Town of New Castle, NH
Settled 1623
Incorporated 1693

COVID Update January 22, 2021

The Vaccine roll out is slower than hoped and it's difficult to find the real data and determine the exact causes, but it is multifactorial. The pace of vaccination is improving.

The UK variant has been detected in more states in the US. Also there are variants from Brazil and South Africa. All three variants have a particular mutation in the virus spike protein, called N501Y. This mutation impacts an important region on the virus that latches on to the cells and may make the virus stickier, allowing it to bind and enter cells more easily. So far the vaccines appear to work against these variants but these variants are more transmissible and contagious. It is estimated that the UK variant will be the predominant infection in the US by March.

A Few of the Benefits of Vaccination:

-Chances of you developing COVID19 are much decreased (likely about 1/20 for all comers).

-The Moderna vaccine prevented Severe COVID 19 infections. There was 0 cases of severe infection in the vaccine group as compared to 30 in placebo.

-Less likely to transmit the virus to others.

-Getting people vaccinated is the best hope & fastest way to end pandemic Vaccination puts us closer to herd immunity one step at a time. Once we have this, restrictions can loosen and we can go back to our normal way of life.

-Vaccine safety: Large studies have shown the vaccine is safe. Millions of people in US have received it already with very few serious side effects.

- Risks of COVID: getting vaccine is much safer than the very real risks of getting COVID

FAQs:

Side effects of vaccination: Systemic side effect tend to start within 1-2 days of dosing, resolve in 1-2 days, occur more frequently in younger vs. older people, and are more frequent after the 2nd dose than the first dose.
The most common side effects that are related to the vaccine with approximate percentages, in order of highest to lower are:

Injection site reactions, for example pain, redness, swelling 84.1%
Fatigue 62.9%

Headache 55.1%
Muscle Pain 38.3%
Chills 31.9%
Joint Pain 23.6%
Fever 14.2%

How effective is the COVID-19 vaccine in comparison to other vaccines?
The Pfizer and Moderna vaccines have efficacy of 94-95% in all comers. In comparison the flu vaccine has efficacy of approximately 60-70%, the pneumonia vaccine 57-84% and the shingles vaccine 89-97%.

Do you need to continue wearing a mask if you have been vaccinated?
Yes. We don't know yet whether the vaccine prevents asymptomatic infections or the ability to transmit the virus. The Moderna trial performed a nasopharyngeal swab and tested for the virus just **before the second dose.** There were 14 (0.1%) positive swabs in the vaccine group and 38 (0.3%) positive in the placebo group. **We also know that fully vaccinated people also can develop symptomatic COVID 19 (i.e. it is not 100% effective and approximately 1/20 can develop infection despite being vaccinated).** Therefore you should continue to wear a mask after vaccination until we have more data and/or have obtained herd immunity. Wearing a mask will continue to prevent you from spreading the virus to others if you are asymptomatically infected and also protect you from the unlikely, but still possible, symptomatic infection.

Can you be infected with COVID-19 if you already had an infection?
Yes, but it is unlikely. Public Health England is conducting a study called SARS-CoV-2 Immunity and Reinfection Evaluation (SIREN). Out of the 6,614 people who previously had an infection and had antibodies to COVID-19, 44 were reinfected over a 5 month period of time. These natural antibodies gave about 83% protection from reinfection.

Are there new data on the efficacy of the vaccines against the new UK variant?
Yes, and the data are encouraging as initial data indicate at least the Pfizer vaccine is effective against the UK variant. As the Moderna vaccine is made using the same technology, it also is likely efficacious.
Recently Pfizer and BioNTech released new data on a study in the test tube (in vitro) that shows sera from individuals immunized with the Pfizer vaccine are capable of neutralizing the U.K. variant known as B.1.1.7 lineage or VOC 202012/01. Previous data evaluated one of the key mutations (N501Y) in the U.K. strain, which is also shared by the South African strain. That study showed efficient neutralization of the N501Y mutated spike bearing virus by sera of individuals who had received the Pfizer-BioNTech COVID-19 vaccine. The current *in-vitro* study investigated the full set of UK strain spike mutations. These new data show that it is likely that the UK variant will also be prevented by the Pfizer vaccine.

How long will immunity last after vaccination and you need another shot in the future?
Moderna just reported that they anticipate immunity with their vaccine will last at least for 1 year. They are planning to start a new study this summer which will provide a booster vaccination 1 year after previous vaccination. Although we still don't know for sure the duration of protection with vaccination, it lasts at least 6 months. It is possible the COVID-19 vaccine will be similar to the flu vaccine and require a yearly booster shot.

How many doses of the vaccines has Operation Warp Speed purchased?

The US government has a contract for the following doses. Since the Pfizer and Moderna vaccines require two doses per person, the US needs other vaccines to be approved in order to vaccinate everyone.

Moderna 200 million
Pfizer 200 million
J&J 100 million
AstraZeneca 300 million
Novavax 100 million
Sanofi/GSK 100 million

Where can I receive the Monoclonal antibody if I have COVID 19 and I am at high risk for complications?
The CDC has released a locator to help find hospitals that have the Lilly and Regeneron antibodies. One of them is Portsmouth Regional Hospital.

https://protect-public.hhs.gov/pages/therapeutics-distribution

Can aspirin prevent COVID-19?
Some groups are advocating for using low dose (baby) aspirin, multivitamins and vitamin D for the prevention of COVID-19. There are NO data to support the use of aspirin for prevention of COVID-19. It has been described for patients with severe COVID-19 who are prone to clotting. However it shouldn't be used for prevention of COVID-19. Aspirin impacts platelet function, bleeding time and also can cause gastrointestinal issues.

Are the vaccines made from fetal tissue? No. The current mRNA vaccines from Moderna and Pfizer are NOT made from cells that were obtained from fetal tissue.

Are the newer vaccines less effective than Pfizer and Moderna? Not necessarily. See below for more detail.

It is important to note that the efficacy stated for these vaccines are a point estimate. There is a confidence interval around that estimate. For example, the Moderna vaccine has 94.5% efficacy but the range is 86.5%-97.8%. In comparison, the data from the first reports from AstraZeneca/Oxford indicated an overall efficacy of 70.4%. People showed concern about the lower rate than Moderna and Pfizer. But the range (confidence interval) is 54.8%-80.6%. As you can see, both of these ranges overlap, so their efficacy may be similar. Therefore people shouldn't be hesitant to receive vaccines that are effective but have a lower point estimate than the Moderna and Pfizer vaccines.

COVID vaccine can give you COVID. No - current vaccines do not include live or attenuated virus

COVID vaccines will alter my DNA. No evidence to support this.
COVID vaccine can make you sterile. No evidence to support this.
Pregnant women should not get COVID vaccine- Pregnant women should be advised of risks & allowed to get vaccine if desired. Please talk to your OB/GYN or PCP about this.
COVID vaccine can trigger an "autoimmune phenomenon". No evidence to support this.
COVID vaccine can lead to "antibody enhanced infection" rather than protection No evidence to support this.

Please continue your vigilance with community mitigation measures and do not succumb to COVID fatigue. There really is a light at the end of the tunnel.

Many thanks to Tony and Diane Coniglio for providing some of the above information.

Yours in Health,

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