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# Vaccine 101 for Community Health workers and CHR's

Teaghen Duffee

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Acknowledgement

# Little about me

Nursing 425 Leadership Student  
from the University of Alberta

Under the supervision of Sandra  
Kennett, Regional Nurse Educator

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# Define some terms

Pathogen – A Bacterium, virus, microorganism that can causes disease

Antigen - foreign pathogen such a viruses, bacteria

Antibodies - Cells that respond to fight foreign pathogens, and have a 'memory' to remember them after.

# What is the Immune System?

Complex network that help prevent diseases to keep us healthy.

**Innate** vs **Adaptive** immune system (Think general vs specialized)

- Innate is your general line of defense, like your skin
- Adaptive is your bodies learned defense after being exposed to a pathogen (Invader)

**Passive** Immunity

- Protection provided by transferring antibodies from an immune individual to another. Such as in breastmilk.

# My 'invaders' Explanation

A way to remember this:

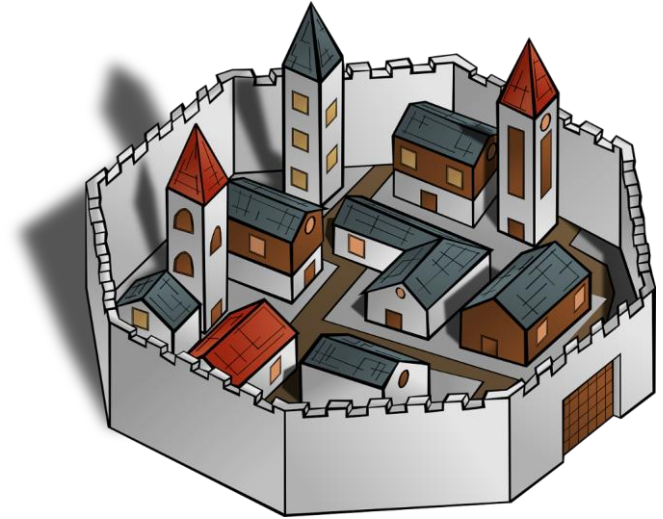
Your body - The town

Antigen - is an army coming in to attack

Immune system - The towns defense

Innate Immunity - the wall around the town to defend it

Active immunity - The trained soldiers that protect the town when the wall cannot. They then take what they know about their invader and use it to fight them if they ever return





# What are Vaccines

A Quick Video:

<https://www.youtube.com/watch?v=pMSSu7QLAlw&list=UUtaLB4sC87gErvaJvM6wzFQ>

Dependent on the vaccine, often made from:

- inactivated or attenuated live organism
- secreted products
- Components
- protein elements of cell walls/antigens.

Activate the Immune system and teach our bodies how to respond when faced with a specific antigen or 'invader'.

Vaccines teach our immune system to fight off germs and protect us from disease.

# Types of Vaccines

- Live Attenuated
- Inactivated
- Subunit



Combined or single vaccines, can be given multiple at a time.

# Common Vaccines

MMR-Var (Measles Mumps, Rubella, Varicella)

DTaP-IPV-Hib-HB or DTap-IPV-HB

Covid-19

Hepatitis

Rotavirus

Pneumococcal (Pneu-c13)

Meningococcal (MenconC)

Menc-ACYW

HPV

HBV

DTaP

# What can happen without these?

Mild-severe outcomes can occur:

Infection across all ages of various diseases.

- Resulting in Signs & Symptoms, being sick
- Require: antibiotics or other medications to treat
- Hospitalization
- Long-term consequences

Outbreaks, spreading to other members of the community

Death

# Why are the important

- Community Immunity (or herd immunity)
- Protect individuals from serious disease and help protect others
- Decrease the prevalence of disease in our communities
- Prevention before disease causing negative outcomes

# Vaccines work: Case counts of 6 vaccine-preventable diseases before and after routine vaccination

[2016 – 2020]

Comparison of case count for 6 vaccine-preventable diseases before and after introducing each vaccine

Disease	Cases then	Cases now	Decrease
Whooping cough	17,777	2,340	87%
Mumps	36,101	737	98%
Measles	53,584	37	More than 99%
Diphtheria	8,142	5	More than 99%
Rubella	14,974	1	More than 99%
Polio	2,545	0	100%

# Barriers



**Access**

**Education**

**Lack of  
trust**

**Fear**

**Vaccine  
records**

**What does this mean for Communities?**

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# Our impact as workers



You all make a difference!

[https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.dreamstime.com%2Fillustration%2Fteamwork.html&psig=AOvVaw2Hi01lJLs-JMQDQ9jR0\\_5U&ust=1712084979144000&source=images&cd=vfe&opi=89978449&ved=0CBIQJRxqFwoTCKDq8tnboYUDFQAAAAAdAAAAABAE](https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.dreamstime.com%2Fillustration%2Fteamwork.html&psig=AOvVaw2Hi01lJLs-JMQDQ9jR0_5U&ust=1712084979144000&source=images&cd=vfe&opi=89978449&ved=0CBIQJRxqFwoTCKDq8tnboYUDFQAAAAAdAAAAABAE)

Inform community members

Keeping ourselves informed

Promoting health in community

Help prevent negative outcomes

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# Misunderstandings vs Facts

## Misunderstandings

- They are unsafe
- They cause autism
- They give you the disease
- They don't work



## Facts

- They are safe
- No evidence they cause autism
- They do not give you the disease, but you can possibly have side effects
- Vaccines have been shown to be extremely effective in decreasing disease prevalence

## MYTH-BUSTING MONDAYS



### Myth:

Spacing out my child's vaccines is safer than following the recommended schedule.

### Fact:

The recommended schedule is safe. Delaying vaccines leaves your child unprotected against serious preventable diseases. Talk to your healthcare professional about your child's vaccine schedule.

Retrieved from: <https://immunize.ca/additional-promotional-resources>

**Reduce your risk of infectious diseases.**



**Trust. Protect. #VaccinesWork**

Talk to your doctor, nurse, pharmacist, or local public health office about the immunizations you and your family need to stay healthy.





## IMMUNIZATION FOR EVERY CHILD

### What is immunization?

Immunization is the process where a child becomes protected against a disease by the introduction of a vaccine into the body. Immunization may also be called vaccination, needles or shots.

### How does it work?

Vaccines cause your child's immune system to produce antibodies and form memory cells which prevent reinfection. For immunization to work best, children must have all their immunizations on time.

### Are vaccines safe?

Vaccines used in Canada are very safe. They are developed with the highest standards and are continuously monitored and tested before being approved for use. Mild side effects, such as fever or redness at the injection site, may occur and last for a short time. Serious reactions are extremely rare.

### Recommended vaccines for your child

The following vaccines are routinely recommended for children, from infancy to adolescence. These vaccines offer the best protection against preventable diseases. Parents are encouraged to contact their health care provider or local public health office to learn about the childhood immunization schedule for their province or territory.

#### **DTap-IPV-Hib**

Diphtheria, tetanus, pertussis, inactivated poliovirus, haemophilus influenzae type b

#### **DTap-IPV**

Diphtheria, tetanus, pertussis, inactivated poliovirus

#### **Tdap or Tdap-IPV**

Tetanus, diphtheria, pertussis or with inactivated poliovirus

#### **MMR or MMRV**

Measles, mumps and rubella or with varicella

#### **RV** Rotavirus

#### **HB** Hepatitis B

#### **Var** Varicella

#### **Pneu-C-13** Pneumococcal

#### **Men-C or Men-C-ACYW-135**

Meningococcal

#### **Flu** Influenza

#### **HPV** Human Papillomavirus

### Travelling to another country?

Consult a travel health clinic, a health care provider, a local public health office, or visit <http://www.phac-aspc.gc.ca/tmp-pmv/>

### Track your immunizations

Track your immunizations using your provincial/territorial immunization record.

Retrieved from:

<https://immunize.ca/additional-promotional-resources>

# Just some of the Resources you can access!

## **CDC:**

<https://www.cdc.gov/vaccines/hcp/vis/current-vis.html>

## **Government of Canada:**

<https://www.sac-isc.gc.ca/eng/1569867927914/1569867958318>

<https://www.canada.ca/en/public-health/services/vaccination-children.html>

## **Government of Alberta & Alberta Health Services:**

<https://www.alberta.ca/immunization-routine-schedule>

<https://myhealth.alberta.ca/topic/Immunization/Pages/default.aspx>

## **Immunize Canada:**

<https://immunize.ca/>

## **Measles Telehealth Session:**

[https://fntn.ca/Library/Play-Video?arcid=12678&path=21160&name=Lets\\_Talk\\_About\\_Measles.mp4](https://fntn.ca/Library/Play-Video?arcid=12678&path=21160&name=Lets_Talk_About_Measles.mp4)



**Questions**



**Thank you!**

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