### **Covid-19 Vaccinations**

Can We Trust Them?





## Disclaimers

- Assumption that we are all comfortable with the general use of vaccines.
- Will not be getting into the deep science of how vaccinations work or why one type is better than another.
- I am not a medical professional

### Vaccines were Developed so Quickly, are they Safe?

- 1. Research of the previous corona viruses (SARS 2002 & MERS 2012) was already well documented which gave researchers a head start in understanding COVID-19. The first coronaviruses were identified over 50 years ago.
- 2. mRNA & vector based vaccines were already in development for SARS, MERS & Ebola. With the first products being developed in 1999.
- 3. Combining of clinical phases (1,2,3) to expedite the process of vaccine approval.
- 4. Though vaccines were developed in record time governments have used science based methods in approving the vaccines.

### **MYTHS & MISCONCEPTIONS**

ABOUT THE COVID-19 VACCINES



#### **MYTH**

IT ISN'T SAFE BECAUSE
IT WAS RUSHED

#### FACT

NO STEPS WERE SKIPPED
IN TESTING OR
DEVELOPMENT



#### MYTH

MRNA VACCINE TECHNOLOGY IS NEW

#### FACT

RNA VACCINES HAVE BEEN DEVELOPED FOR OVER THREE DECADES



#### **MYTH**

YOU WILL GET COVID-19 FROM THE VACCINE

#### FACT

NO LIVE SARS-COV-2 VIRUS IN ANY OF THE VACCINES



#### MYTH

VACCINES AFFECT FERTILITY & PREGNANCY

#### **FACT**

THERE IS NO BIOLOGICAL PLAUSIBILITY OF AN EFFECT ON FERTILITY





#### MYTH

RNA VACCINES ALTER YOUR DNA

#### FACT

mRNA DOESN'T INTERACT WITH YOUR DNA



#### MYTH

VACCINES CONTAIN
HARMFUL SUBSTANCES

#### FACT

INGREDIENTS ARE
TESTED FOR SAFETY &
PUBLICLY VISIBLE

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## MYTH 1 THE VACCINES AREN'T SAFE BECAUSE THEY WERE RUSHED

RESEARCH AND DEVELOPMENT PHASE

DISCOVERY

PROCESS DEVELOPMENT & PRECLINICAL EXPERIMENTS **TRADITIONAL** VACCINE

YEARS

2-4Y

ACCELERATED

VACCINE

MONTHS

MONTHS

READILY **AVAILABLE FUNDS** 

**PRE-EXISTING** RESEARCH

WORLDWIDE COLLABORATION

INVESTIGATIONAL NEW DRUG (IND) APPLICATION

**CLINICAL TRIALS** 

5-7Y

MONTHS

**BIOLOGICAL LICENSE APPLICATION (BLA) OR EMERGENCY USE AUTHORIZATION (EUA)** 

**REVIEW BY FDA** 

1-2Y

1-2M

MONTHS

1-2M

10M-1.5Y

MASSIVE RECRUITMENT OF

**CLINICAL TRIAL VOLUNTEERS** 

**OVERLAPPED** PHASES

**RIGOROUS REVIEW PROCESS** 

**FDA EMERGENCY REVIEW** 

**PACKAGED BEFORE AUTHORIZATION** 

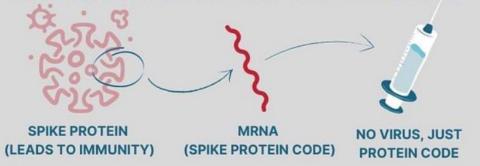
LARGE SCALE PRODUCTION

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>15Y

## MYTH 2 YOU WILL GET COVID-19 FROM THE VACCINE

NONE OF THE VACCINES CONTAINS ANY LIVE SARS-COV-2 VIRUS AND THEREFORE **CAN'T CAUSE ILLNESS.** 



## MYTH 3 RNA VACCINES WILL ALTER YOUR DNA



CELL NUCLEUS
CONTAINING YOUR DNA:
GATED AND HIGHLY
REGULATED



MRNA:
TRANSLATED IN THE
CYTOPLASM
AND LATER DEGRADED

REQUIRES NUCLEAR
LOCALIZATION SIGNALS (NLS)

ALL VACCINES LACK NECESSARY NLS SIGNALS TO ENTER THE NUCLEUS.

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## MYTH 4 MRNA VACCINE TECHNOLOGY IS NEW

RNA VACCINE TECHNOLOGY HAS BEEN IN DEVELOPMENT FOR **DECADES**.

MRNA VACCINES HAVE BEEN **PREVIOUSLY TESTED** IN EARLY CLINICAL

TRIALS FOR OTHER **DISEASES** AS WELL AS **CANCER TREATMENT**.

## MYTH 5 COVID-19 VACCINES AFFECT FERTILITY AND PREGNANCY



SPIKE PROTEIN (SARS-COV-2)

< 1% SIMILARITY CAN'T CONFUSE THE

SYNCYTIN-1 PROTEIN
(PLACENTAL DEVELOPMENT)



TENS OF THOUSANDS OF PREGNANT PEOPLE AND THOSE TRYING TO CONCEIVE HAVE BEEN VACCINATED. VACCINATIONS HAVE BEEN DEEMED SAFE AND EFFECTIVE AT PROTECTING PREGNANT PEOPLE.

## MYTH 6 VACCINES CONTAIN HARMFUL SUBSTANCES

NO MICROCHIPS, FETAL TISSUE, OR "TOXINS" ARE IN THE VACCINES. ALL INGREDIENTS HAVE BEEN TESTED FOR SAFETY.

ALL INGREDIENTS ARE DETAILED ON THE MANUFACTURERS'

WEBSITES AND AT THE FDA AND CDC.

### Vaccines – Weighing the Risk

#### What you need to know up to and including April 9, 2021

#### No safety signals

(potential safety issues) have been identified in Canada

7,569,321

Total doses administered

3,444

Total adverse event following immunization reports

(0.045% of all doses administered)

2,980

Total adverse event following immunization reports that were non-serious

(0.039% of all doses administered)

464

Total adverse event following immunization reports that were serious

(0.006% of all doses administered)

138

New adverse event following immunization reports since last update

(99 new non-serious and 39 new serious)

### Vaccines – Weighing the Risk

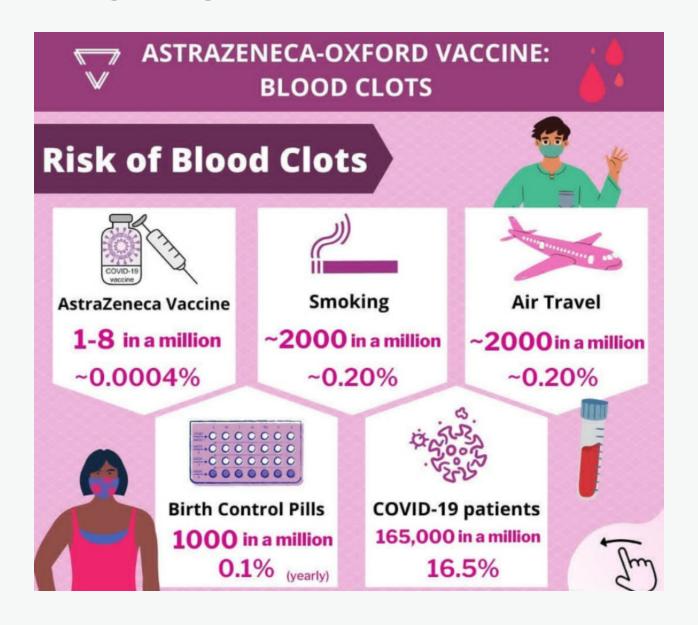
Chance in a million of	25-year-old	55-year-old
serious harm due to vaccine side-effects	<b>11</b> in a million	<b>4</b> in a million
dying with coronavirus	23 in a million	<b>800</b> in a million
dying due to an accident or injury	110 in a million	180 in a million
dying in a road accident	<b>38</b> in a million	23 in a million
being hit by lightning this year	<b>1</b> in a million	<b>1</b> in a million

Figures show the chance of dying with coronavirus since the start of the pandemic. Figures for accidents and car crash fatalities are for 2018

https://www.bbc.com/news/explainers-56665396

#### Vaccines – Weighing the Risk J&J COVID-19 VACCINE RISK COMPARISON: BLOOD CLOTS 0.000088% **JOHNSON & JOHNSON COVID-19 VACCINE** (6 reports of 6,800,000 doses administered) 20 - 30% COVID-19 **ILLNESS** (31-33% in ICU patients, 5-8% among non-ICU patients) 0.1% **GENERAL POPULATION** INCIDENCE OF CLOTS (300,000 - 500,000 cases per year of 351 million people) **HORMONAL** BIRTH CONTROL Incidence rates vary based on formulation

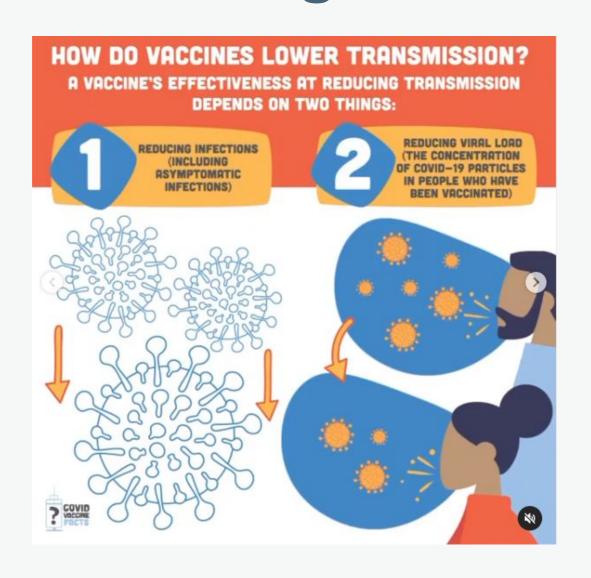
### Vaccines – Weighing the Risk

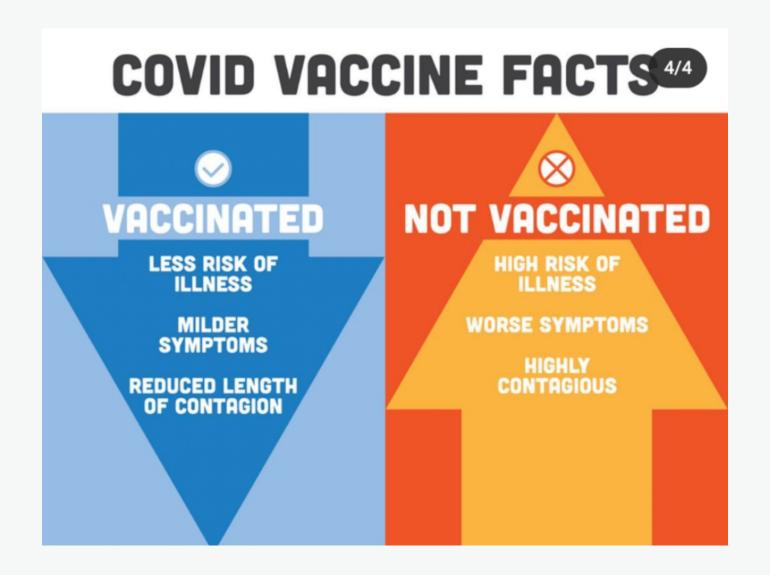




**Practical Perspective** 

"The important point to understand is all the vaccines prevent death and hospitalization"

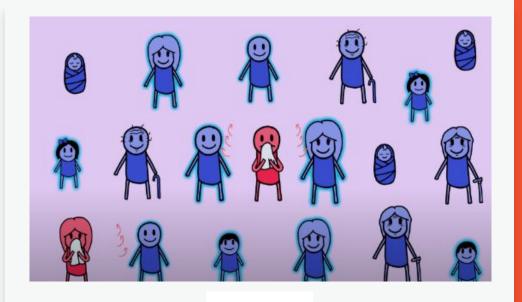


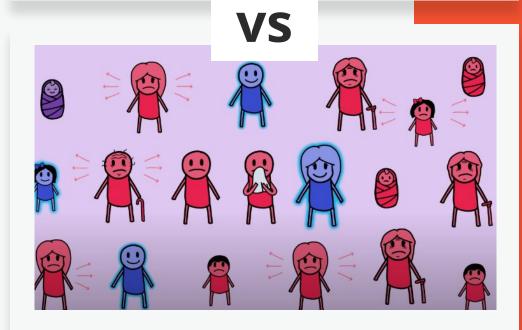


## Herd Immunity

- What is it?
- Is achieved when a large % of the population is immune to a disease
- Works by disrupting the chain of infection for those who cannot be vaccinated
- If herd immunity is upheld for long enough, diseases can be eradicated e.g small pox

Getting vaccinated is not about the individual receiving the vaccine, its about protecting those most at risk!







## The best vaccine is the one you can get!



### What Vaccines are Available in Canada?

- Pfizer-BioNTech COVID-19 vaccine
- Moderna COVID-19 vaccine
- AstraZeneca COVID-19 vaccine
- Janssen COVID-19 vaccine

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## WORRIED ABOUT LONG-TERM COVID-19 VACCINE EFFECTS? READ THIS.

Most vaccine side effects occur within the first 2 days and are minor, expected, and indicate a mounting immune response. Decades of evidence from many other vaccines tell us that any delayed effects following vaccination are rare and typically occur within 2 months if they occur at all.

#### Oral Polio Vaccine (OPV, live attenuated virus):

1 in 2.4 million recipients (0.00004%) developed cases of paralysis due to the weakened virus in the vaccine reverting to "wild" virus, 1-4 weeks after vaccination.

OPV NO LONGER ADMINISTERED IN THE US

VACCINE GIVEN WHERE YELLOW FEVER RISK IS HIGH

UNBLASED

Yellow Fever Vaccine (live attenuated virus):

Extremely rare side effects (neurological symptoms and viscerotropic disease) have occurred 1-2 weeks after vaccination

#### Pandemic Swine Flu Vaccine, 1976:

Slightly increased risk of Guillain-Barré syndrome. Symptoms appeared within 8 weeks of vaccination.



SEASONAL FLU SHOT ARE ROUTINELY MONITORED FOR SAFETY

#### Measles-Mumps-Rubella Vaccine (MMR, live attenuated virus):

Approximately 1 in 40,000 recipients (0.0025%) develop thrombocytopenia (low platelets), which is treatable.

This typically occurs within 1-3 weeks of vaccination.



### **Spiritual Perspective**

"Confirms/shows our response to the MC Message"

## **Midnight Cry**

### VACCINATION

How have we been vaccinated by the MC Message?

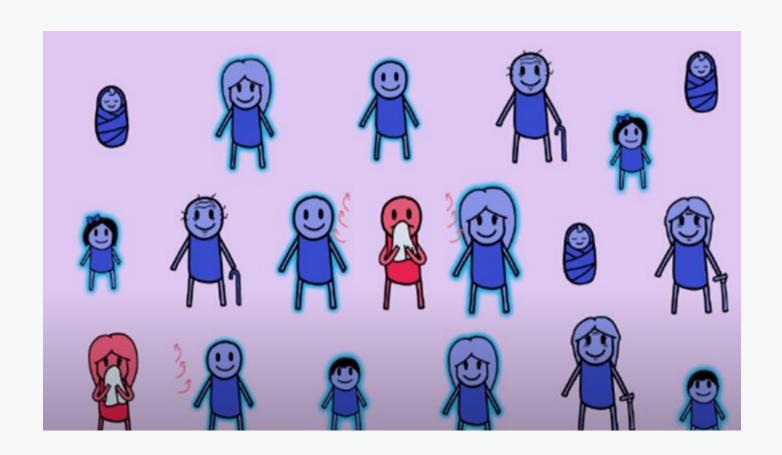




### Herd Immunity in the Midnight

Grant we seeing the principle of herd immunity due to the MC?

- •How is it protecting us?
- •How is/has it changed our lives?



### Side Effects of the MC Vaccination

Identifying some of the side effects that have caused some chaffing.

### **GET VACCINATED**



- 1. https://news.uchicago.edu/story/how-were-researchers-able-develop-covid-19-vaccines-so-quickly
- https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/is-it-true/is-it-true-were-covid-19-vaccines-developed-too-quickly-to-be-safe
- 3. https://www.ctvnews.ca/health/coronavirus/we-need-trust-how-a-covid-19-vaccine-came-so-quickly-1.5225872
- 4. <a href="https://health-infobase.canada.ca/covid-19/vaccine-safety/">https://health-infobase.canada.ca/covid-19/vaccine-safety/</a>
- 5. https://www.cdc.gov/coronavirus/2019-ncov/vaccines/vaccine-benefits.html
- 6. <a href="https://www.vanityfair.com/news/2021/04/republicans-anti-vaccine-herd-immunity">https://www.vanityfair.com/news/2021/04/republicans-anti-vaccine-herd-immunity</a>
- 7. https://www.bbc.com/news/explainers-56665396
- 8. https://www.instagram.com/unbiasedscipod/?hl=en