Artificial Intelligence in Nutrition and Dietetics: A Primer

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Learning Outcomes

- Describe the different types of artificial intelligence (AI)

- Describe opportunities for use of AI in dietetics practice

- Discuss issues associated with AI in healthcare and nutrition practice

What Is AI?

Computers that can perform tasks that typically require human intelligence.

Artificial intelligence allows machines to model, or even improve upon, the capabilities of the human mind.

Two broad categories

- Predictive – use of data and algorithms to predict possible outcomes (diagnosis, interventions, medications)
- Generative – Creates new output based on questions or prompts

Predictive AI

Predictive AI – uses patterns identified in past events to predict future outcomes

- Imaging

- Ophthalmology

- Pathology

- Dermatology

- Nutrition assessment

- Risk assessment

- Nutrient analysis

- Note generation

Generative AI

- Creates new content based on prompts

- Chat GPT and others

- Use large language models (LLM) by deep neural networks

- Need huge amounts of training data (aka, the Internet)

- Fine-tuned using human input

- Importance of prompts used

Using Generative AI

Think about repetitive or "clerical" tasks

- Generating letters
- Recipe creation or modification
- Creating educational materials
- Translating educational materials
- What else?

Downsides

- Fabrication – bibliographic citations
- Vague and general output
- Disinformation
- Reflect bias of content used
- Review output
- Use in education
  - Can be difficult to detect
  - Make it work for you

Questions?