

**Artificial intelligence (AI), new devices, novel treatments and your gut health**

**Nicholas J. Talley AC, MD, PhD**

AI is rapidly changing our world, and medicine and health. Chat GPT for example is a *generative pretrained transformer* (GPT), an AI tool that produces text resembling human writing, allowing users to interact with AI almost as if they are communicating with another person. Many others are working on similar technology. When I asked ChatGPT to provide comments on the topic today here’s in part what the GPT wrote:

“*When it comes to gut health, AI can play a significant role in understanding and managing conditions such as irritable bowel syndrome (IBS), inflammatory bowel disease (IBD), and other digestive disorders. AI algorithms can analyze large amounts of data, including medical records, patient-reported symptoms, and genetic information, to identify patterns and develop personalized treatment plans. In addition to diagnostic and treatment applications, AI can also contribute to improving the efficiency of healthcare systems. It can help streamline administrative tasks, automate routine processes, and assist in resource allocation, ultimately leading to better patient outcomes and reduced costs*”.

Who needs an expert, or a doctor or psychologist anymore if AI can do the job just as well? A recent study compared physician and Chatbot responses to patient questions: of the 195 questions and responses, evaluators preferred chatbot responses to physician responses in 78.6% (95% CI, 75.0%-81.8%).

The risks of AI on the other hand are arguably terrifying. Stephen Hawking wrote: "*The development of full artificial intelligence could spell the end of the human race. It would take off on its own and redesign itself at an ever-increasing rate. Humans, who are limited by slow biological evolution, couldn't compete and would be superseded*."

For management of IBS, apps are all the rage including ones that deliver psychological therapy. But as yet the efficacy of these apps compared with standard treatment remains to be adequately determined.

New devices are also on their way into practice for tough gut problems. A vibrating capsule is being marketed in the US to treat chronic constipation. There are trials suggesting this works but blinding is potentially an issue (you can feel it wriggling). Wearable electric devices might also help improve constipation.

We are testing a device that maps the stomach electrical activity, like an ECG monitors the heart rhythm. This looks potentially useful for diagnosing patients with chronic nausea or vomiting, functional dyspepsia or slow stomach emptying, and might open the door for new therapies.

Therapies both old and new are changing the way gut health is delivered. Examples include diaphragmatic breathing for constant burping, bloating or rumination, and faecal microbial transfer for IBS and possibly neurodegenerative diseases.