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Gobbling up the evidence for turkey dinner

CLINICAL QUESTION

What is the evidence surrounding turkey in a holiday meal?

BOTTOM LINE

We could find no reliable evidence around sedation from a holiday meal of turkey. It is unclear if tryptophan changes sleep at all, but according to flawed research, it would take ~1 pound of turkey to reduce time awake after falling asleep by 1 minute. Really, at this point, evidence is inadequate to say whether there is enough tryptophan in a turkey to make a turkey tired.

EVIDENCE

- Why are some people tired after a holiday turkey meal?
 - No Randomized Controlled Trials (RCTs): Many potential variables including overeating, alcohol consumption, kids waking early, and the rewards/challenges of family gatherings (you know what we mean...).
- Does eating turkey cause sedation/sleepiness?
 - No RCTs comparing turkey to ham or other protein: research money has been spent on worse questions (see example below).
- Does tryptophan cause sedation/sleepiness?

- Systematic review, 18 RCTs in adults.¹ Tryptophan doses 0.25-15g 20-30 minutes before bedtime. After 5.5 days:
 - No effect on total sleep time, time to fall asleep, or time asleep while in bed
 - Not dose dependent.
 - Tryptophan decreased time awake after falling asleep by 1.08 minutes.
 - Unreliable: Meta-analyses and interpretation of statistics issues.
 - Example decreased time awake after falling asleep also reported correlation statistic as 81 minutes/gram of tryptophan: that means 20+ hours less time awake/night for 15g dose.
 - Tryptophan content in turkey: 287mg per 100g.²
 - If above authors primary findings/interpretation were real,¹ a one pound serving of turkey might improve sleep by 0-1minute.
- What is the best method to close a stuffed turkey?
 - Veterinarians, with spare-time, made large incisions (neck-to-tail) in 15 turkeys for deboning/stuffing, then randomized to repair with sutures or staples.³ Three “cooking experts” rated the appearance score, post-cooking and suture/staple removal (range 1-5, higher=better): staples: 4.6, sutures 1.3-2.3.
 - Unclear if authors aware of existing body cavity for stuffing a store-bought turkey: perhaps why they needed “cooking experts” to evaluate outcomes.

CONTEXT

- Spending time with in-laws over the holidays, as compared to your own family, alters gut microbiota: specifically a reduction in *Ruminococcaceae* bacterium, associated with stress and depression.⁴
- During holidays, mean weight gain ~1-2pounds.⁵
 - Potential weight gain does not appear to deter future holiday celebrations.⁶
- Time needed to cook turkey dinner: 3+ hours. Time to order pizza: ~30 minutes.

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No turkeys responded to request for comment, except the turkeys who wrote this TFP.

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