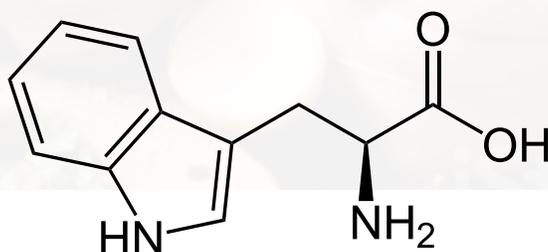


TRYPTOPHAN

L-Tryptophan is an essential amino acid which means it must be mainly acquired by dietary means. Because of the lack of available proteins and tryptophan containing foods in developing countries, many adverse effects can be observed from lack of tryptophan and lysine consumption, such as depression, sleep disorders, the inability to fight off disease, and irritability. Many programs have been dedicated to making sure that there are sufficient dietary requirements met for these compounds in food stuffs in developing countries to help the next generation of humans develop in a healthy way.



Biological Activity

- L-Tryptophan has been used to treat depression, insomnia, anxiety, sedative as well as many ailments.
- L-Tryptophan and its metabolite 5-Hydroxytryptophan are precursors to serotonin which is further metabolized to melatonin.
- 5-Hydroxytryptophan is directly converted to serotonin and can cross the blood-brain barrier making it a more effective version of the essential amino acid.

Fast Facts

- Proteins such as chicken, beef, lamb, and fish are the main source of L-Tryptophan for humans, although some seeds contain more L-tryptophan on a weight-basis¹.
- Kwashiorkor disease is a result of malnutrition in children where not many food options (proteins) are available, like in some parts of Central America where lime-treated corn is a food staple and lacks the essential amino acids Tryptophan and Lysine².

Ordering Information

Check out ChromaDex's best-selling chemical reference standards in the Tryptophan chemical family.

Name	Grade	CAS	Part Number
L-Tryptophan	P	73-22-3	00020541
DL-Tryptophan	P	54-12-6	00020521
5-Hydroxytryptophan	P	4350-09-8	00008726

References

1. <https://www.myfooddata.com/articles/high-tryptophan-foods.php> powered by <https://fdc.nal.usda.gov/>
2. Friedman, Mendel. "Analysis, Nutrition, and Health Benefits of Tryptophan." *International journal of tryptophan research : IJTR* vol. 11 1178646918802282. 26 Sep. 2018. doi:10.1177/1178646918802282
3. Allen, Jeffrey A et al. "Post-epidemic eosinophilia-myalgia syndrome associated with L-tryptophan." *Arthritis and rheumatism* vol. 63,11 (2011): 3633-9. doi:10.1002/art.30514

