VACCINES CHASE
THE CORONAVIRUS

starring
Al Capone

as the Coronavirus

© 2021 Just Human Productions
Think of **Live Al Capone** as **live SARS-CoV-2 coronavirus**.

Like detectives chasing criminals, vaccines help us find and eliminate viral threats.
These mugshots of Al Capone are like **subunit vaccines**.

Detectives can identify Capone from these photos of him.

This is how **subunit vaccines** work. They’re made of a fragment of the virus, such as a single protein. Your immune system sees that fragment and learns to nab viruses carrying that same specific fragment.

Examples of **subunit vaccines** include:

- Hepatitis B vaccine
- Human papilloma virus (HPV) vaccine
- Pertussis (whooping cough) vaccine
- Tetanus vaccine
These film negatives of Capone’s mugshots are like mRNA vaccines.

Detectives can print photographs of Capone that show what his face looks like.

Just like you can print photographs from a film negative, your cells can make a specific fragment of the virus, such as a single protein, from the mRNA vaccine. Your immune system sees that fragment and learns to nab viruses carrying that same specific fragment.

Examples of mRNA vaccines include:

* Pfizer COVID vaccine
* Moderna COVID vaccine
This is Martha, a nice young woman who works at the bank. She's not a criminal and poses no threat.

Capone left his hat at the scene of the crime, and Martha put it on to show the detectives what Capone looks like.

Detectives can identify Capone from seeing Martha wearing his hat. They don’t need to meet Capone in person to know what he looks like.

This is how virus vector vaccines work. A harmless, non-replicating virus shows the immune system a specific fragment of the virus, such as a single protein. Your immune system sees that fragment and learns to protect against viruses carrying that same specific fragment.

Examples of virus vector vaccines include:

★ Johnson & Johnson COVID vaccine
★ Oxford-AstraZeneca COVID vaccine
Right now, mRNA vaccines, Virus Vector vaccines, and likely soon, Subunit vaccines, are being used for COVID vaccines in the U.S.

Here are two other vaccine technologies. We’re not using these for COVID vaccines in the U.S., but we do use them to teach your immune system how to fight other viruses and bacteria.
Al Capone got pretty **beat up** in a fight with another mob family. His arms and legs are broken. **He can’t fight or hurt anyone.**

But he’s still recognizable, and detectives can still arrest him.

This is how **live, attenuated vaccines** work. They’re too weak to hurt you, but your immune system sees the weakened virus and learns to recognize more like it.

Examples of **live, attenuated vaccines** include:

- Measles/Mumps/Rubella (MMR) vaccine
- Chickenpox vaccine
- Smallpox vaccine

© 2021 Just Human Productions
Imagine if Al Capone had a twin who died in a shootout.

Detectives can still identify Al Capone from his deceased twin.

This is how inactivated vaccines work. They’re made of dead viruses, which are no longer a threat. The immune system sees the dead virus and learns to eliminate more like it.

Examples of inactivated vaccines include:

- Most flu vaccines
- Hepatitis A vaccine
Thank you for reading!

This series was brought to you by Just Human Productions.

It is free to use and share, as long as the slides are not altered in any way.

We'd love to know how you are using this material, drop us a note:

hello@justhumanproductions.org