Getting 'Back to Normal' Is Going to Take **All of Our Tools**

If we use all the tools we have, we stand the best chance of getting our families, communities, schools, and workplaces "back to normal" sooner:

Get vaccinated.

Wear a mask.

Stay 6 feet from others, and avoid crowds.

Wash hands often.

This disease is devastating, and these vaccines will help stop it, but only if enough of us get it.

KNOW THE FACTS!

Take a look at the attached articles for more info on the COVID-19 Vaccines.

How to Respond to Someone Who Doesn't Want the Vaccine

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COVID-19 has upended all our lives but with vaccine rollouts happening across the country, there is finally an end in sight...but only if enough people actually get vaccinated. So when your friend/aunt/colleague tells you that they're considering *not* getting the vaccine, you're understandably concerned—for them and for the general population. Your plan of action? Know the facts. We spoke to the experts to find out who actually shouldn't get the vaccine (note: this is a very small group of people), and how to address the concerns of those who are skeptical about it.

Note: The below information relates to the two COVID-19 vaccines that are currently available to Americans and developed by pharmaceutical companies Pfizer-BioNTech and Moderna.

Who should definitely NOT get the vaccine

- **Those under the age of 16.** "Right now, the available vaccines are not approved for use in those under the age of 18 for Moderna and under the age of 16 for Pfizer because adequate numbers of younger participants were not included in the safety trials," Elroy Vojdani, MD, IFMCP, tells us. "This may change as both companies are currently studying the effects of the vaccine in adolescents." But until we know more, young people under the age of 16 should not receive the vaccine.
- **Those with allergies to any ingredient in the vaccine.** According to the CDC, anyone who's had an immediate allergic reaction—even if it was not severe—to any ingredient in either of the two available COVID-19 vaccines should not be vaccinated.

Who should talk to their doctor before getting the vaccine

- **People with autoimmune diseases.** "There are no short-term indications that the vaccine will

increase autoimmunity, but we will have much larger sets of data regarding this in the coming months," says Dr. Vojdani. In the meantime, patients with autoimmune disease should have a discussion with their physician about whether the vaccine is the right choice for them. "In general, in this group, I lean towards the vaccine being a much better option than the infection itself," he adds.

- **Those who have had an allergic reaction to other vaccines or injectable therapies.** Per the CDC, if you have had an immediate allergic reaction—even if it was not severe—to a vaccine or injectable therapy for another disease, you should ask your doctor if you should get a COVID-19 vaccine. (Note: The CDC recommends that people with a history of severe allergic reactions *not* related to vaccines or injectable medications—like food, pet, venom, environmental or latex allergies—*do* get vaccinated.)

- **Pregnant women.** The American College of Obstetricians and Gynecologists (ACOG) says the vaccine should not be withheld from people who are lactating or pregnant. ACOG also states the vaccine is not believed to cause infertility, miscarriage, newborn harm, or harm to pregnant people. But because the vaccines weren't studied in people who were pregnant during clinical trials, there is little safety data available to work with.

Wait, so should pregnant women get the vaccine or not?

"Getting the COVID vaccine while pregnant or nursing is a personal decision," says Nicole Calloway Rankins, MD, MPH, a board certified OB/GYN and host of the *All About Pregnancy & Birth* podcast. "There is very limited data about the safety of COVID-19 vaccines for people who are pregnant or nursing. When considering whether to get the vaccine while pregnant or breastfeeding, it's important to ask your healthcare provider in the context of your own personal risk," she tells us.

For example, if you have underlying health problems that increase your risk of having a more severe form of COVID-19 (like diabetes, high blood pressure or lung disease), you may be more inclined to get the vaccine while pregnant or breastfeeding. Likewise, if you work in a higher risk health care environment like a nursing home or hospital.

"Remember that there are risks either way. With the vaccine you're accepting the risks of vaccine side effects, which thus far we know to be minimal. Without the vaccine you're accepting the risks of getting COVID, which we know can potentially be devastating."

Bottom line: If you're pregnant, talk to your doctor so that you can assess the risks and decide whether the vaccine is right for you.

My neighbor says that they've already had COVID-19, does that mean they don't need the vaccine?

The CDC is recommending that even those who have had COVID-19 get vaccinated. "The reason for this is that immunity from the infection is somewhat variable and it's very difficult to make an individual assessment of it as a deciding factor in whether one should get it or not," explains Dr. Vojdani. "Their response to that was to recommend vaccination so that one can be sure that they have the level of immunity demonstrated in the phase 3 studies from the vaccine makers. With COVID representing such a massive global health crisis I understand this take."

My friend thinks that vaccine is linked to infertility. What should I tell her?

Short answer: It's not.

Long answer: "A protein that's important for the placenta to function properly, syncytin-1, is somewhat similar to the spike protein formed by receiving the mRNA vaccine," explains Dr. Rankins. "There has been a false theory circulated that antibodies formed to the spike protein that results from the vaccine would recognize and block syncytin-1, and thus interfere with the functioning of the placenta. The two do share a few amino acids, but they are not similar enough that antibodies formed as a result of the vaccine would recognize and block syncytin-1." In other words, there is zero evidence that the COVID-19 vaccine causes infertility.

Why are some members of the Black community so skeptical

of the vaccine?

According to the results of a Pew Research Center poll published in December, only 42 percent of Black Americans said they would consider taking the vaccine, compared to 63 percent of Hispanic and 61 percent of white adults who would. And yeah, this skepticism makes total sense.

Some historical context: The United States has a history of medical racism. One of the most infamous examples of this was the government-backed Tuskegee Syphilis Study that began in 1932 and enrolled 600 Black men, 399 of which had syphilis. These participants were tricked into believing they were receiving free medical care but were instead just observed for research purposes. The researchers provided no effective care for their illness (not even after penicillin was found to cure syphilis in 1947) and as such, the men experienced severe health problems and death as a result. The study only ended when it was exposed to the press in 1972.

And that's just one example of medical racism. There are many more examples of health inequity for people of color, including lower life expectancy, higher blood pressure and strain on mental health. Racism also exists within healthcare (Black people are less likely to receive appropriate pain medication and experience disproportionately high rates of death related to pregnancy or childbirth, for example).

But what does this mean for the COVID-19 vaccine?

"As a Black woman, I also share a lingering mistrust of the healthcare system based on the way the healthcare system has treated us, both historically and currently," says Dr. Rankins. "However, the science and data is solid and suggests the vaccine is effective and safe for the vast majority of people. In contrast, we know that COVID can kill otherwise healthy people and can have devastating long term effects that we are just now beginning to understand," she adds.

Here's another factor to consider: COVID-19 affects Black people and other people of color more severely. Data from the CDC shows that more than half of COVID-19 cases in the United States have been among Black and Latinx people.

For Dr. Rankins, that was the deciding factor. "I got the vaccine, and I hope most people will get it as well."

Bottom line

It's unclear exactly how many Americans would need to get vaccinated in order to reach "herd immunity" (i.e., the level at which the virus will no longer be able to spread through the population). But Dr. Anthony Fauci, the director of the National Institute of Allergy and Infectious Diseases, recently said that the number would need to be somewhere between 75 to 85 percent. That's... a lot. So, if you *can* receive the vaccine, you should.

"It's understandable to be skeptical about something relatively new, but it's also important to put emotion aside and to look at the objective evidence," says Dr. Vojani. "The evidence says that the vaccine results in a massive decrease in the development of COVID-19 symptoms for those inoculated and prevents hospitalization and death. So far, short-term side effects seem to be relatively mild and manageable particularly compared with COVID-19 itself and no autoimmune complications were observed so far. This is contrary to the infection which carries an alarming rate of chronic fatigue and post infectious autoimmune disease."

If someone tells you that they don't want to get the vaccine and they're not in one of the disqualified groups mentioned above, you can give them the facts as well as urge them to speak with their primary care provider. You can also pass along these words from Dr. Rankins: "This disease is devastating, and these vaccines will help stop it, but only if enough of us get it."

RELATED: Your Ultimate Guide to Self-Care During COVID-19

A Simple Breakdown of the Ingredients in the COVID Vaccines - COVID-19, Health Topics - Hackensack Meridian Health

The Pfizer-BioNTech and Moderna COVID-19 vaccines were given Emergency Use Authorization (EUA) from the U.S. Food and Drug Administration (FDA) in mid-December 2020. Prior to authorization by the FDA, these vaccines underwent the same rigorous safety and effectiveness standards as all other vaccines. Quickly, vaccine distribution began, starting with health care professionals on the frontlines of patient care.

Once available to the broader public, it's critical that a high percentage of the population receive the vaccine in order to achieve herd immunity against COVID-19. Herd immunity occurs when most of a population is immune to an infectious disease (either from previous infection and/or vaccination) and provides indirect protection to those who are not immune to the disease.

There have been many rumors flying around on the internet about what's in the vaccine. Some rumors even suggested that the vaccines contain gluten, wheat, eggs and even bee venom! All of that is simply, untrue.

If you're among the many wondering "what's actually in it?" and, "is it safe to receive the injection?", keep reading.

COVID Vaccine Ingredients

There are two COVID-19 messenger-ribonucleic acid (mRNA) vaccines currently authorized for emergent use in the United States: the Pfizer-BioNTech and the Moderna vaccines. Conventional vaccines rely on weakened and inactivated pathogens or a fragment of the pathogen to trigger an immune response. In contrast, the COVID-19 mRNA vaccines use a novel approach by which mRNA is delivered into our cells to provide the genetic instructions for our own cells to "temporarily" make a "specific" viral protein that triggers an immune response.

The Pfizer-BioNTech COVID-19 vaccine is made of the following ingredients:

- **mRNA** – Also known as messenger ribonucleic acid, mRNA is the only active ingredient in the vaccine. The mRNA molecules contain the genetic material that provide instructions for our body on how to make a viral protein that triggers an immune response within our bodies. The immune response is what causes our bodies to make the antibodies needed to protect us from getting infected if exposed to the coronavirus.

There are rumors that mRNA vaccines will alter our DNA because the RNA molecule can convert information stored in DNA into proteins. That's simply, not true. It's critical to note that the mRNA vaccines never enter the nucleus of the cell, where our DNA is stored. After injection, the mRNA from the vaccine is released into the cytoplasm of the cells. Once the viral protein is made and on the surface of the cell, mRNA is broken down and the body permanently gets rid of it, therefore making it impossible to change our DNA.

- **Lipids –** The following lipids are in the new COVID vaccine. Their main role is to protect the mRNA and provide somewhat of a "greasy" exterior that helps the mRNA slide inside the cells.
    - (4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis
    - (2-hexyldecanoate), 2 [(polyethylene glycol)-2000]-N,N-ditetradecylacetamide
    - 1,2-Distearoyl-snglycero-3- phosphocholine
    - cholesterol
- **Salts –** The following salts are included in the Pfizer vaccine and help balance the acidity in your body.
    - potassium chloride
    - monobasic potassium phosphate
    - sodium chloride
    - dibasic sodium phosphate dihydrate

- **Sugar –** Basic table sugar, also known as sucrose, can also be found in the new COVID vaccine. This ingredient helps the molecules maintain their shape during freezing.

The Moderna COVID-19 Vaccine is made of the following ingredients:

- **mRNA –** Like the Pfizer BioNTech vaccine, Moderna's also uses mRNA technology to build antibodies against COVID-19.

- **Lipids** – The Moderna vaccine also requires lipids to help deliver the mRNA to the cells.
    - SM-102
    - 1,2-dimyristoyl-rac-glycero3-methoxypolyethylene glycol-2000 [PEG2000-DMG]
    - cholesterol
    - 1,2-distearoyl-snglycero-3-phosphocholine [DSPC]

The remaining ingredients (below), including acids, acid stabilizers, salt and sugar all work together to maintain the stability of the vaccine after it's produced.

- **Acids**
    - Acetic acid
- **Acid Stabilizers**
    - Tromethamine & Tromethamine hydrochloride
- **Salts**
    - Sodium acetate
- **Sugar**
    - Sucrose

That's it! "Overall, the main ingredients in the Pfizer-BioNTech and Moderna vaccines are very similar, both vaccines were found to be safe and efficacious in preventing symptomatic COVID-19 disease in rigorously conducted clinical trials. These COVID-19 mRNA vaccines are safe and went through the same rigorous testing process as other vaccines before being approved for emergent use in the United States. Although local and systemic side effects have been reported, as is the case for many other medical interventions, the risk of lacking protection against COVID-19 and developing severe disease far exceeds those posed by the vaccine itself. " says Juan Ravell, M.D., division chief of allergy and immunology at Hackensack University Medical Center. "These ingredients are safe and the development of COVID-19 mRNA vaccines marks a huge step towards acquiring heard immunity and the end of this pandemic."