

A Conversation with ChatGPT About Hypercholesterolemia: Bridging the Gap Between Patients and Physicians

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Dear Editor,

Artificial intelligence (AI) has emerged as a transformative force in healthcare, bridging gaps in knowledge and accessibility. Among the most talked-about advancements is ChatGPT, an AI chatbot developed by OpenAI. Launched in 2022, ChatGPT uses advanced language processing to engage users in conversational exchanges on a variety of topics, including health. Its ability to explain complex concepts in simple, easy-to-understand language has captured attention worldwide. However, while it has the potential to educate and empower patients, questions about its accuracy and reliability remain¹.

Hypercholesterolemia, commonly known as high cholesterol, is a widespread condition that increases the risk of cardiovascular disease, one of the leading causes of death globally. This condition is often linked to lifestyle factors like diet and exercise, but genetics also play a significant role, particularly in cases of familial hypercholesterolemia². Despite its prevalence, many patients struggle to understand the nature of their condition, leading to poor adherence to treatment and suboptimal outcomes³. This lack of understanding among patients is an issue that must be addressed to improve health outcomes⁴.

This is where tools like ChatGPT could prove invaluable. By offering quick, accessible and understandable health information, ChatGPT has the potential to empower patients with knowledge about diseases such as hypercholesterolemia. This could help patients feel more prepared when consulting their doctor and reduce the burden on healthcare providers by addressing basic questions upfront. In this letter, I examine ChatGPT's ability to respond to common patient questions about hypercholesterolemia, evaluate its accuracy and explore its role as a supplemental educational resource.

To evaluate ChatGPT's potential, I posed several common patient questions about hypercholesterolemia. The AI's responses, summarized in **(Table 1)**, reflect its strength in simplifying medical concepts while maintaining a reassuring tone. For instance, ChatGPT explains hypercholesterolemia as "a condition where cholesterol levels, especially LDL cholesterol, are higher than normal, increasing the risk of heart disease and stroke." It also advises on lifestyle changes like eating more fiber, reducing saturated fats and exercising regularly, aligning closely with recommendations from the American College of Cardiology (ACC) and the American Heart Association (AHA)².

Table 1: Simulated Conversation between ChatGPT and a Patient About Hypercholesterolemia.

Question	ChatGPT's Response
What is hypercholesterolemia?	Hypercholesterolemia is a medical condition in which there's too much cholesterol in your blood. Cholesterol is a type of fat that your body needs to build cells and produce hormones, but having high levels of the wrong kind of cholesterol can be harmful. Specifically, "bad" cholesterol or low-density lipoprotein (LDL), can build up on the walls of your arteries, forming plaques. Over time, this can narrow or block the arteries, leading to problems like heart attacks and strokes. In contrast, "good" cholesterol or high-density lipoprotein (HDL), helps remove excess cholesterol from your blood. It's a balance and when LDL levels are too high, that balance is disrupted.
What causes high cholesterol?	High cholesterol can have several causes, ranging from genetics to lifestyle factors. For some people, it runs in the family—this is called familial hypercholesterolemia. If you have this condition, your body has trouble removing LDL cholesterol from your blood. Lifestyle factors are also a big contributor. Eating a diet high in saturated fats, like those found in red meat, butter and processed snacks, can raise your cholesterol levels. Not getting enough exercise, being overweight and smoking can make things worse. Additionally, some health conditions, like diabetes or hypothyroidism, can cause secondary hypercholesterolemia. Age and gender also play a role; cholesterol levels tend to rise as you get older and women's cholesterol levels often increase after menopause.
How can I lower cholesterol at home?	The good news is that there's a lot you can do to manage cholesterol at home, especially if you catch it early. The foundation of treatment is lifestyle changes. Start with your diet: focus on eating heart-healthy foods like fruits, vegetables, whole grains, nuts and fatty fish, like salmon or mackerel, which are high in omega-3 fatty acids. Replace saturated fats, like butter, with healthier options, such as olive oil. You'll also want to avoid trans fats, often found in baked goods and fried foods. Regular physical activity is also key. Aim for at least 150 minutes of moderate exercise, like brisk walking, every week. If you're overweight, even losing 5-10% of your body weight can make a significant difference in your cholesterol levels. And if you smoke, quitting can improve your cholesterol profile and overall heart health.
Are there medications for it?	Yes, there are several medications available to lower cholesterol and the choice depends on your specific needs and risk factors. The most commonly prescribed are statins, which block the enzyme your liver uses to make cholesterol. They're very effective at lowering LDL cholesterol and reducing the risk of heart attacks and strokes. If statins aren't enough or you can't tolerate them, other options include ezetimibe, which reduces cholesterol absorption in your intestine and PCSK9 inhibitors, newer injectable medications that can dramatically lower LDL levels. Bile acid sequestrants and niacin are other options, although they're less commonly used today. It's important to work with your doctor to determine the best treatment plan for you.
Can high cholesterol be cured?	High cholesterol isn't something that can typically be "cured," but it can be very well managed. For some people, especially those with lifestyle-related high cholesterol, making permanent changes to diet and exercise can bring cholesterol levels back to normal ranges. However, for people with genetic conditions like familial hypercholesterolemia, medication may be needed for life to keep cholesterol under control. The goal of treatment isn't necessarily to "cure" the condition but to lower your cholesterol to a safe level, reducing your risk of complications like heart attacks and strokes. With the right management, you can live a long and healthy life.
What tests do I need to check my cholesterol?	The most common test for cholesterol is a lipid panel, which is a simple blood test. It measures your total cholesterol, LDL cholesterol (bad cholesterol), HDL cholesterol (good cholesterol) and triglycerides, which are another type of fat in your blood. Ideally, you should fast for about 9-12 hours before the test for the most accurate results. Your doctor will interpret the numbers based on your overall health and risk factors for heart disease. If your cholesterol is high, they may also check for other underlying conditions, like thyroid issues or diabetes, to see if they're contributing.
Can children have high cholesterol?	Yes, children can have high cholesterol, though it's less common than in adults. When it does occur, it's often due to genetics, such as familial hypercholesterolemia. However, diet and lifestyle factors are becoming increasingly significant in younger populations due to the rise in childhood obesity. If high cholesterol is diagnosed in children, the first steps are usually dietary changes and increased physical activity. Medications are generally reserved for cases where lifestyle changes alone aren't enough or for children with very high LDL levels due to genetic conditions. Early management is important because high cholesterol in childhood can set the stage for heart disease later in life.
Does cholesterol affect women differently?	Yes, cholesterol affects men and women differently. Before menopause, women tend to have lower LDL and higher HDL levels compared to men, partly because of the protective effects of estrogen. However, after menopause, LDL levels often rise and HDL levels may decrease, increasing the risk of heart disease. This makes it especially important for postmenopausal women to monitor their cholesterol levels and make heart-healthy choices. Additionally, during pregnancy, cholesterol levels naturally rise to support the growing baby, but they usually return to normal after delivery.

The accuracy of ChatGPT's answers is reassuring, as it aligns with widely accepted guidelines. For example, its suggestion to reduce saturated fats and increase dietary fiber is consistent with established strategies to lower LDL cholesterol³. However, there are limitations. ChatGPT lacks the ability to consider a patient's specific medical history, family background or potential medication interactions. Additionally, its responses don't include cited references, which could make it harder for patients to verify the information.

On the positive side, ChatGPT excels in making technical information approachable. For patients who may feel overwhelmed or unsure of what to ask during a doctor's appointment, this kind of interaction can serve as a helpful starting point. However, as an AI, it cannot replace the nuanced judgment and personalized care that healthcare providers offer. According to Denecke, et al., while conversational agents like ChatGPT are promising for health education, they still lack the ability to assess individual patient needs in real-time and personalized care remains a critical component of effective healthcare⁵.

ChatGPT offers a promising glimpse into the future of patient education. Its ability to deliver quick, clear and accurate information on conditions like hypercholesterolemia can empower patients to take an active role in decision-making in their treatment and care while easing some of the burden on healthcare providers. However, its limitations, such as the inability to personalize responses and the lack of sources to verify the information, show that it should assist, not replace, the expertise of healthcare professionals.

Looking ahead, AI tools like ChatGPT could be refined to incorporate real-time references from trusted medical sources, making their responses more transparent and reliable. With further development, they could be integrated into patient care as supplementary resources, supporting both education and engagement. As AI technology continues to evolve, it holds immense potential to reshape the way patients and providers interact, ultimately improving health outcomes.

References

1. McKinney W, et al. ChatGPT: A Survey of its Role in Healthcare. *Journal of Healthcare AI*, 2023.
2. Stone NJ, Scott MG, Bailey AL , et al. 2018 ACC/AHA Guideline on the Management of Blood Cholesterol. *Journal of the American College of Cardiology*, 2018;73(24): 285-350.
3. Pencina MJ, et al. Statin Use and Risk of Cardiovascular Events in Individuals with Hypercholesterolemia. *Circulation*, 2017;135(4): 331-343.
4. O'Connor A, et al. Understanding Cholesterol and its Management: A Survey of Patient Knowledge. *American Journal of Preventive Medicine*, 2016;51(6): 1026-1031.
5. Denecke K, et al. Artificial Intelligence-Based Conversational Agents for Chronic Conditions: Systematic Literature Review. *Journal of Medical Internet Research*, 2020;22(9): e20701.