

As someone who has devoted a significant part of my life to health and natural healing, I've never considered getting a flu shot. I've not had any vaccinations or antibiotics since I was a teenager. At the same time, I have tried to avoid imposing my personal views on my patients. I truly believe that we are each on our health journey and I strive to be a point of reference and an offering of new possibilities. Not so much a guide as much as a resource.

There are two vaccines being administered in the USA. They are made by Pfizer/BioNTech and Moderna. Both of these are mRNA (messenger RNA) vaccines that [insert the genetic code](#) into our bodies that stimulate our cells to produce viral spike proteins. The body then launches an immune response against the proteins which also works against the Covid-19 virus.¹ This immune response increases as time goes on and after two weeks from the first dose our bodies have about a 50% immunity to the virus. A second dose 3-4 weeks afterwards brings the immunity [to 95% within another month](#).²

There are [many other vaccines in the testing phase](#) using different technologies to create an immune response, but so far, only the mRNA vaccines are being administered to the public.³ According to the FDA, the most common side effects from all the vaccines are pain at the injection site, fatigue, headache, muscle pain, joint pain, and chills. Because the vaccines are trying to cause an immune response, many of these side effects [are to be expected](#).⁴ These are short term and go away within a couple of days. I am telling patients to plan on experiencing one of these mild side effects. Other side effects are found with different vaccines [still in trial](#).⁵

In addition to the mRNA, the Pfizer/BioNTech vaccine [ingredients](#) are: [ALC-0315](#) = (4-hydroxybutyl) azanediyl)bis (hexane-6,1-diy)bis(2-hexyldecanoate), [ALC-0159](#) = 2-[(polyethylene glycol)-2000]-N,N-ditetradecylacetamide, [1,2-Distearoyl-sn-glycero-3-phosphocholine](#), cholesterol, potassium chloride, [potassium dihydrogen phosphate](#), sodium chloride, [disodium hydrogen phosphate dihydrate](#), sucrose, and water for injections.⁶

The Moderna vaccine [ingredients](#) are messenger ribonucleic acid (mRNA), lipids (SM-102, polyethylene glycol [PEG] 2000 dimyristoyl glycerol [DMG], cholesterol, and 1,2-distearoyl-sn-glycero-3-phosphocholine [DSPC]), tromethamine, tromethamine hydrochloride, acetic acid, sodium acetate, and sucrose.^{7,8}

In the [FDA's toxicity grading scale](#), a severe (Grade 3) reaction can be defined as the inability to perform daily activities. This includes needing to take the day off from work from a bad headache, nausea, flu symptoms, fatigue, muscle pain, severe pain, or the inability to lift). Other reactions that are considered severe are swelling or redness that is larger than 10cm, fever greater than 102.1 F, a racing heartbeat, or high or low blood pressure. A Grade 4 reaction would cause a

¹ "How do mRNA vaccines work? - Medical News Today." 18 Dec. 2020, <https://www.medicalnewstoday.com/articles/how-do-mrna-vaccines-work>. Accessed 29 Dec. 2020.

² "Nurse tests positive for COVID-19 despite recent vaccine" 29 Dec. 2020, <https://abcnews.go.com/Health/nurse-tests-positive-covid-19-shortly-vaccinated/story?id=74947995>. Accessed 30 Dec. 2020.

³ "More COVID-19 vaccines in the pipeline as US effort ramps up." 29 Dec. 2020, <https://apnews.com/article/public-health-anthony-fauci-coronavirus-pandemic-coronavirus-vaccine-3db1583f627efcd7f06a1762209e6f36>. Accessed 29 Dec. 2020.

⁴ "What to Expect after Getting a COVID-19 Vaccine | CDC." 19 Dec. 2020, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/expect/after.html>. Accessed 29 Dec. 2020.

⁵ "COVID-19 Vaccine Side Effect Tracker - MedShadow." 28 Dec. 2020, <https://medshadow.org/covid19-vaccine-side-effects/>. Accessed 29 Dec. 2020.

⁶ "Information for Healthcare Professionals on Pfizer/BioNTech" 24 Dec. 2020, <https://www.gov.uk/government/publications/regulatory-approval-of-pfizer-biontech-vaccine-for-covid-19/information-for-healthcare-professionals-on-pfizerbiontech-covid-19-vaccine>. Accessed 29 Dec. 2020.

⁷ "Vaccines and Related Biological Products Advisory Committee Meeting - FDA Briefing Document Moderna COVID-19 Vaccine." 17 Dec. 2020, <https://www.fda.gov/media/144434/download>. Accessed 29 Dec. 2020.

⁸ "What Are the Various Ingredients in the COVID-19 Vaccines" 18 Dec. 2020, <https://www.goodrx.com/blog/ingredients-covid-19-vaccine/>. Accessed 30 Dec. 2020.

visit to an emergency room or hospitalization.⁹ In the vaccine trials, 9.6% of the Moderna subjects and 4.6% of Pfizer/BioNTech subjects had a Grade 3 (severe) reaction. Less than 0.1% of Moderna subjects experienced a [Grade 4 reaction](#) (with no Pfizer/BioNTech experiencing a Grade 4 reaction).¹⁰ Grade 1 reactions are very common with most people experiencing muscle aches, headaches, or fatigue. The original report from the FDA can be downloaded [here for Pfizer/BioNTech](#)¹¹, and [here for Moderna](#).¹²

Since the FDA approved the vaccines the most serious reactions have been severe allergic events. As of December 29, seven reported cases have been reported with one being from the [Moderna vaccine](#)¹³ and six from the [Pfizer/BioNTech](#).¹⁴ One of the ingredients common to both vaccines is [suspected to be the cause](#) of these reactions.¹⁵ For perspective, there have been [close to two million](#) doses given in the United States.¹⁶

To help ensure the safety of the Covid-19 vaccines, the CDC has launched [a site and mobile app to track adverse reactions and side effects](#).¹⁷ I am recommending that people that decide to get vaccinated to take part in this program.

On the one hand, the long term effects of these vaccines are unknown, and while the likelihood of an extreme reaction is low, the likelihood of a mild reaction is high.

On the other hand, Covid-19 has killed almost [350,000 people in the US](#).¹⁸ This number will continue to rise [in the coming weeks](#).¹⁹ More and more of us have known someone who has died, and not all of them were old. [Only 20% of the cases](#) are truly asymptomatic, with presymptomatic cases able to spread the disease two days before symptoms appear.²⁰ There are also many survivors dealing with long term changes.

The seriousness of this disease has me rethinking my prejudices against vaccinations. Cuyahoga county has not yet decided how to categorize chiropractors for when we should get vaccinated, but I expect that they will address this in the coming weeks. At this moment, I am leaning towards getting vaccinated, but before I do, I will get an [antibody test](#) done to see if I have been previously exposed.²¹ (Labcorp is offering antibody tests that may be paid for by insurance or government programs. The cash price for the [test is a little over \\$50](#))²²

⁹ "Guidance for Industry: Toxicity Grading Scale for ... - FDA." <https://www.fda.gov/media/73679/download>. Accessed 29 Dec. 2020.

¹⁰ "Pfizer-BioNTech COVID-19 Vaccine | FDA." 11 Dec. 2020, <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/pfizer-biontech-covid-19-vaccine>. Accessed 29 Dec. 2020.

¹¹ "Vaccines and Related Biological Products Advisory ... - FDA." 10 Dec. 2020, <https://www.fda.gov/media/144245/download>. Accessed 29 Dec. 2020.

¹² "Moderna - FDA." 17 Dec. 2020, <https://www.fda.gov/media/144434/download>. Accessed 29 Dec. 2020.

¹³ "Boston Doctor Who Had Allergic Reaction to COVID Vaccine" 28 Dec. 2020, <https://www.nbcboston.com/news/coronavirus/boston-doctor-who-had-allergic-reaction-to-moderna-vaccine-describes-experience/2266946/>. Accessed 29 Dec. 2020.

¹⁴ "Boston Doctor Develops Severe Allergic Reaction After" 25 Dec. 2020, <https://www.nytimes.com/2020/12/25/health/covid-moderna-vaccine-allergies.html>. Accessed 29 Dec. 2020.

¹⁵ "Scientists Eye Potential Culprit Behind Covid-19 Vaccine" 26 Dec. 2020, <https://www.wsj.com/articles/scientists-eye-potential-culprit-for-covid-19-vaccine-allergic-reactions-11608901200>. Accessed 29 Dec. 2020.

¹⁶ "CDC Weighs in on COVID-19 Vaccines - Contagion Live." 27 Dec. 2020, <https://www.contagionlive.com/view/thinking-about-getting-a-covid-19-vaccine-cdc-weighs-in>. Accessed 29 Dec. 2020.

¹⁷ "V-safe After Vaccination Health Checker | CDC." 19 Dec. 2020, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/vsafe.html>. Accessed 29 Dec. 2020.

¹⁸ "Coronavirus in the U.S.: Latest Map and" <https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html>. Accessed 30 Dec. 2020.

¹⁹ "COVID-19 Forecasts: Deaths | CDC." 23 Dec. 2020, <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/forecasting-us.html>. Accessed 30 Dec. 2020.

²⁰ Pollock Allyson M, Lancaster James. Asymptomatic transmission of covid-19 BMJ 2020; 371 :m4851, <https://www.bmj.com/content/371/bmj.m4851>. Accessed 30 Dec. 2020.

²¹ "Test for Past Infection | CDC." 29 Oct. 2020, <https://www.cdc.gov/coronavirus/2019-ncov/testing/serology-overview.html>. Accessed 30 Dec. 2020.

²² "COVID-19 Antibody Testing | LabCorp." <https://www.labcorp.com/coronavirus-disease-covid-19/individuals/antibody-test>. Accessed 30 Dec. 2020.