



SOURCES

CDC, Mayo Clinic

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Different Types of Vaccines

Vaccine development has made huge leaps in the past few decades. Currently, there exist many different types of vaccines. A few are described here:

Inactivated virus vaccines use inactivated versions of the virus, which cannot replicate in your body and cause disease. This means that these inactivated viruses are able to safely expose your body to components of the virus, which allows your body to generate the appropriate antibodies to fight against the real virus in the future.

Examples of inactivated virus vaccines include the rabies vaccine and the influenza (flu) vaccine.

mRNA vaccines use mRNA, which are genetic instructions that your body can use to produce proteins. The mRNA in the vaccine specifically tells your body how to produce a protein that it can use to recognize the virus. Once these proteins are made, your immune system can generate antibodies against them in preparation for potential future exposure. Since this viral protein is NOT the virus itself, it cannot give you the disease. This allows the vaccine to safely prepare your body to fight against the virus in the future.

Examples of mRNA vaccines include the Moderna and Pfizer COVID-19 vaccines.

Viral-vector vaccines use a modified version of a different, harmless virus that delivers information to your body about the disease-causing virus. Specifically, it brings in information about a specific protein that your immune system can use to recognize the disease-causing vaccine in the future and generate antibodies against. These modified viruses are also designed to be unable to cause the actual disease.

The Johnson & Johnson COVID-19 vaccine is an example of a viral-vector vaccine.