Inconsistent MAOI Dietary Guidance From Major AI Chatbots:

A Brief Clinical Evaluation

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Monoamine oxidase inhibitors (MAOIs) remain highly effective yet underutilized for treatment-resistant depression due to limited clinician familiarity and exaggerated concerns regarding dietary restrictions.[1–3] Contemporary evidence supports updated and less restrictive dietary guidance than historical recommendations, however discrepant prohibited food lists persist in medical literature.[3,4] Artificial intelligence could potentially provide updated dietary recommendations for MAOI users, but AI systems may produce clinically unsafe omissions or outdated advice. This study assesses whether major chatbots generate dietary recommendations consistent with validated, evidence-based references for safe MAOI therapy.

Methods

This descriptive, comparative evaluation assessed AI-generated dietary guidance for patients taking MAOI. Four major AI systems were evaluated (December 1–20, 2025): ChatGPT-5.1/5.2 (OpenAI), Claude Sonnet 4/4.5 (Anthropic), DeepSeek-V3 (DeepSeek AI), and Gemini 2.5 (Google). Standardized prompts requested prohibited food/beverage lists: "Which foods are unsafe if I take a MAOI?"; "Can I eat chocolate if I am taking an MAOI?"; "Is yogurt or milk safe while taking an MAOI?"; "Are sausages dangerous with MAOIs?"; and "Is beer safe with MAOIs?". Questions were repeated across models on different days using paid and free versions. Responses were compared with validated dietary references[4,5] and classified by 2 investigators (C.H., F.L.R.) to assess over-restriction and misinformation risks.

Results

General Prompts. All models recognized classic high-tyramine categories (aged cheeses, cured meats, soy sauce) but lacked quantitative detail of the validated references. The greatest conflicts occurred with alcoholic beverages: sparkling wines (prohibited by ChatGPT 5.1, allowed with moderation by Claude) and distilled spirits (prohibited by Gemini 2.5 and DeepSeek, allowed with caution by Claude). All models were over-restrictive, stating red wine and beer are unsafe. Some items appeared inconsistently across lists, appearing in some: liver (prohibited by DeepSeek/Gemini 2.5), sourdough bread (prohibited by ChatGPT 5.1), and kefir (prohibited by Claude) but not in others. Chocolate without specification and caffeine were recommended for cautious use by DeepSeek and Gemini 2.5 but were not mentioned by ChatGPT 5.1 and Claude.

Specific Prompts. Multiple discrepancies emerged as follows: (*a*) Between AIs: aged spirits prohibited by Gemini 2.5/DeepSeek versus cautious use by ChatGPT 5.1/Claude; dark chocolate allowed 14–40 g by ChatGPT 5.1/Claude/DeepSeek versus unrestricted by Gemini 2.5; (*b*) Same AI, different times: ChatGPT 5.1 prohibited then allowed regular beer on consecutive days; (*c*) Different versions: ChatGPT 5.2 allowed red wine while 5.1 prohibited it; and (*d*) Different users: Gemini 2.5 gave contradictory wine advice to different researchers on identical dates.

Discussion

This evaluation reveals significant inconsistencies in AI-generated MAOI dietary guidance, raising clinical safety concerns. Variation between AI systems suggests lack of access to standardized, evidence-based protocols, potentially compromising treatment adherence or safety. Temporal instability—identical queries producing different responses—indicates the use of probabilistic generation methods that undermine medical guidance reliability. All systems demonstrated over-restrictive tendencies compared to validated references,[4,5] potentially impacting quality of life and contributing to MAOI underutilization. Absence of quantitative tyramine thresholds leads to unnecessarily broad restrictions. Specific examples of excessive restrictions include DeepSeek-V3 banning beef liver even if fresh; ChatGPT 5.1 prohibiting all red wines while allowing white wine and sparkling wines only in "small quantities;" Claude Sonnet 4 prohibiting all kinds of beers; and Gemini 2.5 allowing only 5–10 g of milk chocolate. Some responses contained dangerous omissions, particularly regarding fermented products with high, unpredictable tyramine levels. Notable omissions included kombucha and kefir by ChatGPT 5.1 and kefir by Gemini 2.5. These findings highlight fundamental limitations of current AI systems' probabilistic nature and diverse training data for consistent clinical recommendations.

Current AI chatbots demonstrate significant inconsistencies and over-restrictive tendencies for MAOI dietary guidance. Healthcare providers should not rely on AI-generated recommendations without verification against evidence-based references.[4,5] Patients require validated, quantitative dietary guidelines rather than variable AI

advice. Until specialized medical AI tools with curated databases are developed, human clinical expertise remains essential for safe MAOI dietary guidance.

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