



**TAKE YOUR
BEST SHOT!**

WE ENGAGE 4 HEALTH IS FUNDED BY A GRANT FROM THE NATIONAL INSTITUTES OF HEALTH SCIENCE EDUCATION PARTNERSHIP AWARDS.

[HTTPS://WEENGAGE4HEALTH-LIFE/](https://weengage4health-life/)

CAST OF CHARACTERS



Hey, Miss Georgia!
Hi, Jazzy! Nice day for a
walk outside!

Hey, Pops! It's
good to see you.

It's good to see
you too. I've been
meaning to wish you a
happy birthday!



Let's take a rest at these tables. We can spread out and take off our masks.



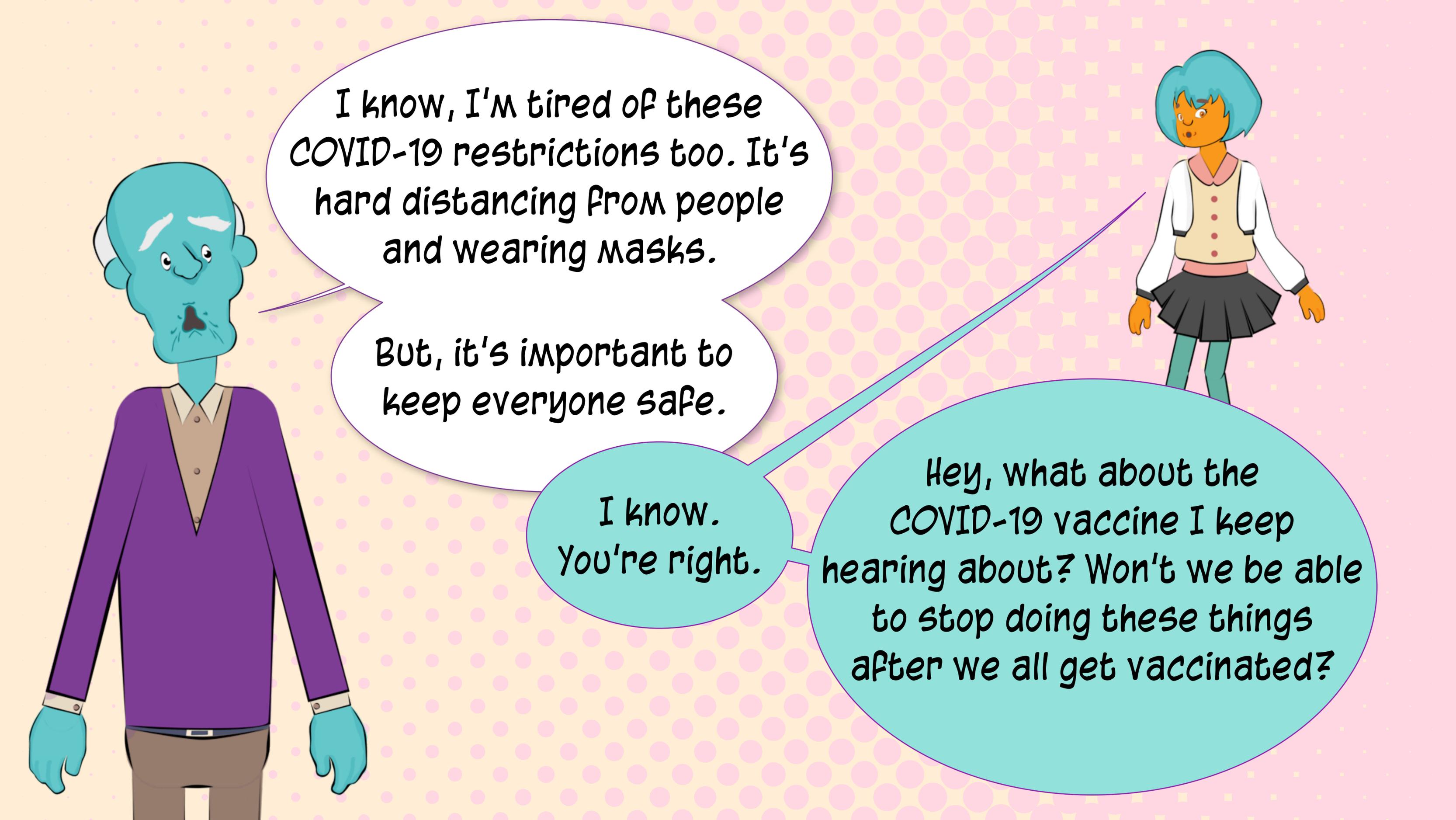
So... Happy
Birthday, Jazzy!

Thanks! Some of my
friends video called me,
which was nice!

But I still missed
having a party with
them in person, like
we always do!

I'm tired of
things being
different!





I know, I'm tired of these COVID-19 restrictions too. It's hard distancing from people and wearing masks.

But, it's important to keep everyone safe.

I know.
You're right.

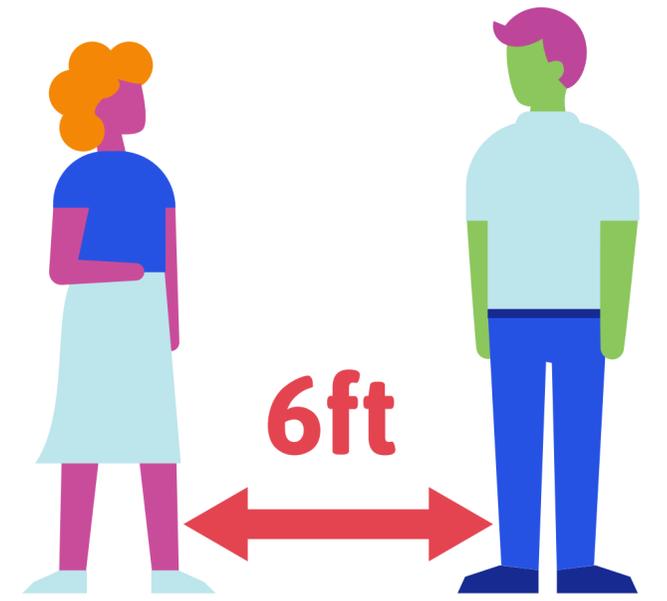
Hey, what about the COVID-19 vaccine I keep hearing about? Won't we be able to stop doing these things after we all get vaccinated?



Yes, it's great that we have vaccines now to protect us against COVID-19.

Vaccines will gradually lower the number of people with COVID-19. When the number of cases is very, very low, we can get back to normal.

Until then, even with the vaccine, we still need to social distance and wear masks.





I would love for things to go back to normal, but I'm not sure I want to get a COVID-19 vaccine.

They made it so quickly, so how can we be sure it's safe?



It's good to be skeptical. And it's true that many vaccines have taken 10–15 years to develop.

But, scientists have made vaccines quickly in the past. The mumps vaccine in the 1960s only took about four years.



Oh, my baby cousin just got her MMR vaccine! I found out that's a vaccine for measles, mumps, and rubella!





As for the COVID-19 vaccines... part of the fast development was how serious the pandemic is. Lots of money has been available for research!

But normal testing and review was still followed to make sure they're safe and work well!

VACCINE TESTING AND REVIEW STEPS

1

THE COMPANY MAKING THE VACCINE TESTS AND REVIEWS IT IN PHASES ... FROM TEST TUBES, TO LAB ANIMALS, TO SMALL GROUPS OF PEOPLE, TO LARGE GROUPS OF PEOPLE.

2

THE FOOD AND DRUG ADMINISTRATION (FDA) REVIEWS ALL THE TEST RESULTS.

3

AN INDEPENDENT PANEL REVIEWS ALL THE TEST RESULTS AND MAKES ITS REPORT PUBLIC.

Well, that makes me feel a little better. They tested and reviewed all the COVID-19 vaccines?



Yeah, all the new vaccines went through those safety checks.



Wait, you said "all the new vaccines." There's more than one? What's the difference?





The first COVID-19 vaccines to be approved use mRNA, which is a new way to make vaccines.

Scientists were working on the idea of mRNA vaccines way before the pandemic started.

mRNA has already been used for years to fight cancer and other diseases.



Is mRNA like DNA?
It sounds like it. We
learned about DNA in
school.

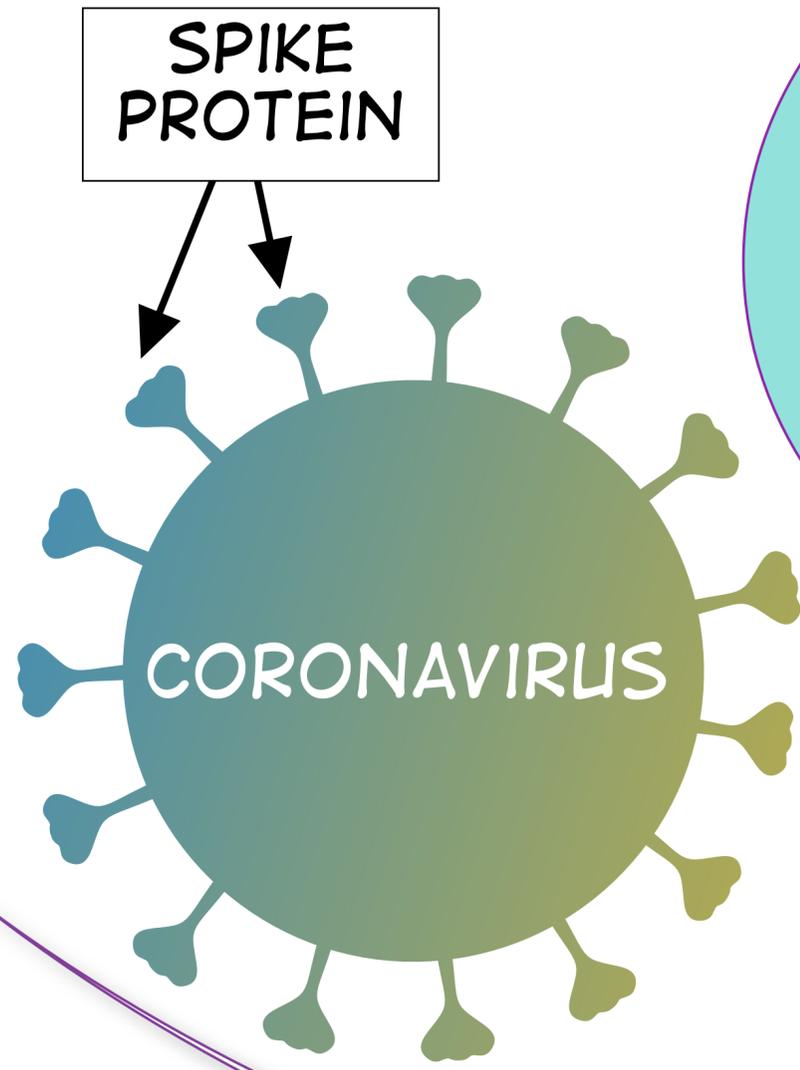
mRNA is kinda like DNA!
Think of DNA as a master
cookbook with lots of
*recipes for proteins.

mRNA is like a copy of one
recipe. The recipe goes to a
**chef that follows the
recipe to make a protein.

mRNA MOVES TO
RIBOSOMES

DNA STAYS IN
CELL NUCLEUS

*RECIPES = GENES
** CHEF = RIBOSOMES



Protein? Didn't I hear that a protein sticks out all over the coronavirus?

Those spiky looking things in the pictures?

Exactly! Those proteins are what let the virus attach to your cells.



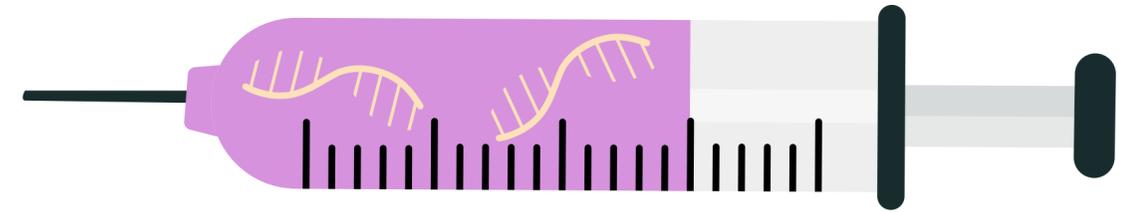


The mRNA in COVID-19 vaccines tells your body how to make that spike protein.



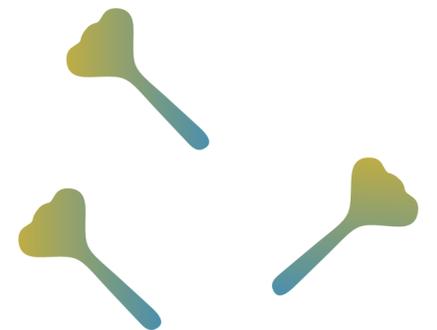
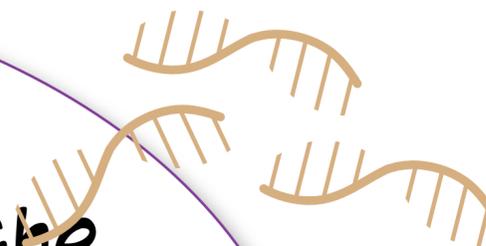
You could say the mRNA vaccines contain the recipe for the spike protein!

Exactly! After you get the vaccine, your body starts making the spike protein. This protein doesn't cause disease like the full coronavirus does.



MRNA
"RECIPE"

THE M IN MRNA
STANDS FOR
MESSENGER.



SPIKE
PROTEIN



But the spike protein something foreign, so, your immune system attacks it!

And your immune system gets trained to recognize and fight the real coronavirus!

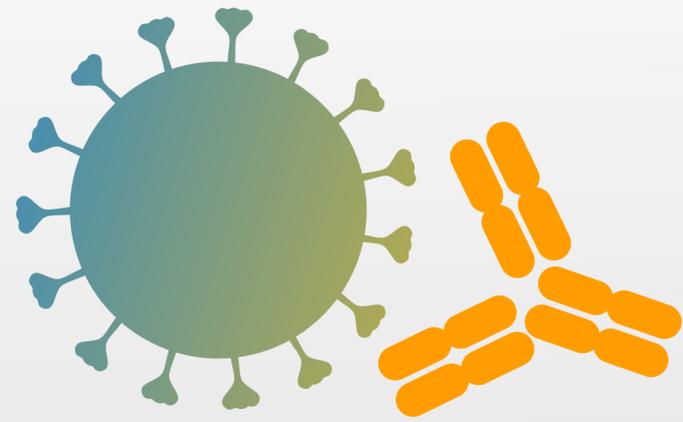
WHEN VACCINE IS GIVEN

SPIKE PROTEIN

WE BETTER LEARN TO FIGHT YOU!

WE'RE READY!

WHEN CORONAVIRUS ENTERS BODY

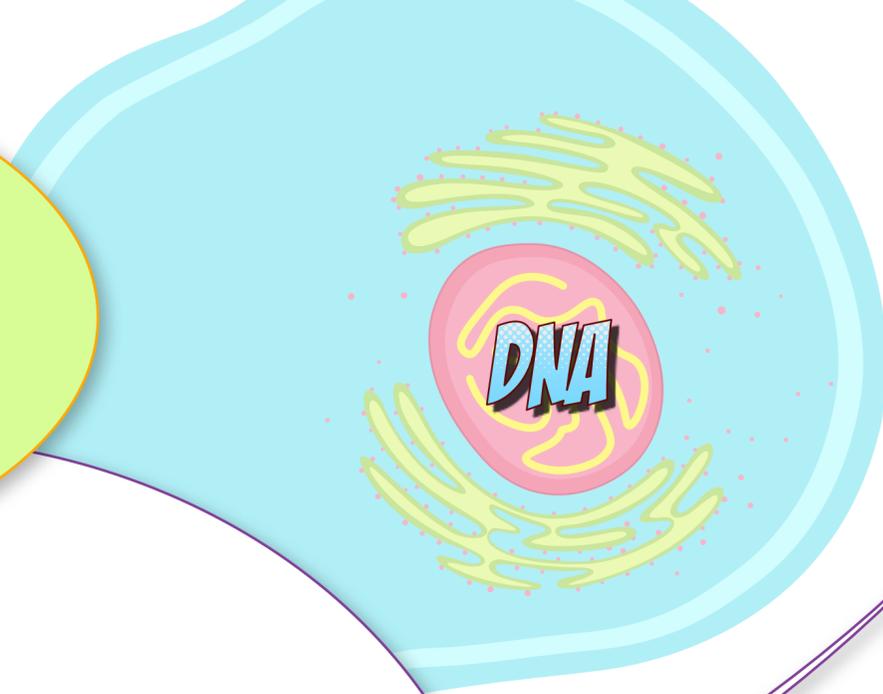


CORONAVIRUS WITH SPIKE PROTEIN

WE ALREADY KNOW YOU!



HMM. I don't know. Can this mRNA affect my DNA somehow?



No. mRNA can't affect your DNA. Your DNA is always safe inside the nucleus of each cell. The mRNA from the vaccine doesn't go in there.



Also, the vaccine mRNA is only in your body a short time. It makes the spike protein and then quickly breaks down.

FUN FACT: mRNA VACCINES NEED TO STAY COLD TO KEEP THE mRNA FROM BREAKING DOWN.

DR. COOKS EXPERT TIP:

DNA AND **RNA** ARE BOTH MOLECULES CALLED **NUCLEIC ACIDS**. MRNA IS A TYPE OF RNA INVOLVED IN MAKING PROTEINS.

NUCLEIC ACIDS ARE LONG CHAINS OF NUCLEOTIDES.

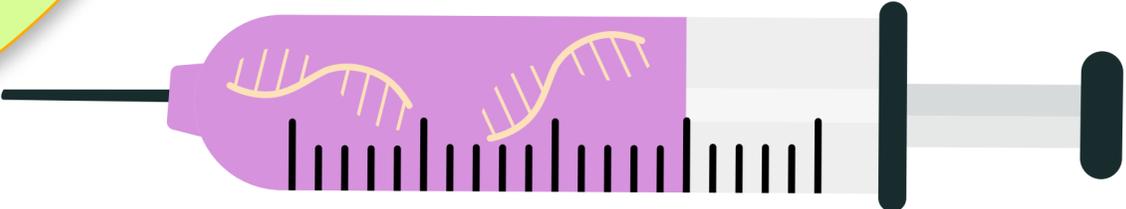
NUCLEOTIDE + NUCLEOTIDE + NUCLEOTIDE + NUCLEOTIDE ... = NUCLEIC ACID

THE ORDER OF THE NUCLEOTIDES IN A GIVEN DNA OR RNA MOLECULE CODES FOR DIFFERENT PROTEINS, LIKE THE PROTEINS ON THE OUTSIDE OF VIRUSES.

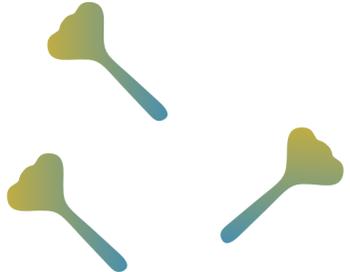


OK. So, I see that the mRNA vaccine is well-tested and safe. And the mRNA in it is the "recipe" for the spike protein on the outside of the coronavirus.

You've got it!



MRNA
"RECIPE"



SPIKE
PROTEIN



People are developing some other COVID-19 vaccines that use weakened viruses to train your immune system to fight the coronavirus.

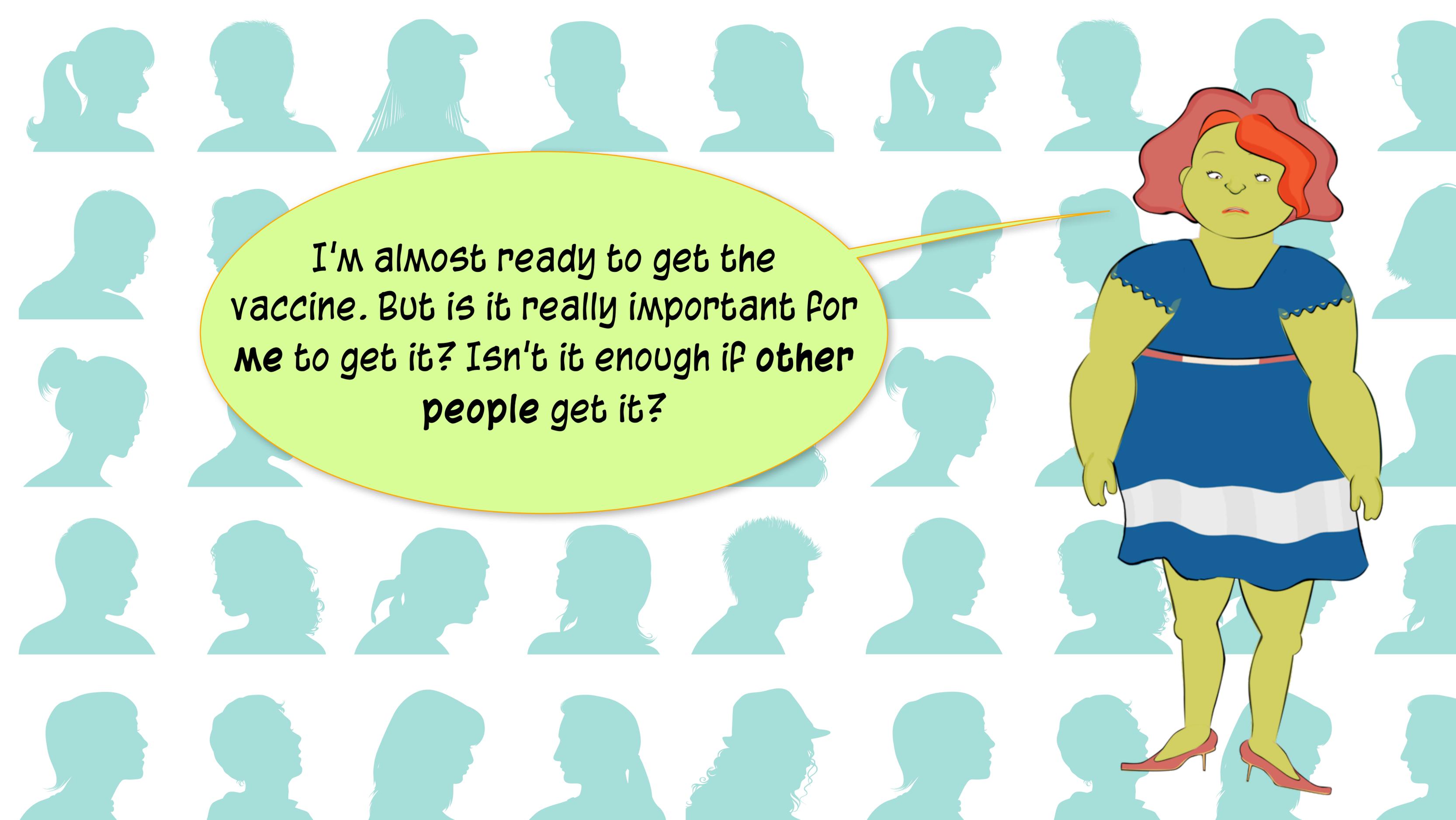
That method is more traditional than the mRNA type.

WE BETTER LEARN TO FIGHT YOU!

WE'RE READY!

WEAK VIRUS

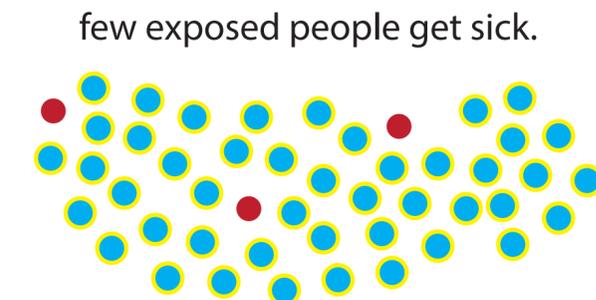
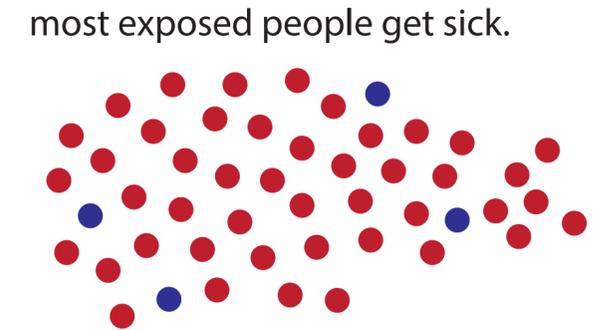


A woman with red hair and a blue dress stands on the right side of the image, looking slightly to her left with a concerned expression. She is surrounded by a grid of teal-colored silhouettes of various people's heads and shoulders. A large, light green speech bubble with a black outline is positioned in the center-left, containing text. A thin yellow line connects the top of the speech bubble to the woman's head.

I'm almost ready to get the vaccine. But is it really important for me to get it? Isn't it enough if other people get it?

Are you talking about herd immunity?

Oh, I heard about this in science class. Isn't herd immunity when so many people have gotten vaccinated that it's hard for diseases to spread?



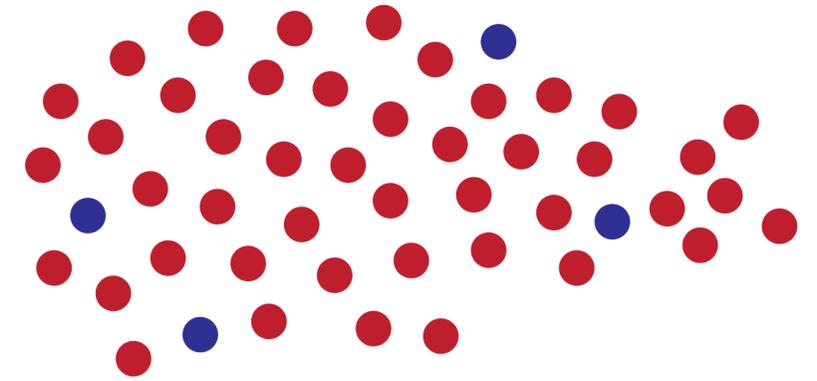
- Vaccinated
- Not vaccinated
- Sick



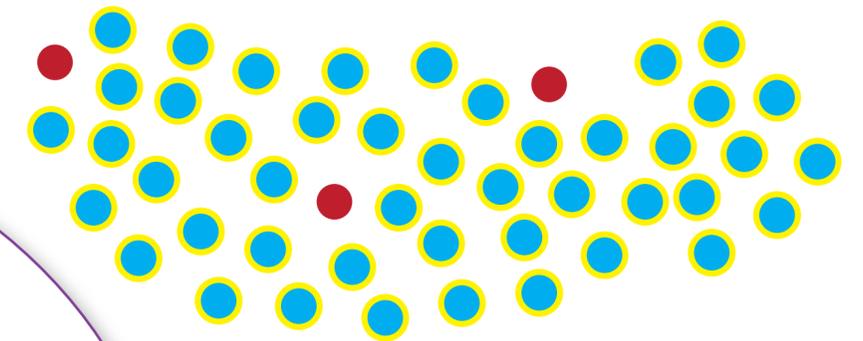
That's right, Jazzy! Herd immunity keeps viruses like the coronavirus from spreading. But getting enough people vaccinated will take time.

Even when a lot of people are vaccinated, COVID-19 won't be completely gone. But, it'll be much less common.

before vaccines: many people getting COVID-19



after vaccines: few people getting COVID-19





When I was a kid, I remember bringing measles home from school. All my siblings and I got sick, but now hardly anyone gets measles because of vaccines.

Yeah, I've never heard of anyone I know getting measles. I guess that's why it's so important for everyone to get the vaccine.



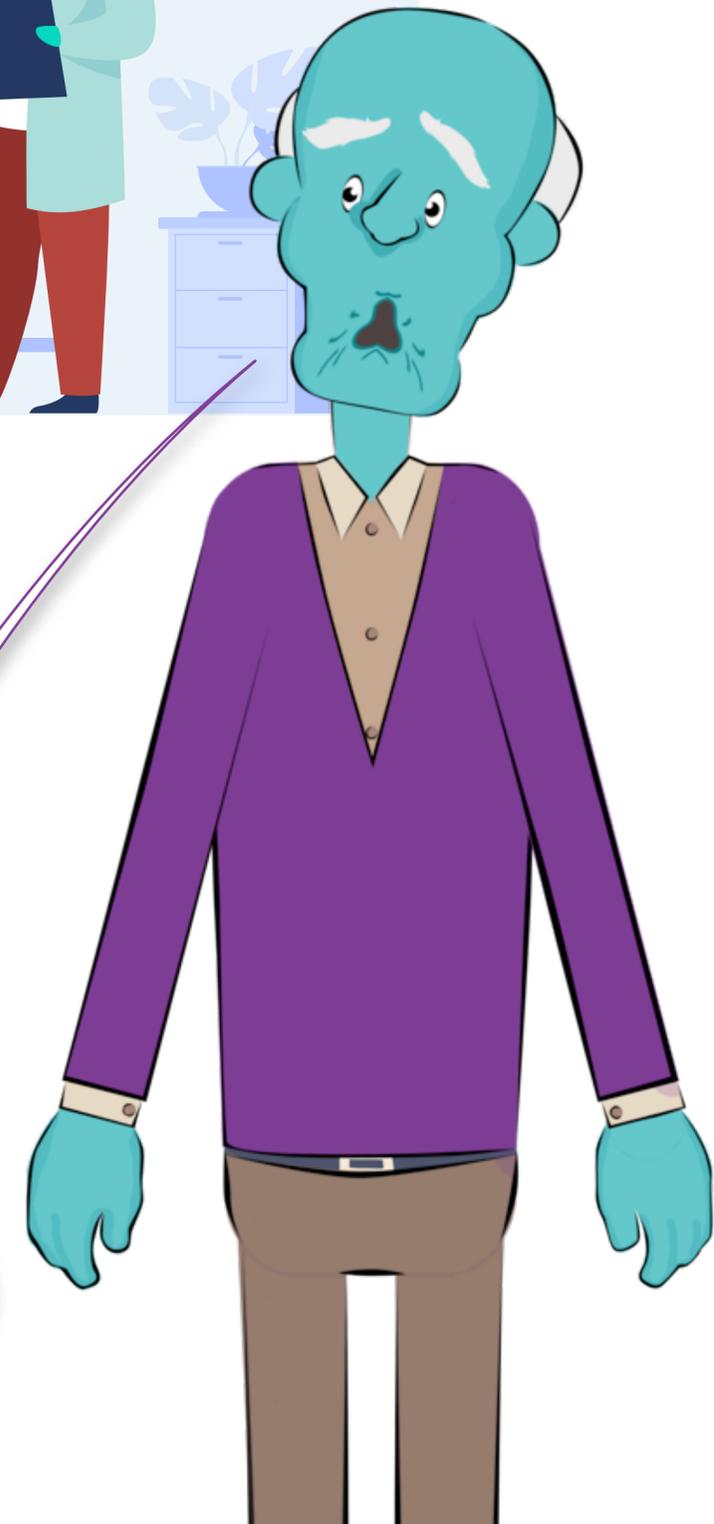
NO MEASLES!



My siblings and I all recovered from measles, but a lot of people died from it before the vaccine!

I guess COVID-19 is similar! I know some people who got it and didn't get very sick, but one of my friends was admitted to the hospital when he got it.

How scary!



I don't want to risk getting COVID-19 like my friend did, but the vaccine still makes me a bit nervous.

People have worried about new vaccines in the past too. Remember when Elvis got the polio vaccine to show people it was safe?

I do! And I saw Dr. Cook get the COVID-19 vaccine on the local tv news.





Oh, that reminds me, my favorite rapper posted a video of herself getting the vaccine. Here she is!

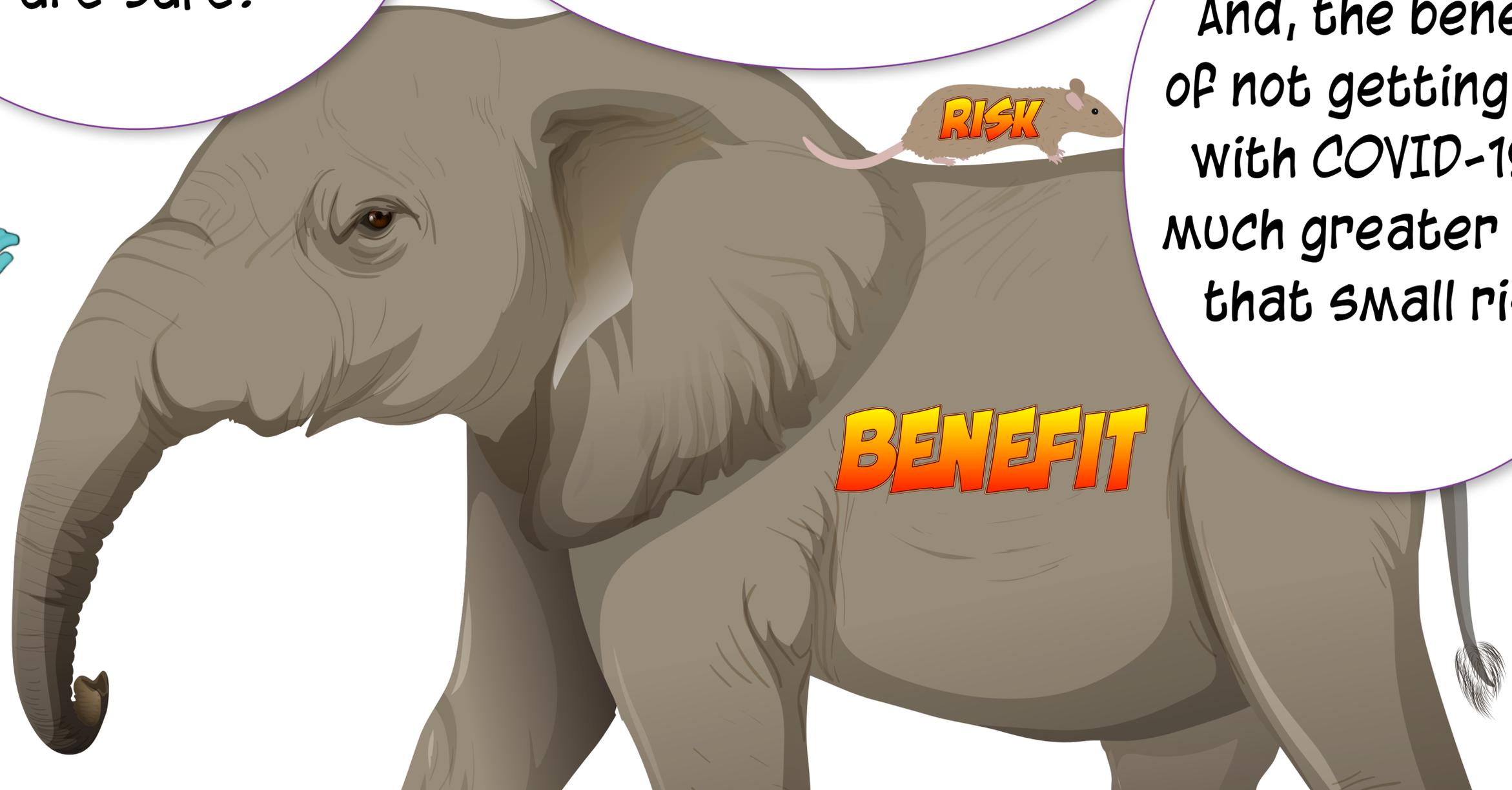
She's inspiring her fans to get vaccinated... like Elvis did back in your day!



I understand you've had some worries, Miss Georgia, but overall, vaccines are safe.

It's true that all medical treatments have risk. But the risk of any bad reaction to the COVID-19 vaccine is very small.

And, the benefit of not getting sick with COVID-19 is much greater than that small risk.





Once everyone is vaccinated, COVID-19 will be like measles and show up way less often.



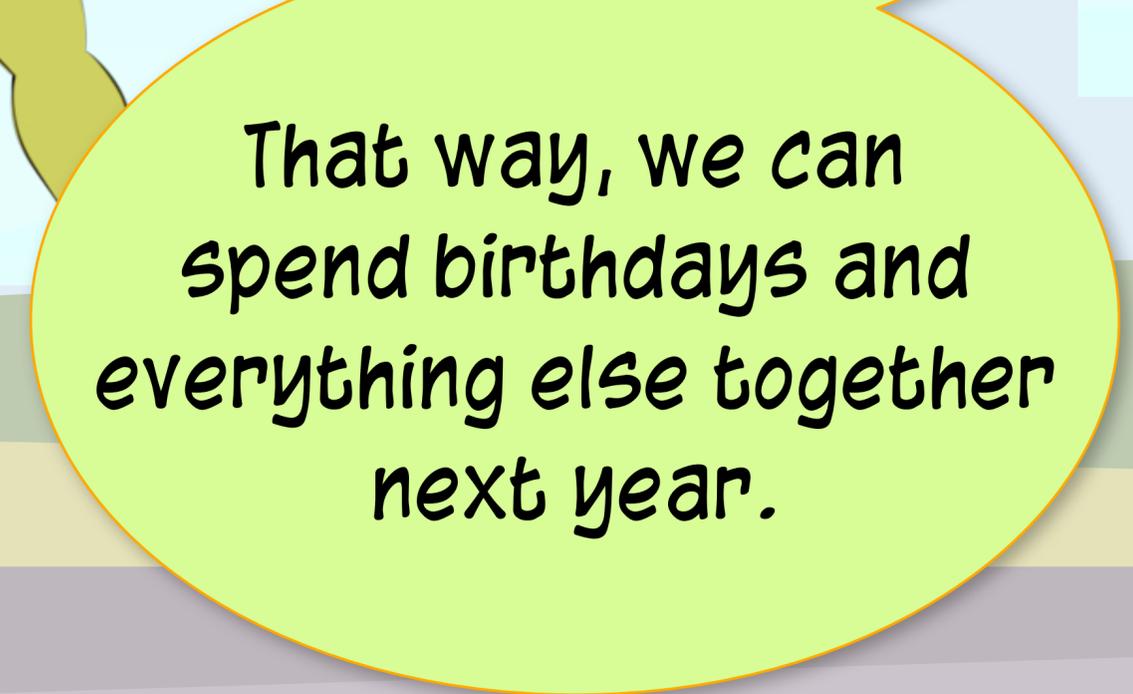
I can't wait!



Me either! But Meanwhile, let's keep up with masks, distancing, and washing hands.



It's a lot easier to keep doing these things knowing the end is in sight. I'll definitely get vaccinated!



That way, we can spend birthdays and everything else together next year.



We all look forward to that!



We sure do!

CHALLENGES TO HEALTH

1 FOR LIFE TO GET BACK TO NORMAL, WE NEED THE PROTECTION FROM COVID-19 THAT A VACCINE OFFERS.

2 SOME PEOPLE ARE SCARED TO GET COVID-19 VACCINES. THEY WORRY THAT THE VACCINES WERE MADE TOO QUICKLY OR THAT MRNA VACCINES ARE NOT SAFE.

3 SOME PEOPLE THINK IT'S GOOD ENOUGH IF OTHER PEOPLE GET THE VACCINE AND THEY DON'T. BUT FOR THE POPULATION AS A WHOLE TO BE PROTECTED, ALMOST EVERYONE NEEDS TO HAVE A COVID-19 VACCINE.

HEALTHY ACTIONS

1

THE COVID-19 VACCINES WORK AND ARE SAFE. GETTING THE VACCINE AS SOON AS IT'S AVAILABLE TO YOU PROTECTS YOU AND THE PEOPLE AROUND YOU.

2

CONTINUING TO WEAR MASKS AND SOCIAL DISTANCE UNTIL ALMOST EVERYONE HAS A VACCINE WILL SLOW DOWN THE SPREAD OF THE CORONAVIRUS.

3

HELP YOUR IMMUNE SYSTEM PROTECT YOU FROM DISEASE. SLEEPING ENOUGH, EATING COLORFUL FRUITS AND VEGETABLES, AND EXERCISING BOOST YOUR IMMUNE SYSTEM.



THIS WE ENGAGE 4 HEALTH (WE4H) STORY WAS DEVELOPED AS A COLLABORATION OF COMMUNITY REPRESENTATIVES OF THE WEST END NEIGHBORHOOD IN CINCINNATI, OHIO AND WE4H PROGRAM STAFF.

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