

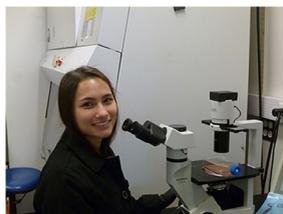


Vaccines: What, how, WHO, why?

Introduction

In 2000 the United States declared measles was eradicated thanks to the MMR vaccine; two decades later, the World Health Organization has reported that outbreaks are on the rise. Vaccines are a powerful tool for protecting ourselves, our loved ones, and our communities from disease. But many fear that they carry their own risks, and don't participate. So what are the facts, what are the stakes, and how do we move the conversation forward?

Speakers



Sophina Taitano, PhD
Research: Immunology
Talk: How do vaccines protect us?
Fun Fact: From US territory of Guam



Breanna Symmes, PhD
Research: Asthma and Pulmonary Fibrosis
Talk: Vaccines, a historical perspective
Fun Fact: Loves birds



Dylan Verden, PhD Candidate
Research: Stroke
Talk: Vaccines in the news and our communities
Fun Fact: Enjoys singing/songwriting

Glossary

Pathogen: Bacteria, viruses, and parasites that can cause disease

Immune System: Your body's army against pathogens

Antibodies: Proteins made by your cells that recognize and bind pathogens. Antibodies stick around after exposure, giving your body an **immune memory** that allows it to respond quickly next time.

Signs of immune activation: These are symptoms we might associate with "getting sick," but are really our body's helpful responses seeing a pathogen: *Redness, swelling, heat, pain.*

Vaccine: A solution containing the part of a pathogen your body would recognize, allowing it to build defenses without exposure to the actual disease

Vaccine Components:

Parts of Pathogen: Inactivated/Destroyed/Altered pathogen

Preservatives/Stabilizers: Prevent bacterial growth and increase storage life, allowing for safe storage

Adjuvants: Boost your immune response to make sure antibodies get made

Herd/Community Immunity: A community's resistance to the spread of a disease due to high immunity rates. Prevents disease spreading to vulnerable populations (pregnant women and young infants, the elderly, or individuals with weakened immune systems).

Free Resources (We have more,
reach out to us!)

Vaccines

Community Immunity: Boulder nonprofit focused on providing people with vaccine information before they have children. www.supportyourherd.com

Vaccine benefits (NIH): www.niaid.nih.gov/research/vaccine-benefits

Vaccine safety (WHO): www.vaccine-safety-training.org/overview-and-outcomes-1.html

History of Measles (CDC): www.cdc.gov/measles/about/history.html

Vaxopedia: Great exploratory resource for finding vaccine information.

The Debate

World Health Organization Best practice guidance: How to respond to vocal vaccine deniers in public

Astho: Communicating effectively about vaccines. Study showing when communication efforts work - or don't

Healthy Debate: 7 ways to talk to anti-vaxxers (that might actually change their mind. Covers some of the common mistakes we make in these types of conversations

A history of vaccine skepticism:

www.historyofvaccines.org/content/articles/history-anti-vaccination-movements



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<https://www.facebook.com/ColoradoSITN/>



Colorado.SITN@gmail.com

