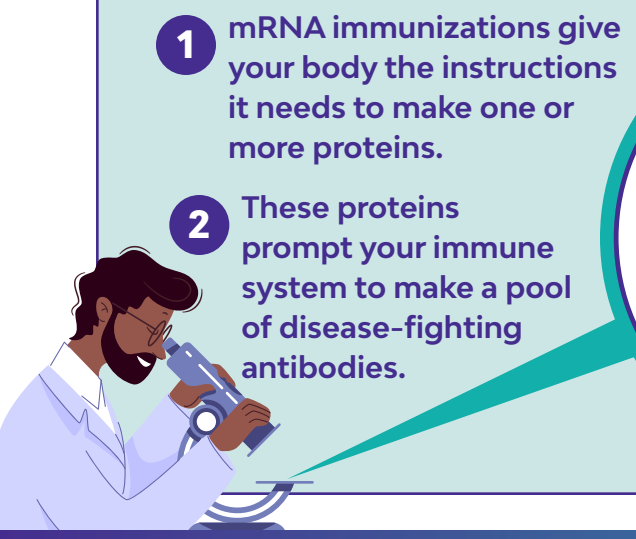
Understanding Messenger RNA Vaccines in Humans

How do mRNA vaccines work?

Every cell in the human body contains mRNA, which directs your body to make proteins. mRNA immunizations teach your body how to make its own medicine for a virus or other pathogen.

1. mRNA immunizations give your body the instructions it needs to make one or more proteins.
2. These proteins prompt your immune system to make a pool of disease-fighting antibodies.
3. These antibodies help your body fight off the virus in the future.
4. Once your body makes the antibodies to fight the infection, the mRNA is broken down and discarded.



Restrictions on the use of mRNA technology limit an important tool to protect public health and prevent future infectious disease outbreaks.

mRNA vaccines are safe

- mRNA from a vaccine does not remain in the body post-immunization.
- mRNA in immunizations does not enter the cell's nucleus and therefore cannot change your DNA.
- With billions of doses administered, the safety of mRNA immunizations is well-established.

mRNA technology research is not new

- Scientists have been researching and testing this kind of technology for more than 30 years.
- mRNA technology is currently being studied for prevention or treatment in a wide range of diseases, including cancer and cystic fibrosis.

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Understanding Messenger RNA Vaccines in Animals

mRNA vaccines do not remain in livestock products

mRNA vaccines are safe. After immunization, mRNA does not remain in the animal or end up in food.

1. mRNA technology teaches the body to make a specific protein found on a virus and make antibodies to fight against infection.

2. As part of the USDA approval process, a 'withdrawal period' is set for all animal vaccines to ensure no component of the vaccine can be found in the animal.

3. mRNA is not new, it exists in every living organism. Scientists have been researching and testing the utility this kind of technology in medicine for more than 30 years.

The National Association of State Departments of Agriculture (NASDA) supports a robust review and approval process for any animal health tool that can be used to protect the domestic livestock industry.

Vaccinations are vital for our food supply and humane treatment of animals

- Devastating animal diseases, such as Highly Pathogenic Avian Influenza (HPAI), Lumpy Skin Disease, and Foot and Mouth Disease, pose a threat to animal agriculture in the US.
- Immunizations offer a way to fight these diseases and mRNA technology can be updated quickly to combat new variants.

Limiting mRNA vaccine technology would mean losing a new tool to protect animals from emerging diseases

- Requiring specific labeling for a food product derived from an animal treated with an mRNA vaccine would put a significant financial and liability burden on the producer and supply chain and would harm both animal and human health.

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