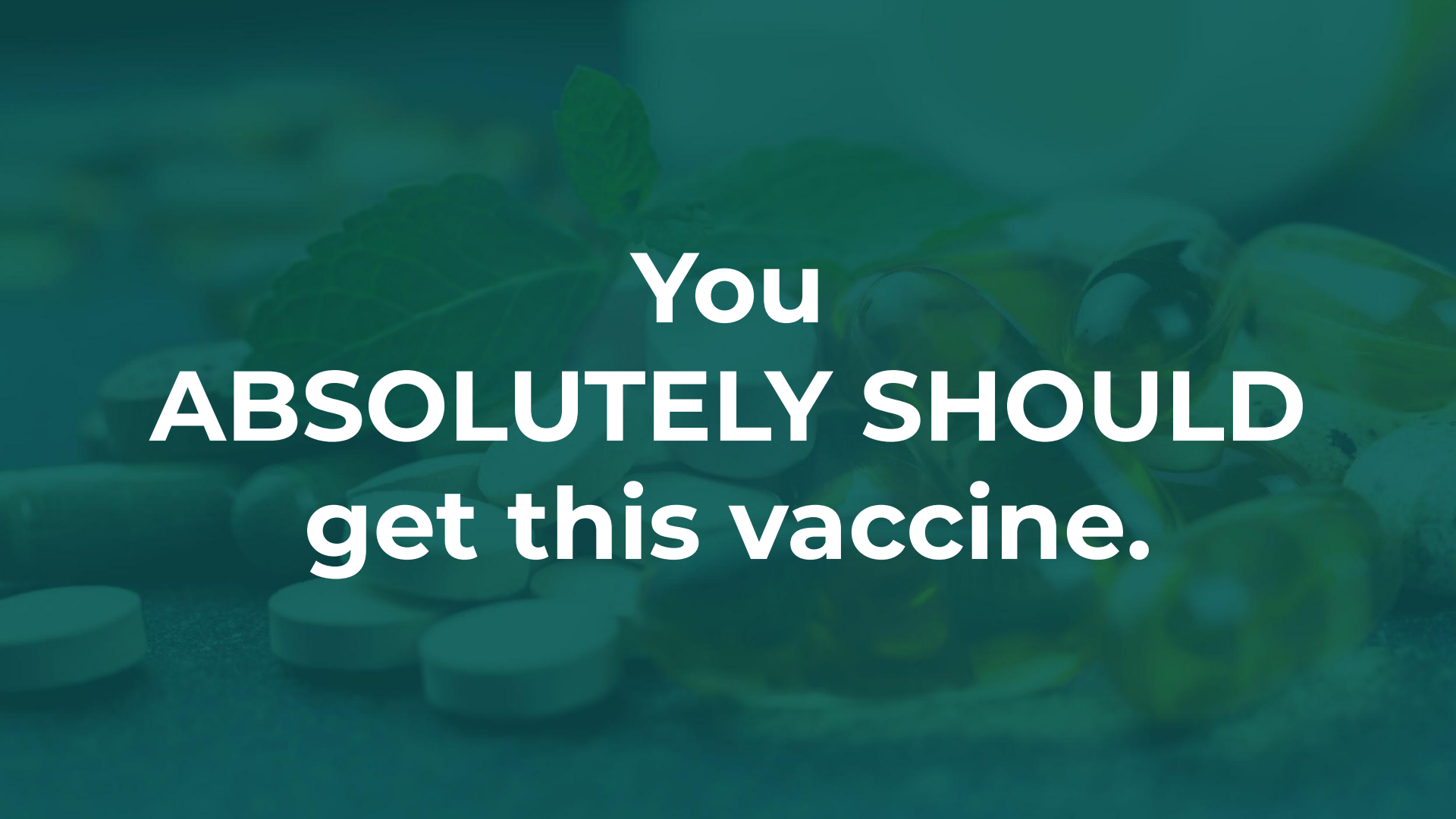


dr neal smoller
HOLISTIC PHARMACIST

the covid vaccine

THE BIGGEST NO-BRAINER OF YOUR LIFE



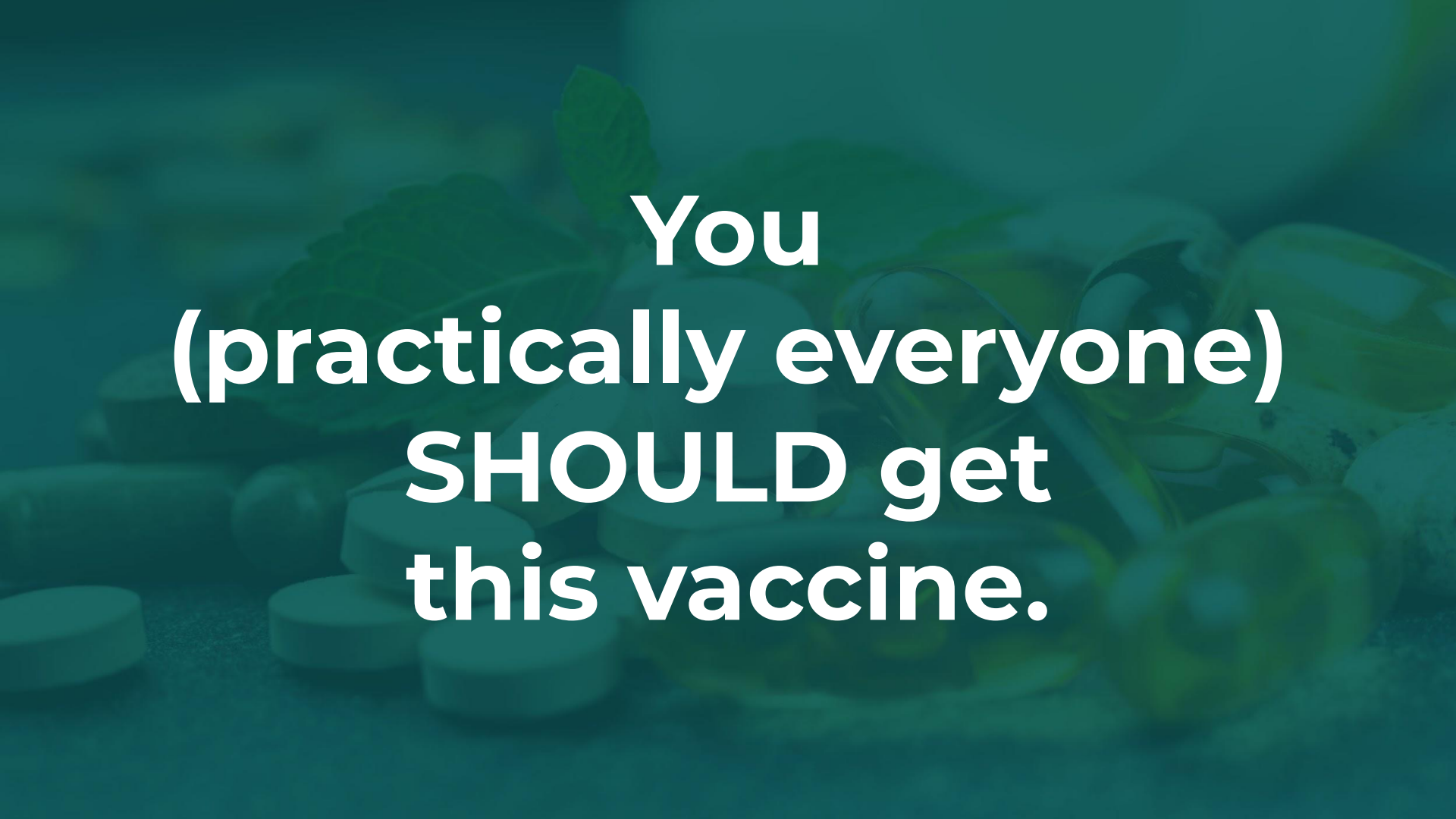
**You
ABSOLUTELY SHOULD
get this vaccine.**

let's start with the end

- *On the vaccine side...*
- This vaccine is of the most studied and scrutinized vaccine in our medical history
- Coming at a time when our technology is at its finest.

let's start with the end

- *On the disease side...*
- This pandemic caused by this virus is devastating to everything
- Including our own health
- With long term vital organ damage resulting from even mild cases.

The background is a teal color with a soft-focus image of several white, round pills scattered across the surface. Some green leaves are also visible, partially overlapping the pills. The overall aesthetic is clean and medical.

**You
(practically everyone)
SHOULD get
this vaccine.**

all about me

- Dr. Neal Smoller, PharmD
- Holistic Pharmacist
 - I don't push drugs, quite the opposite!
 - I believe both the conventional medicine and wellness industries often times stand in the way of our optimal health
 - We need a new path with **true** holistic care to live our best, healthiest lives
- Visit DrNealSmoller.com for my blog, podcast, videos, and more



dr neal smoller
HOLISTIC PHARMACIST

all about me

- I'm not a researcher
- I do care about everything that goes into your bodies: foods, medicines, supplements, and immunizations
- I ask tough questions
- I can help people understand complex topics
- I'm not an alarmist nor am I a fear monger

I'm not a shill for supplements or Pharma; I'm sick of people getting bad information and making unhealthy choices because of it.



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my default vaccination opinion

- **If you don't want it, don't get it.**
 - I'm convincing no one.
 - People are stuck in their echo chambers and will believe what they want.
- **BUT, I believe there are only 3 GOOD reasons not to**
 - 1. Allergy to the vaccine or components
 - 2. You're deathly afraid of needles
 - 3. You just don't want to
- If your justification is based on anything else—especially the mountain of anti-vaxx propaganda and anti-science information—your position is flatly wrong
- Don't get it, but don't pretend the misinformation is accurate

overview

- Questions around vaccines often fit into 3 bins & we will approach our discussion in this manner
- Safety: is this going to hurt me?
- Efficacy: will it work, and what does that mean for my life?
- Logistics: when can I get my shot?

covid vaccine logistics

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common logistics questions

- When will I get the vaccine?
- How or where will I get it (who will give it to me)?
- Which vaccine will I get?
- What does it look like, actually getting the vaccine?

when will i get it?

- Answer: ??????
- Slightly more refined answer: not today, so take a deep breath.
- Short version of the most probable answer: probably mid-Feb to mid-March

Let's better understand how the rollout is happening and the math behind my estimate.

cdc priority groups

- **Phase 1a:**
 - Health care personnel
 - Long-term care facility residents
- **Phase 1b:**
 - Frontline essential workers
 - *People 75 and older*
- **Phase 1c:**
 - People ages 65-74
 - People ages 16-64 with high-risk conditions
 - Other essential workers
- **Phase 2:**
 - People 16 and older not in Phase 1

Which group are you in?

priority groups

- **Phase 1a (24 million people):**
 - Health care personnel
 - Long-term care facility residents
- **Phase 1b (49 million people):**
 - Frontline essential workers
 - People 75 and older
- **Phase 1c (129 million people):**
 - People ages 65-74
 - People ages 16-64 with high-risk conditions
 - Other essential workers
- **Phase 2: (~100-120 million people)**
 - People 16 and older not in Phase 1



Which group are you in?

priority groups

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 - Health care personnel
 - Long-term care facility residents
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 - People 16 and older not in Phase 1

“I’m 66, therefore 1C”

**There are $24+49 =$
73 million people BEFORE we
get to 1C**

**Then, there are 129 million
people who are eligible like you!**

**Let’s pretend you are in the
middle: 64.5 million people are
in front of you, making you
#137,500,000.**

Health

At least
5.3 million
people have been vaccinated
in the U.S.

17.3 million doses have been distributed.

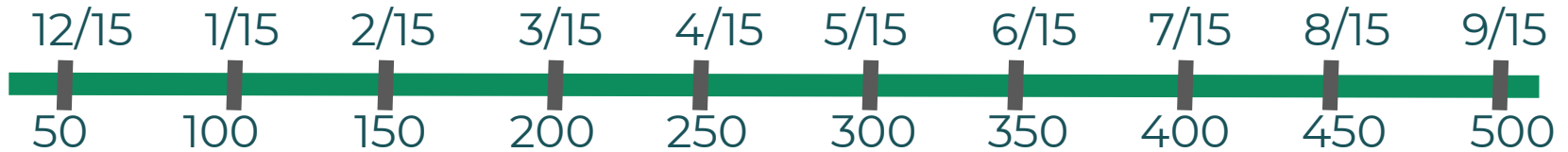
Data as of Jan. 6 at 2:51 p.m.

<https://www.washingtonpost.com/graphics/2020/health/covid-vaccine-states-distribution-doses/>

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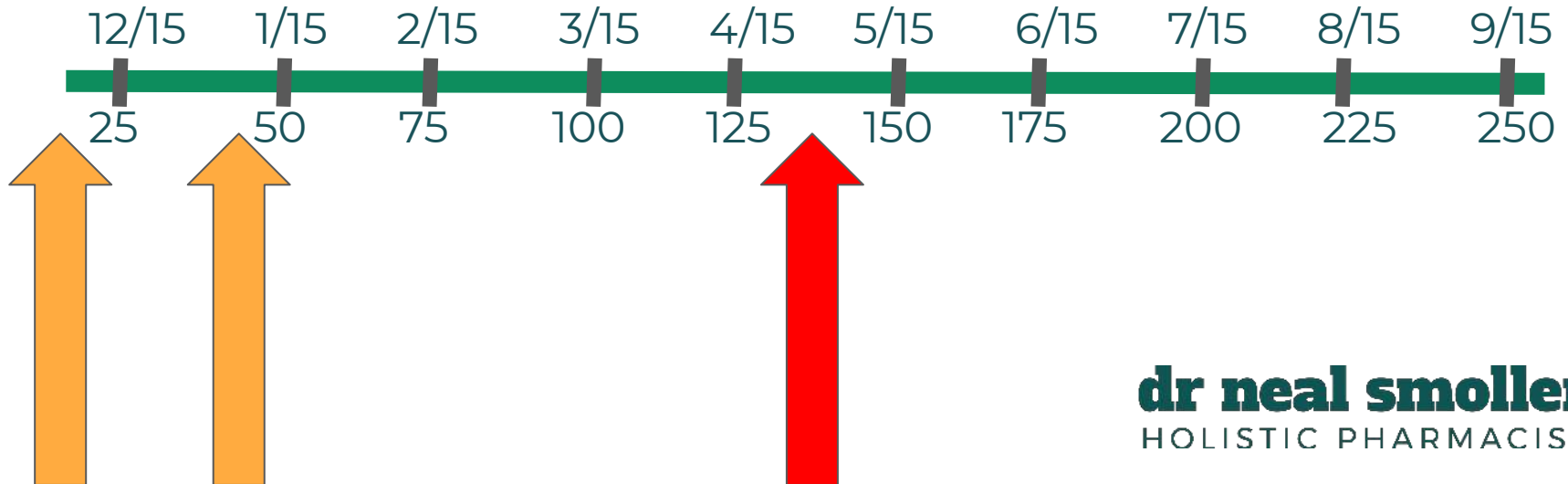
more math!

- Imagine that we received 50 million doses on December 15th (we didn't) and we receive 50 million doses on the 15th of every month (we won't, at least not for a while)



remember: everyone needs 2 doses

- Imagine we received 50 million doses on December 15th (we didn't) and we receive 50 million doses on the 15th of every month (we won't, at least not for a while)



**I believe the community at large
will get doses mid-February to
early-March, with most non-high
risk adults getting immunized in
late spring/early summer**

things can change

- More efficient distribution
- Greater supply
- People opting out

“But I’m high risk!”

- After I tell someone we don’t have any doses and they won’t be receiving the dose until March-ish, folks will retort with this sentiment
- **I get it**
- It doesn’t matter. There are 100s of millions of folks that are eligible for this with you or before you
- **Your exhaustion is showing**
- I feel you, so very much
- You’re doing all the right things and these anti-mask thought leaders are getting theirs... it’s not fair.
- There is not only light at the end of the tunnel, but we are so physically close to the end, we just need to push through winter!

**This is a MIRACLE that we could
even get it now.**

**Don't be frustrated, be very
thankful we have this opportunity
to end this so soon.**

patience is key!

- Deep breath
- Hold the door open for those weaker among us
- If you're number 1, 139 million, or 210 million, it really doesn't matter (except for peace of mind)
- More on this with 'efficacy'

underlying medical conditions, explained

- Here's the current verbiage from the CDC:
 - **“People aged 16—64 years with underlying medical conditions which increase the risk of serious, life-threatening complications from COVID-19.”**
- They have yet to specific specifically who that is and if there will be a priority list within that
- “Will my disease qualify?” is a common question, and we really don't know anything concrete as of yet
- We can go by what the CDC (and others) have identified as high risk for developing COVID, and that most likely will mirror over

underlying medical conditions

- Chronic lung disease, including COPD
- Serious heart conditions
- Obesity with a body mass index (BMI) of 30 or more
- Diabetes (type 2)
- Chronic kidney disease that requires dialysis
- Conditions that cause you to be immunocompromised
- Sickle cell disease

what is immunocompromised?

- Cancer treatment
- Smoking
- Bone marrow or organ transplant
- Immune deficiencies
- Poorly controlled HIV or AIDS
- Prolonged use of corticosteroids and other immune weakening medications

other high risk conditions

- Asthma (moderate to severe)
- Blood disorders, such as thalassemia
- Cerebrovascular disease
- Cystic fibrosis
- Dementia
- Diabetes (type 1)
- High blood pressure
- Liver disease
- Lung damage
- Pregnancy

how will i get it?

- Phase 1a is being supplied to specific health facilities and groups to distribute ONLY to those on 1a
- Pharmacies, doc offices, and more have registered to provide the vaccine when the supply becomes available for 1b and after
- In NY, mass vaccination centers have just been announced
- In Ulster County, there will be mass vaccination clinics aiming to administer 50,000 doses a month
- **You will get the vaccine from either a private practice or (more likely in NY) a mass immunization clinic**

behind the scenes

- The states get the doses
- In NY, approved facilities will be able to prebook whatever is available
 - We'll be clawing and scratching to get some: this is silly!
- They must be able to usually dispense what they prebook in 7 days
 - If you give 5 doses a week of flu, you're not getting 1000 COVID vaccines
- You can't transfer it to other facilities without permission from the state
- Unused vaccine will count against your ability to order more
- You must log the administration with the state ASAP (within 24 hours)
- **You sign an agreement to not administer outside of the current priority lists**

can you store the pfizer?

- We don't have to store in ultra-cold
- These doses have limited stability in frozen/refrigeration (normally 5-ish days)
- If I get 1-5000 doses, I could get rid of those in 2-3 days (ie. the entirety of my community)
- But yes, any facility who registers as a vaccinator is required to have capacity and capability to store enough doses

which vaccine will i get?



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which vaccine will i get?

- We'll talk about this more, but if you think:
 - You have a choice
 - You should choose
 - You should delay vaccination to get what you want
- **You are missing a huge opportunity for yourself**
- We're in the middle of a public health crisis, brand name selection is not going to be a consideration, nor should it be.
- **JUST GET WHATEVER IS AVAILABLE**
- If COVID vaccination becomes a more frequent thing in 1-3 years, then you'll probably have all the choice in the world.

do i have to get tested for COVID first?

- No, testing is not tied to receiving vaccines
- But, if you have recently been tested and are awaiting results or have an active case, they most likely won't let you in the building
- Most consent forms require 14 days since any potential exposure

will the vaccine cost money?

- Yes, but you already paid for it via your taxes
- Vaccination will most likely be free for everyone

“You’re a Pharma shill, you are making \$\$!”

- Pharmacists make, on average, \$15 for the administration of an immunization
- I believe it should be much more!
 - We’re screening you
 - We’re willing to take the liability
 - We’re handling rare adverse events
 - We have to have the equipment, training, compliance, billing, inventory, etc etc
- The COVID vaccine will probably pay, on average \$22 per shot
- **No one gets rich with vaccines, but we should also value the services that our medical professionals are providing for us**

covid vaccine safety

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did you miss the in depth discussion?

- Here, on The Big Mouth Pharmacist podcast
- Dr. Ray Yip
 - Epidemiologist
 - CDC alum
- Also available on my Youtube Channel
 - Dr. Neal Holistic Pharmacist
 - Links on drnealsmoller.com
- Discussed everything in depth that leads me to say the brief version here

THE
BIG
MOUTH
PHARMACIST



Dr. Neal Smoller
HOLISTIC PHARMACIST

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this vaccine was not “rushed”

- “Then why was it done so quickly when vaccines normally take nearly a dozen years?”
- Excellent question that leads to a tangent we should discuss!

riddle me this...

- How many patients were in the Phase III trial of the shingles vaccine, Shingrix?
- How long was phase 3 for the flu vaccine this year?
- How many cases of anaphylaxis to the Tdap vaccine happened last month?



YOU PROBABLY DON'T KNOW!



**The COVID vaccine is one of the
most publicly scrutinized vaccines.
EVER.**

the microscope

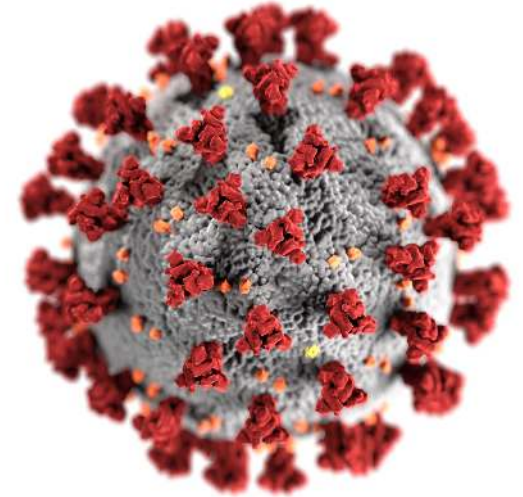
- Because the world's attention is on this vaccine and so many people have something to gain with anything “newsworthy” with this, we are hearing EVERY. LITTLE. DETAIL about this **without understanding the normal process...**
- ...AND HOW WE HAVE RADICALLY MORE AND BETTER DATA THAN ANY OTHER VACCINE TRIAL!
- My job as an **anti-misinformation expert** also must draw attention to the fact there are a number of people who have a lot to gain in any failure (real or perceived) of this vaccine
 - Charlatans
 - Anti-vaxx community
 - Propaganda specialists
 - Those looking for attention → money

You MUST reset.

Our skepticism is, at times, far from healthy and is fueled by persistent propaganda (that we may not support but are aware of).

this vaccine was not “rushed”

- It was quick because we got lucky.
- 1. Within days, a scientist in China mapped the entire genetic sequence of the virus, allowing all of us to start research and development almost immediately
- 2. COVID has these clear, obvious targets
- 3. COVID is relatively stable
- 4. We gave ALL the money, investing in production **prior to it being approved**
- 5. We removed the red tape that would normally trip up the process



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Flip the script:

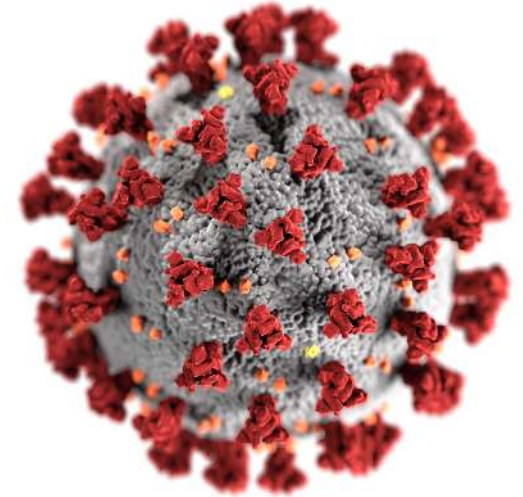
~~How could this be quick AND safe?~~

**What if research was well funded
and bureaucracy was reduced?**

What could we accomplish?

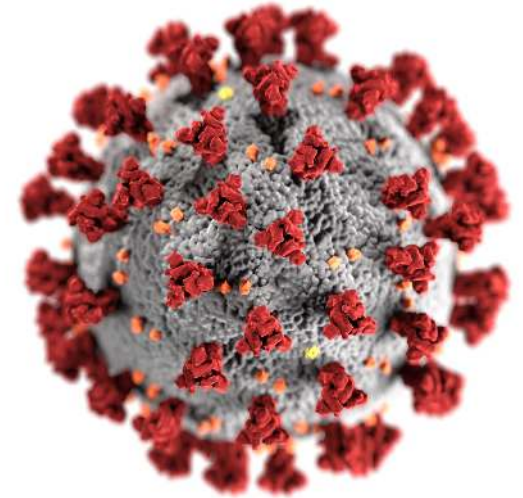
this vaccine was not “rushed”

- Most of the time in vaccine development (outside of paperwork filing and everyone taking their sweet time) is in **the development of the attack point on a moving target** and **finding enough cases to have a proper study**
- Dr. Yip and HPV example
- 6. We got lucky that we handled COVID so poorly and it was so widespread
- We had ample cases to test against and ample number of folks willing to try the vaccine



we got lucky!

- As a result, we have one of the biggest collection of data on any vaccine, with the most public scrutiny. EVER.
- Multiple vaccine candidates
- Each studied in HUGE populations
- The results from one validate the others!
- **Science is strengthened with great study control, large numbers of people, and results that are replicated by others**
- The science is STRONG



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bad stuff **WILL** happen!

- There are people who will have an allergic reaction to the vaccine or its components
- There are people who may have a rare adverse event; there are billions of people and stuff can get weird
- The benefits FAR outweigh the risks (See: initial conversation - the disease is NASTY and it's VERY likely you can catch it)

we have to “grow up”

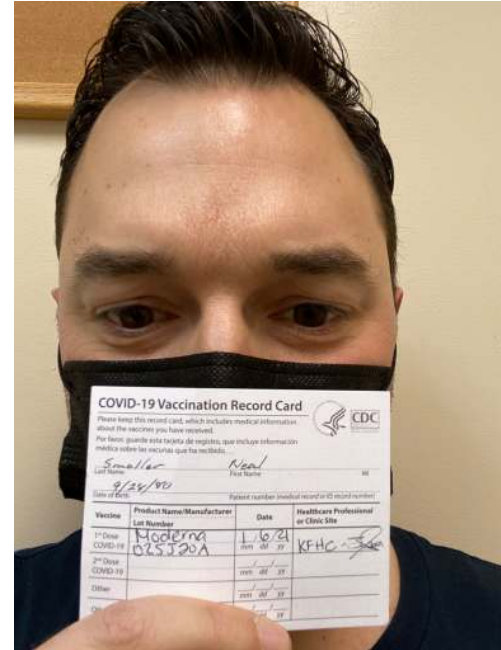
- We can't expect things to be perfect
- Nothing is: the seatbelts in your car, the medicines or supplements you take, the surgery you need, the exercise you do, your diet, the coffee you drink
- There is inherent risk to anything
- The risk of problems are VERY low and the benefit is TREMENDOUS to you and the public at large
- It's not Russian Roulette, at least as you know it

the real adverse events

- Pain, redness, or slight swelling in the arm (or injection site)
- Headache
- Fever
- Chills
- Fatigue
- This will start within 24 hours and persist usually for no longer than 72 hours
- **Based on what we're hearing, this vaccine (much like Shingrix and Pneumovax) are more likely to cause some local or brief reactions like the above**

our anecdotes

- If you follow me on social media (DrNealSmoller on FB and IG), you know my staff qualified for 1A and we were vaccinated on Jan 6th.
- Here's what happened
 - 4 of us had muscle pain at the injection site
 - 2 of those folks had it pretty bad, where we needed pain relievers and even had a tough time moving the arm around
 - 1 person had chills and achiness 6 hours later, but felt great the next day with no local pain
 - 2 people had no reaction at all



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the vaccine and anaphylaxis

- No medical professional or vaccination expert is surprised that there have been cases of anaphylaxis reported
- It was a bit “odd/goofy” that two folks pretty close to each other in Alaska both had it
- Again, we’re scrutinizing any and all reactions (How many anaphylaxis reactions happened with Shingles?)

the current best guess why (and strategy)

- The fats used to protect the fragile mRNA have polyethylene glycol (PEG) attached to them
- PEG is known to cause local reactions in some people
- **It almost definitely will not be an issue for people who don't have a history of anaphylaxis**
- If you do, it's recommended you get your dose under strict medical supervision (i.e. at a hospital or a clinic with emergency personnel that are present)
- The vaccine is still recommended for anyone, even with this history!

what's in the vaccines?

- The quick, non-nerdy answer:
 - mRNA
 - Fats
 - Salts
 - Sugar
 - Water
- The nerdy answer...

what's in the vaccines?

COVID-19 Vaccine Ingredients

By @dr.risahoshino

Ingredients	Moderna	Pfizer
Active Ingredient: mRNA	<ul style="list-style-type: none">• Synthetic messenger ribonucleic acid (mRNA) encoding the pre-fusion stabilized spike glycoprotein (S) of SARS-CoV-2 virus.	<ul style="list-style-type: none">• Nucleoside-modified messenger RNA (modRNA) encoding the viral spike glycoprotein (S) of SARS-CoV-2
Fats: Encases & protects the fragile mRNA.	<ul style="list-style-type: none">• SM-102• 1,2-dimyristoyl-rac-glycerol-3-methoxypolyethylene glycol-2000 [PEG2000-DMG]• 1,2-distearoyl-snglycerol-3-phosphocholine [DSPC]• Cholesterol	<ul style="list-style-type: none">• (4-hydroxybutyl)azanediylbis(hexane-6,1-diyl)bis(2-hexyldecanoate)• 2-[(polyethylene glycol)-2000]-N,N-ditetradecylacetamide• 1,2-distearoyl-snglycerol-3-phosphocholine• Cholesterol
Saline Solution: Buffer to keep the pH level close to our body's	<ul style="list-style-type: none">• Tromethamine• Tromethamine hydrochloride• Acetic acid• Sodium acetate• Sucrose	<ul style="list-style-type: none">• Potassium chloride• Monobasic potassium phosphate• Sodium chloride• Dibasic sodium phosphate dihydrate• Sucrose

Source: FDA

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what's in the vaccines?

- There are no hidden or unlabelled ingredients; that is misinformation
- These ingredients are incredibly benign
- Despite the local reactions and questions around PEG (which will help our understanding exponentially moving forward!), **none of the ingredients of the vaccine cause short term or long term harm**

The adverse events most of us experience (minus the pain at injection site), are not from the injection, but from our immune system working.

riddle me this...

- How many supplements are sold in this country that, besides being possibly not being safe, don't do anything at all for those taking them
- How many doses of resveratrol do you need to know it's working? Will you ever?
- **FLIP THE SCRIPT: Your immune reaction to a new vaccine isn't something to fear, it's something to look forward to!**
- (Like Erin!)

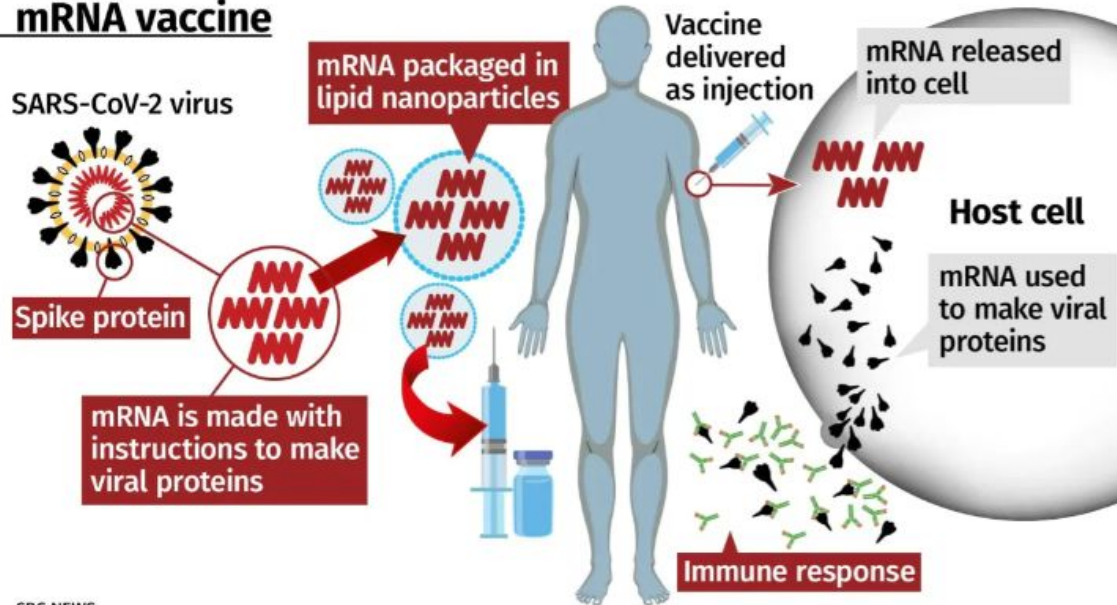
covid vaccine efficacy

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how do these vaccines work?

- Focus on Moderna and Pfizer for now; we can always have another webinar in the future!

mRNA vaccine



CBC NEWS

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do they change your dna?

- HECK NO!
- In fact, anyone suggesting that is clearly just making things up and lack a basic understanding of biology
- It's silly anyway, because **we already know your DNA isn't this rigid thing**; it changes over the time based on external environment, food, microbes that live within us, etc etc

vaccine efficacy

How coronavirus vaccines compare to vaccines for other viruses

VACCINE	VACCINE EFFECTIVENESS	# OF RECOMMENDED DOSES
Flu (Influenza)	44.0%	1
AstraZeneca novel coronavirus	70.0%	2
Chickenpox (Varicella)	92.0%	2
Moderna novel coronavirus	94.1%	2
Pfizer novel coronavirus	95.0%	2
Measles (MMR)	97.0%	2
Polio	99.0%	3-4

Note: Flu vaccine effectiveness calculated based on yearly average from 2009 to 2019. AstraZeneca, Moderna, and Pfizer coronavirus vaccine efficacy based on early clinical trial results. AstraZeneca results based on an average of two different vaccine dose regimens.

Source: CDC; AstraZeneca; Moderna; Pfizer

INSIDER

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vaccine efficacy: it's all good!

- Don't get hung up on the numbers!
- We would have been thrilled with over 50%
- Seeing 90+% is mind blowing!
- Don't think that AstraZeneca is no good because it is "only" 70%
- All of them are great, you can't go wrong with any one of them
- Even the Chinese or Russian candidates are showing strong efficacy too!

how long does the vaccine last?

- Short answer: ????
- Longer answer: probably 2-3 years, as coronavirus mutations happen at about that rate, and our normal immunity to other coronaviruses wanes at about that time
- Moderna CEO (1/7/21): “probably a couple of years”

how long does it take to work?

- OR “Can I drive directly to the bar after I get my shot?”
- Per Pfizer briefings filed with FDA/analysis reported by NY Times
 - 52% efficacy 10 days after first dose
 - 95% efficacy 7ish days after second dose
- Moderna vaccine efficacy after first dose not analyzed
 - 92% efficacy 14 days after second dose
- **We’re not going to let our guard down right away, and in fact, we’re going to have to keep our guard up for a while**

what does the vaccine *really* do for me?

- Vaccines will help your body identify and fight an infection. Period.
- **You can still get exposed and “get sick”**
- You’re not making a shield around you! Vaccines are not 100% effective!
- Someone with rampant COVID could cough on you and the virus would try to set up shop in your body
- Because of the vaccine, your body will be equipped to respond both quickly and over a longer time (the two different immune responses) to successfully clear the infection without assistance
- You can still get sick, but it would often be VERY mild and you probably would avoid hospitalization

life won't be “normal” for a while

- Even if you are vaccinated, you STILL need to follow the COVID trinity: masking, distance, hand washing.
- It is too difficult to litigate who has and has not had a vaccine (or is carrying the virus), and therefore until the cases drop EXTREMELY low, we will be masked up (at the least, restricted at the most)
- **This is for your own benefit; do not rush to take your mask off as vaccination is not 100% effective**



I want you to see your friends and family again!

I want you to be safe, too!

the personal risk assessment

- Managing COVID has always been about lower risk people mingling in low risk environments
- People
 - Low Risk People - those working from home, following the rules
 - High Risk People - anti-maskers or “promiscuous” people
- Environments
 - Low Risk Environments - outside
 - High Risk Environments - inside where there are lots of people without masks
- Vaccination lower YOUR personal risk tremendously

neal's anecdote

- My buddy is a pharmacist. Her husband is a nurse manager of a dialysis clinic.
- Their kids stay home 100%. They don't hang out with ANYONE without masks. They're hermits.
- The same goes for my family (Mr. & Mrs. Big Mouth)
- My buddy/her husband got vaccines the same day as us!
- Therefore, 2 weeks after our second dose, you BET we're going to socialize.
 - Lowest risk people
 - Higher risk environment (inside, for extended time), but irrelevant as we are COVID negative and would have immunity

can i still spread covid if i'm vaccinated?

- Theoretically, sure.
- You have some active virus that your body is fighting off, it could be spread to others. TECHNICALLY.
- But this is more of an answer as a responsible practitioner, not what we've seen in real life.
- Here's the answer: I want you to be responsible by following the COVID trinity, despite getting vaccinated, to ensure you are not catching it and/or spreading it
- There is NO clinical studies that have directly investigated this (nor will there be, probably)

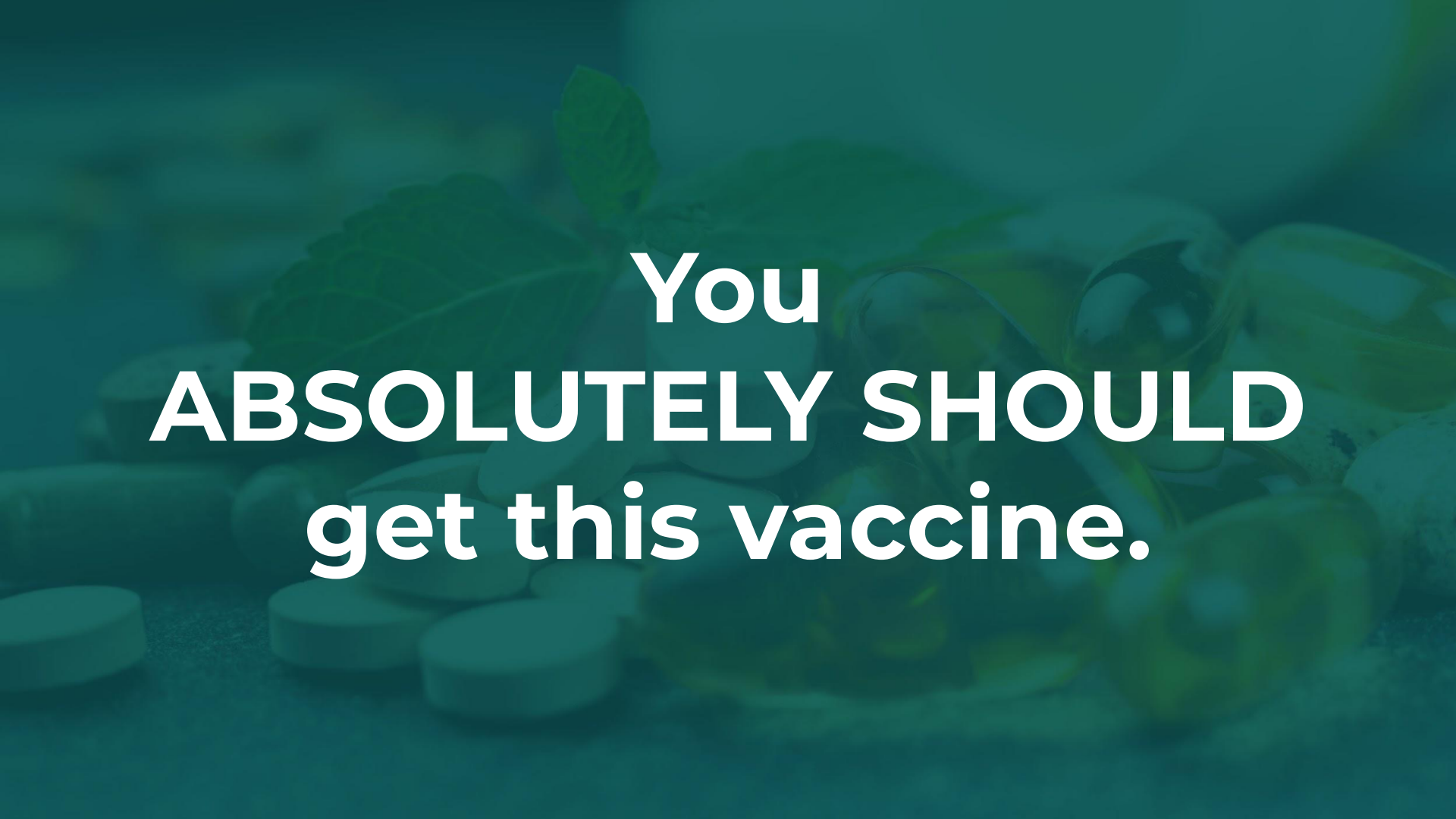
what about the variant?

back to the start

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the biggest no-brainer of your life

- On the disease side...
 - This pandemic caused by this virus is devastating to everything
 - Including our own health
 - With long term vital organ damage resulting from even mild cases.
- On the vaccine side...
 - This vaccine is of the most studied and scrutinized vaccine in our medical history
 - Coming at a time when our technology is at its finest.



**You
ABSOLUTELY SHOULD
get this vaccine.**

question & answer

THANK YOU FOR YOUR ATTENTION!

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