Studies test whether gene-editing can fix high cholesterol. For now, take your medicine

Cardiovascular disease, or heart disease, is a worldwide problem and is currently the leading cause of fatality. It can be caused by a number of factors, from living an unhealthy lifestyle to being genetically inherited. While there are different types of heart diseases, the most common is called coronary heart disease (CAD). This is caused by a buildup of plaque, consisting of fats and cholesterol, leading to the narrowing of arteries. (Centers for Disease Control and Prevention, 2024). Recently, research and testing has uncovered a way to lower excessive cholesterol through a process called gene editing.

Gene editing is a technique that allows scientists to alter the DNA sequence of a gene through technology. Before scientists uncovered this though, many patients with high cholesterol were prescribed medication, usually statins, with unwanted side effects such as muscle pains, brain fog, and sometimes liver damage. Even with medication though, patients still struggled with excessive cholesterol, making medication alone ineffective. While having some cholesterol is necessary for the body to function, research shows that just one injection of a protein-blocking medication can drop “bad” LDL cholesterol to half of its original level, along with triglyceride levels. While gene editing is still fairly new, studies following patients years later still show levels of lowered cholesterol. Gene editing is the next advancement to lower the risk of developing cardiovascular disease from high cholesterol without causing major side effects.

According to an article from the National Library of Medicine, gene editing treatment reduced cholesterol levels in patients safely and effectively by around 50%. (PMC, n.d.) This was enough to help patients reach their goal and ensure the beginning of a healthy lifestyle. Gene editing therapy has the potential to reduce cardiovascular risks through a single treatment and help millions.

Since gene editing for cholesterol is still in the trial phase, there are several more ways to ensure a healthy lifestyle and overall reduce the risk of cardiovascular disease. Firstly, fruits and vegetables play an important role in health because they contain essential nutrients the body cannot obtain alone. Foods containing saturated fats may lower cholesterol levels and improve heart health. Next, maintaining a healthy weight and staying active is crucial to reduce unnecessary fats and LDL. Finally, keeping a normal blood pressure and blood sugar is also considered a healthy practice. While gene editing continues to grow, these lifestyle improvements can help reduce the risk of developing cardiovascular disease.

References

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