

What is Tryptophan?

Tryptophan is a natural food substance. It is an amino acid. Amino acids are the building blocks of all proteins and there are 20 different amino acids. It is a component of protein it is found in eggs, fish, meat, milk, cheese etc.

Did You Know?

There are certain food substances that are particularly rich in Tryptophan (turkey and tuna) Occasionally, people will describe having sleepiness after having a tuna sandwich. This may be because of the high amounts of Tryptophan contained in the tuna.

How Does It Get Into The System?

Tryptophan is absorbed into the body and enters into the blood stream. In the normal situation, when one is eating a mixed diet, the amount of Tryptophan that enters into the body is limited by the fact that there are many other amino acids competing to gain entry to the body. In the situation where one takes Tryptophan on its own, the entry into the body is unchallenged and therefore large amounts of Tryptophan enter the circulation.

It has been shown that tryptophan gains easier access to the body if it is taken simultaneously with carbohydrate. The table below gives some suggestions about foods that should and should not be taken with tryptophan :

	DO'S	DON'TS
 BREADS	Bagels, multigrain, whole wheat etc	Nutbread, seed-topped breads
 SANDWICHES	Tomato and lettuce, guacamole, peppers, all vegetables	Peanut butter, chopped egg, tuna, cheese, meats
 COOKIES	Oatmeal, bran, fig, tea biscuits	Peanut butter
 PASTAS	Primavera, tomato sauce	Cream, meat, cheese sauces
 FRUITS & VEGETABLES	All good choices, especially cooked cranberries, rhubarb, corn	
 FRUIT DESSERTS	Apple crisp, peach crumble, rhubarb pie	
 BEVERAGES	Any fruit juice	milk

What Does It Do?

Once tryptophan is taken into the body, it is converted in a series of chemical steps, first to serotonin, a chemical that is involved in many processes in the body including sleep, temperature control and mood. The next step in the pathway of tryptophan metabolism takes Serotonin to Melatonin. Melatonin is a hormone made in the brain, which has a profound impact on the body clock. For more information on melatonin please see the leaflet titled "Circadian rhythms"

It is used for two main purposes; the first is as a sleep promoting agent. The second purpose is as a augmenting agent for antidepressant treatments. Occasionally tryptophan is observed to have antidepressant effects on its own. However, it can in combination with recognized antidepressants, produce an effect where the antidepressant on its own did not produce an effect.

How Much Should Be Taken?

Tryptophan can be used at a very wide range of dosages. It is important to think of it as a food substance more than a medicine. Because it is a food substance, one uses high dosages ranging from 750mg to a usual maximum of 12g. (12000 mg) When used as an adjunct to an antidepressant, typical doses would be 2g-4g. When used as a sleep aid some individuals might find two tablets effective but many would find that they would need 5-6 tablets to get a beneficial effect.

Does The Duration Of Use Make A Difference?

There is some evidence that when used as a sleeping aid the longer the duration of use, the better the effect. For this reason, it can be prescribed in the following way:

In the first two weeks, one might take one tablet, for the next two weeks 2 tablets, for the next two weeks 3 tablets, and continue taking 1 extra tablet every two weeks up to 6 tablets.

If one finds that in weeks 10 (on 5 tablets) the Tryptophan becomes effective in promoting sleep, then it is useful to consider whether or not it was the 5 tablets that was the basis of the success of the treatment or if it simply that 10 weeks had elapsed since the start of the use of the Tryptophan. It would therefore make sense in the following two weeks to cut back the Tryptophan and this would mean that the amount of Tryptophan would be two week by two week, one tablet, two tablets, three tablets, four tablets, five tablets, then four tablets again. If the dosage is still sedating, one can conclude that it was four tablets for a period of ten weeks which produced the effect. It would then be reasonable to cut back to three tablets to see if that too would be effective and if one finds that the effects of sleep promotion is lost then one would leave the dose finally at a point of four tablets.

In general terms, it is thought that the pattern of establishing a sleep rhythm may be related to the association of food intake and subsequent sleep.

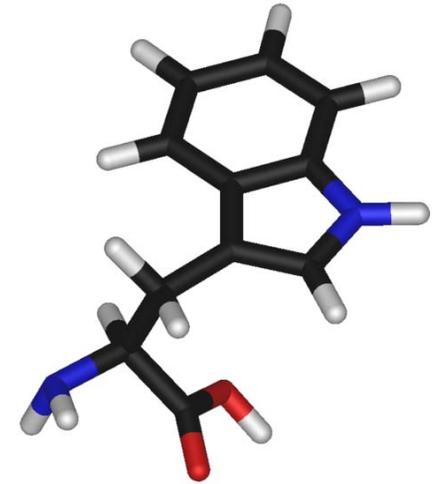
Important Points About Taking Tryptophan:

- Avoid taking this medication with meals or snacks that contain protein such as milk, cheese, peanut butter and meat.
- Tryptophan should be taken 45 minutes before bedtime
- To make the most of tryptophan therapy boost the effect with a carbohydrate-rich snack of cookies and juice
- One of the most appealing aspects of Tryptophan as a sleep promoting agent is that it is not a true medication in the usual sense of the word and for many it has the appeal of being a natural substance. The fact that it is a food agent is also attractive and particularly when considering the use of sleep promoting agents in children has particular appeal where standard hypnotics are often not recommended although maybe appropriate in particular circumstances.

What Are The Side Effects of Taking Tryptophan?

- Unlike most drugs Tryptophan does not have any side effects. In some individuals taking large amounts, there may be nausea but one might think of the nausea in the same way as one might be nauseous from eating four or five slabs of chocolate.
- Since vitamin B6 is required for the conversion of tryptophan to serotonin, in people who are B6 deficient, tryptophan may be rapidly degraded into mildly toxic metabolites; therefore, the brain typically receives less than 1% of ingested tryptophan.

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Youthdale
Child and
Adolescent
Sleep Centre

The Youthdale Child and
Adolescent Sleep Centre

227 Victoria St., Toronto, ON M5B 1T8

Tel: 416 703-0505

Fax: 416 703-0507