

# ANXIETY

## Carnitine

Studies show that carnitine can reduce anxiety and improve feelings of well being.<sup>28,29</sup>

## Chromium

Its effect on serotonin transmission may explain its anxiolytic (anxiety relieving) effect in animal studies.<sup>30,31</sup>

## Folate

Aids in production of neurotransmitters such as dopamine and serotonin, which have a calming effect on mood.<sup>19,32,33</sup>

## Inositol

A neurochemical messenger in the brain, inositol (vitamin B8) affects dopamine and serotonin receptors; Trials confirm it is very effective in reducing panic attacks.<sup>1,2</sup>

## Choline

Precursor to the neurotransmitter acetylcholine, which affects focus and mood; Low levels of choline linked to anxiety.<sup>3,4</sup>

## Vitamins D and E

Low vitamin D status is linked to anxiety; Animal studies confirm the role of vitamins D and E in reducing anxiety-related behavior.<sup>24,25,26,27</sup>

## Serine

Exerts a calming effect by buffering the adrenal response to physical or emotional stress; Lowered anxiety scores of patients with post traumatic stress disorder.<sup>5,6,7</sup>

## Vitamin B3

One of the symptoms of severe B3 deficiency (pellagra) is anxiety; Pharmacological doses of B3 may enhance the calming effects of GABA in the brain; Converts tryptophan to serotonin.<sup>19,22,23</sup>

## Copper

Integral part of certain chemicals in the brain (such as endorphins) that calm anxious feelings; Anxiety-like behavior may be exacerbated with copper deficiency.<sup>8,9,10</sup>

## Vitamin B6

Cofactor in synthesis of calming neurotransmitters such as GABA (gamma-aminobutyric acid), serotonin and dopamine.<sup>19,20,21</sup>

## Selenium

Repletion of selenium to normal levels reduced anxiety scores in clinical trials; Some suggest the mechanism of action is due to its role in key regulatory proteins (selenoproteins).<sup>14,15</sup>

## Magnesium

Regulates the HPA (hypothalamic-pituitary adrenal) axis which controls physical and psychological reactions to stress; Deficiency can induce anxiety and emotional hyper-reactivity.<sup>11,12,13</sup>

## Zinc

Reduces anxiety in clinical trials, possibly due to its interaction with NMDA (N-methyl-D- aspartate) receptors in the brain which regulate mood.<sup>16,17,18</sup>

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