

## How CRISPR gene editing might soon protect us against Alzheimer's

The challenge: There is evidence that Alzheimer's may be developing in the brain as much as [30 years](#) before symptoms appear, but there isn't a way to easily and accurately diagnose it that early.

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In 2012, researchers studying the genes of people in Iceland discovered a rare mutation in the [amyloid precursor protein, or] APP gene that makes it harder for the enzyme to break apart the precursor protein.

As a result, people with the mutation have "[strong protection](#)" against Alzheimer's, as well as general cognitive decline and memory loss.

People with this mutation are "five times more likely to reach 85 without being diagnosed with Alzheimer's," according to [Nature](#), and "also live longer, with a 50% better chance of celebrating their 85th birthday."

Researchers at Canada's University of Laval have now [used a CRISPR technique](#) known as "prime editing" to successfully insert the Icelandic mutation into up to 68.9% of human cells treated in the lab.

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Looking ahead: For the [CRISPR](#) treatment to be effective, it would need to edit the genes in a significant portion of the brain's cells, and CRISPR faces the same issue as other treatments in [crossing the blood-brain barrier](#).

**[This is an excerpt. Read the original post here.](#)**