26}\)

**Folate**
Low folate status in pregnancy linked to hyperactivity in children; People with the MTHFR (methyl tetrahydrofolate reductase) gene are predisposed to folate deficiency and more likely to have ADHD.\(^{1,2}\)

**Antioxidant Status**
Oxidative imbalance is prevalent in ADHD patients and likely plays a causative role; Deficiency of glutathione common in ADHD.\(^{3,4,5,6}\)

**Vitamin B6**
Evidence suggests high dose supplementation of B6 is as effective as Ritalin for ADHD, probably due to its role in raising serotonin levels.\(^{7,8,9}\)

**Magnesium**
Deficiency linked to poor function of the neurotransmitters that control emotion, social reactions, hyperactivity and attention; Synergistic effect with Vitamin B6.\(^{8,9,10}\)

**Zinc**
Cofactor for dopamine synthesis which affects mood and concentration in ADHD; Low zinc depresses both melatonin and serotonin production which affect information processing and behavior in ADHD.\(^{11,12,13,14}\)

**Serine**
Administration of phosphatidylserine with omega 3 fatty acids improved ADHD symptoms (attention scores) significantly better than omega 3 fatty acids alone, suggesting a synergistic effect; Phosphatidylserine increases dopamine levels.\(^{18,19,20}\)

**Carnitine**
Reduces hyperactivity and improves social behavior in people with ADHD due to its role in fatty acid metabolism; Some consider it a safe alternative to stimulant drugs.\(^{15,16,17}\)

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REFERENCES


Additional references at http://www.spectrancell.com/online-library-mnt-adhd-abstracts/