

Dear Friends,

Since so many of you reached out to me yesterday with questions regarding the announcement about Pfizer's vaccine, I thought it was best to sent out a practice email. Pfizer's announced the early results of its coronavirus vaccine trial suggests that the **vaccine is more than 90% effective in preventing Covid-19** among trial volunteers who had no evidence of prior coronavirus infection. (*Vaccine efficacy is the % reduction in disease between the vaccinated and unvaccinated participants)

Pfizer has not yet applied for an EUA (Emergency Use Authorization) because they are waiting to collect two more months of data. The Pfizer results have not been peer-reviewed by outside scientists or published in a medical journal. However, Pfizer did release their protocols, which normally are kept secret, which has allowed many scientific investigators to get an inside look at how the data was collected and analyzed. Undoubtedly, this is very promising news, but it will likely be 6-12 months before this vaccine has widespread availability. Here are some interesting facts about the vaccine:

• Pfizer's vaccine **requires individuals to receive two injections of the vaccine three weeks apart**. Pfizer's vaccine uses mRNA, technology, which uses "genetic material to cause the body to create a protein from the virus; the immune system then <u>recognizes</u> the virus and learns to attack". Moderna is producing a similar mRNA vaccine.

• Pfizer's vaccine requires **super-cold storage and this will make distribution much more difficult.** It will require specialized trucks and pharmacies, doctor offices and other non-lab environments will have to be supplied with specialized equipment that can store the vaccine at -70 degrees (deep freeze). In the beginning the vaccine will likely only be available at hospitals. The government will also partner with major pharmacies...CVS, Walgreens.. to provide them with deep freezing storage equipment.

• No serious adverse outcomes have been reported. Pfizer is waiting until the end of the month so they can observe half of the patients in their study for any side effects or safety issues for at least two months following their second dose.

• Since the vaccine has been produced in absolute record time, it has only been studied for a couple of months; scientists are not able to say how long the vaccine will protect against infection.

• Pfizer says up to 50 million doses could be available globally by the end of the year, with 1.3 billion available in 2021. There are also expected to be distribution challenges due to the deep freezing requirements.

• These early results were based on evaluations of 94 confirmed cases of Covid-19 in trial participants. The clinical trial will continue until at least 164 confirmed cases have been evaluated.

• Pfizer is not part of the Trump Administration's "Operation Warp Speed", and therefore did not take any federal money to help pay for research and development.

Sincerely,

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