

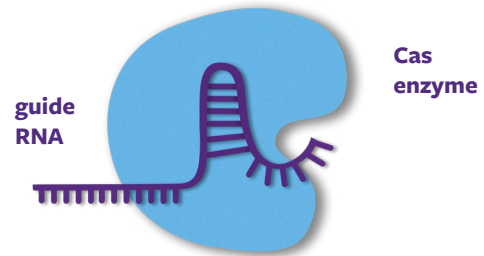
## CRISPR/CAS SYSTEM OVERVIEW

This resource offers a summary of the CRISPR/Cas system for your learning journey. **Download to your device or print** to share this information and guide potential conversations with your support system, doctor, and community.

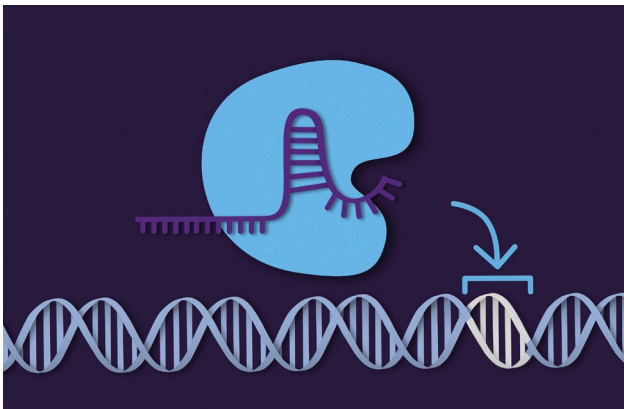
### The CRISPR/Cas system

The CRISPR/Cas system is designed to scan millions of lines of genetic code in DNA to search for the genes that prevent your body from doing its job. The CRISPR/Cas system may make it possible to edit these genes and help get your body back on track.

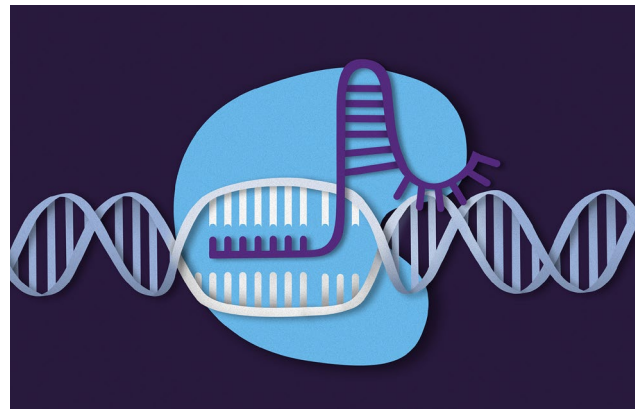
The CRISPR/Cas system is made up of different parts, working together, to edit DNA.



These parts consist of an enzyme, called a Cas enzyme, and a guide called a guide RNA.



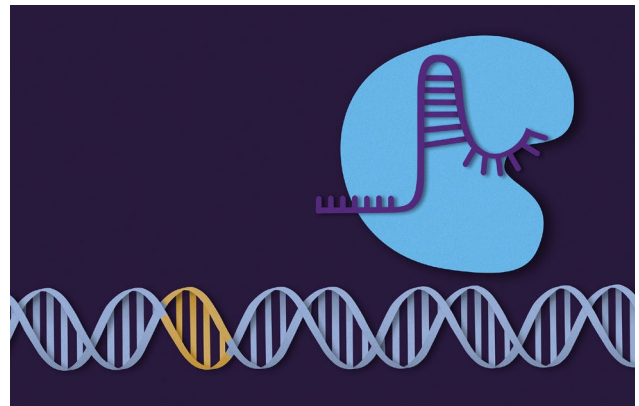
First, the guide RNA directs the Cas enzyme to a specific site in the DNA where the gene that should be modified lives.



Once the site has been found, the Cas-RNA complex causes the DNA to unravel. The guide RNA then lines up with the unraveled DNA.



Next, the Cas enzyme cuts the DNA strand at a precise location so that the gene editing can take place. The body's natural repair process plays a role in repairing the cut DNA.



We have now activated a new set of instructions within the cell.

Once this process is complete, your modified genes can function with a new set of instructions.