

Turkey and Tryptophan: A Tired Myth

By: Ben Johnson

It's an hour after a long Thanksgiving dinner and the family is spread out on every available couch and chair in the room. They're loosening their belts and trying, most without success, to keep their eyes open and their minds from drifting off into blissful slumber. Then Uncle Marty, you know the one, Uncle Marty with all those war stories, says the same thing he says every year at this time: "It's that tryptophan. Turkey's full of it. Makes you tired."

You've probably heard something similar at your own Thanksgiving family dinner. Or any other time you're eating turkey with someone who thinks they know a fun fact about post-meal drowsiness. You may have even repeated that same old, tired line yourself. But is it really the case?

Is tryptophan really the cause of that after-turkey stupor? Well it's about time you woke up to the truth.

WHAT IS IT, REALLY?

Tryptophan is considered to be one of the eight essential amino acids. This means that it is an amino acid your body needs but cannot produce directly. Therefore, in order to maintain a healthy diet, you have to eat foods that contain tryptophan. Doesn't seem so bad now, does it?

Before we go on, it's important to know that, in a way Uncle Marty was right about tryptophan. It does make you tired. However, turkey contains the same amount of tryptophan as any other poultry meat, about 0.24 grams per gram of food. In contrast,

beef contains just about the same amount (0.23 grams of tryptophan per gram of food), and pork chops contain more (0.25 grams per gram of food). Though you generally don't eat as much of them at one time, if you're really worried about getting tired you should avoid eating sunflower seeds (0.30 grams per gram of food) and Parmesan cheese (a whopping 0.56 grams of tryptophan per gram of food).

SO WHY THOSE ZZZs?

So if a turkey dinner has about the same amount of tryptophan in it as any other family meal, what is it exactly about a Thanksgiving one that makes us all want to call it a night immediately afterwards? Well, our sleepiness is caused by three factors.

1. We like to eat – and we like to eat a lot. Who can blame us? It's Thanksgiving and we're assaulted by good food on all sides. It turns out that all this eating makes us tired.
2. We also like to drink. We're surrounded by good company and a beer or two (or ten or more depending on your family) is the perfect complement to all that food. It turns out that all this drinking makes us tired.
3. When we're eating and drinking, we consume a lot of carbohydrates. It turns out that carbohydrates have a peculiar effect on tryptophan (remember tryptophan?). Carbohydrates cause other amino acids in the bloodstream to be absorbed into the muscle, leaving behind a greater ratio of tryptophan. Guess what? This makes us tired.

It isn't so much the amount of tryptophan in turkey that is making us drowsy as it is everything else we're consuming at the same time. So the next time Uncle Marty opens his mouth to "talk turkey," just tell him to talk less and eat more.

Bibliography:

1. Hartman E. Effects of L-tryptophan on sleepiness and on sleep. J Psychiatr Res, 1983
2. Wyatt RJ, et al. *Effects of L-tryptophan (a natural sedative) on human sleep* Lancet. 1970
3. <http://www.vitamins-supplements.org/amino-acids/tryptophan.php> 2006 Vitamin Supplements Guide (Accessed 2008)