

## **Oral treatment with L-lysine and L-arginine reduces anxiety and basal cortisol levels in healthy humans.**

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Dietary supplementation with an essential amino acid L-lysine has been shown to reduce chronic anxiety in humans with low dietary intake of L-lysine. A combination of L-lysine and L-arginine has been documented to normalize hormonal stress responses in humans with high trait anxiety. The present study was carried out in one hundred eight healthy Japanese adults. The aim of study was to find out whether a week-long oral treatment with L-lysine (2.64 g per day) and L-arginine (2.64 g per day) reduces trait and stress-induced state anxiety and basal levels of stress hormones. We confirmed that, without regard to gender, the amino acid treatment significantly reduced both trait anxiety and state anxiety induced by cognitive stress battery. In addition, we found that the treatment with L-lysine and L-arginine decreased the basal levels of salivary cortisol and chromogranin-A (a salivary marker of the sympatho-adrenal system) in male subjects. These results of this double-blind, placebo controlled and randomized study confirm the previous findings in humans and animals and point to a combination of L-lysine and L-arginine as a potentially useful dietary intervention in otherwise healthy humans with high subjective levels of mental stress and anxiety.

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