

No more turkey trash talk

26 November 2013, by Melissa Wdowik

Turkeys are heading to tables around the country for traditional holiday meals and countless leftovers, and its reputation as a sleep inducer gives many an excuse to nap rather than wash dishes or toss around a football. But turkey is not really to blame, and it's time to set the record straight.

Turkey is a good source of high quality [protein](#), with seven grams of protein per ounce, putting it in the same league as chicken, beef, pork, fish and eggs. Protein provides the body with the amino acids (protein building blocks) it needs for muscle and tissue repair, the immune system, and other body functions. One of the many amino acids in turkey and other meats is L-tryptophan, the one with the reputation for sleepiness.

The story begins with the digestion of turkey and continues as tryptophan and other amino acids leave the gut to travel in the bloodstream to the brain. Tryptophan alone would increase brain levels of serotonin, a [brain chemical](#) that regulates mood. Tryptophan, however, does not appear alone in food and is joined by other amino acids. These other [amino acids](#) compete with tryptophan to enter the brain. The plot twist is the appearance of carbohydrates in the meal. When you eat carbohydrates, your body produces insulin, which drives amino acid uptake into the brain. Here the tryptophan is used to make serotonin, whose high levels lead to feeling calm, relaxed, and even drowsy. But don't bash the turkey; it would not make you sleepy without the presence of carbohydrate-rich potatoes, stuffing, and rolls.

Other reasons for holiday fatigue could be less sleep at night, more alcohol, and a general feeling of relaxation. Additionally, a "food coma" may be induced by the large quantity of food eaten at holiday celebrations: protein and fat loading of the stomach along with stretching the small intestine cause drowsiness, and more blood going to the digestive tract instead of to the [brain](#) or muscles means less inclination to be alert and moving. Scientists call this "rest and digest," a feeling

conducive to sleep that is the opposite of the better known "fight or flight" response.

So enjoy your turkey, whose healthful protein, vitamins and minerals balance out an otherwise sleep-inducing overload of carbohydrate-rich foods. Enjoy those carbs in smaller portions and go easy on the desserts and festive beverages. With this approach you may get to wash the dishes and play football without needing a nap.

Provided by Colorado State University

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