## Vermont EMS - COVID-19 Vaccine Sugaring Out the FACTS Daniel Wolfson, MD – State EMS Medical Director



**Purpose:** EMS responders are among the first group to be offered the COVID-19 vaccine. Choosing to get vaccinated is a personal decision that only you can make, and you may have questions about the vaccine. Here are some of the facts I learned while researching the vaccines' safety and efficacy in my own decision process that may help you make the best-informed decision for yourself.

How do these new vaccines work? Both the Pfizer and the Moderna are mRNA vaccines. Unlike traditional vaccines that use a weak or dead form of the virus to stimulate an immune response in your body, these vaccines use synthetic messenger RNA that gives instructions to our cells to produce the harmless spike protein that is found on the outside of the COVID-19 virus. Our immune system recognizes these spike proteins as foreign and develops the antibodies to fight off any future actual COVID-19 infection.

**Can I get COVID-19 from the vaccine?** No. The mRNA only gives instructions to our cells to produce one part of the virus, the harmless spike protein. It is not possible for our cells to make the complete virus. You cannot get Coronavirus from the vaccine. The mRNA vaccine is very safe.



**Will an mRNA vaccine affect my DNA?** No. The mRNA vaccine does not affect or interact with our DNA (genetic material) in any way. mRNA never enters the nucleus of the cell where our DNA is kept. The cell breaks down and gets rid of the mRNA soon after it is finished using the instructions.

After the vaccine, will I test positive on a PCR test and have to quarantine? No. The mRNA vaccine will NOT cause you to test positive on the viral PCR test which detects active disease, not immunity.

**Do I really need the vaccine?** COVID-19 is much worse than a flu or common cold. While symptoms may be mild in some people, others may experience severe disease or even die. COVID-19 may cause microvascular complications that lead to blood clots, stroke, or heart attack. There are also reports of long-term effects such as weakness, shortness of breath, trouble focusing, and heart or kidney problems.

**Are these vaccines effective?** Getting vaccinated greatly reduces your chance of getting COVID-19. The mRNA vaccines have been found to be about 95% effective.

What are the side effects like, really? Individual response may vary, but most people report about 36 hours of pain at the injection site, fever, fatigue, chills, and muscle or joint pain, especially after the second dose. Remember, side effects are an indication of a good immune response and mean the vaccine is doing its job.

**Can I defer vaccination?** The decision to get vaccinated is yours. You are being prioritized for early vaccination right now based on your profession. Your "space in line" in the future is uncertain.

**Bottom Line:** After careful research, I strongly encourage vaccination. I believe the vaccines are safe and effective. I like my quality of life and do not want to risk long-term complications of COVID-19. Most importantly, I know the vaccine will help to protect me, my family and my patients. Now, you decide.