



How COVID-19 Vaccines Affect Immunosuppressive Medications

The Autoimmune Association heard from with [Mehrdad Matloubian, MD, PhD](#), on the Autoimmune Newscast, *Should I Get the COVID-19 Vaccine?* Matloubian, MD, PhD, explains that immunosuppressive medications can be divided into four groups. The Autoimmune Association always recommends consulting with your doctor to determine the best course of action.

Group 1:

The first group are the ones that the people who are on them should not worry about the medications affecting the response to the vaccine. These include prednisone in doses that are less than 20 milligrams a day, hydroxychloroquine or Plaquenil, sulfasalazine, leflunomide or Arava, CellCept or Myfortic, and azathioprine, also known as Imuran.

This group also includes most of the biologic self-injectable agents or infusions. These include the TNF inhibitors, such as Humira, Enbrel, Remicade, Cimzia and Simponi that many individuals with rheumatoid arthritis or IBD are on. They include the class of biologics known as IL-6 inhibitors, including Actemra and Kevzara; the IL-1 inhibitors, which include Anakinra, Ilaris and Rilonacept; the IL-17 inhibitors that many individuals with psoriasis or psoriatic arthritis are on, which include Taltz, Cosentyx, and Siliq; and other medications such as Skyrizi, Tremfya, Stelara, and Entyvio, which many individuals with IBD are on.

For people with MS, there are medications that are within the S1P inhibitor family, and they include Fingolimod and Ozanimod. There are calcineurin inhibitors, such as Cyclosporine A, Tacrolimus, and Prograf. If you are on these medications, studies have shown that they do not significantly affect the response to the influenza vaccine. We don't expect them to affect the response to the COVID vaccine, either, so you should continue taking them and do not need to take a break from these medications.

Group 2:

There's a second group of medications that do affect the immune response to vaccines and the timing of the vaccine relative to the medication is important. There's one medication in that group, and that's Abatacept or Orencia that people with rheumatoid arthritis and psoriasis could be on. Abatacept is known to affect immune responses to vaccines. The recommendation from the American College of Rheumatology is that if you're taking the self-injectable form of Abatacept, to hold your dose one week before the first dose of the COVID vaccine and hold it for another week following the first dose of the COVID vaccine.



Abatacept doesn't really affect the booster response, so the recommendation is not to hold it for the second dose of the COVID vaccine. If there are individuals out there who have stable disease and don't

have a flare while they hold their Abatacept, they may want to consider, in consultation with their physician, to hold it for the second dose as well, to maximize their immune response to the vaccine. For people who are getting the IV Abatacept, the recommendation is, because the medication is given every four weeks, to get the first dose of the COVID vaccine four weeks after your last infusion and delay your next infusion by one week. This is only for the first dose. Of all the medications that people are on, Abatacept/Orencia is the more important one to pay attention to the timing of administration of vaccine in relation to the medication.

Group 3:

There's a third class of medications that many people are on, and these are what's called the B-cell-depleting agents. They include Rituximab and ocrelizumab or Ocrevus. People who are chronically treated with these medications and have been on them for some time will not have the arm of the immune system that leads to neutralizing antibodies that provide protection against infection after vaccination. They should still get the vaccine, but keep in mind that if you're on these medications and you've been getting them frequently, you will not make neutralizing antibodies to the vaccine and you will not be protected from getting COVID infection.

You might still get infected and you might still be at the risk of transmitting it to your loved ones or people you live with, but at the same time, studies have shown that the vaccines also activate the other arm of the immune system called T cells, which are important in fighting against virus infections. Despite being on Rituximab or Ocrevus, you should still get the vaccine because you will be protected against getting a more severe infection or having a worse outcome if you get infected with the novel coronavirus.

There are some societies such as the American College of Rheumatology and National MS Society that recommend timing of the vaccine relative to infusions of Rituximab, so you should talk to your doctor to see if they think that's important. This is again, a controversial area. Some people think that it really doesn't matter, so you should get your vaccine whenever it's available.

Group 4:

The last group of medications that are very common are a bit controversial because there are two schools of thought on whether to hold them or not in relation to COVID vaccines. I'm just going to preface it by saying that you should talk to your physician about it. This should be a shared decision. The two medications are Methotrexate and a class of medications called JAK inhibitors, which includes



Xeljanz, Olumiant and Rinvoq. These are used for rheumatoid arthritis, as well as inflammatory bowel disease.

For the JAK inhibitors, there hasn't been that much data. The only study has been done in people who received the influenza vaccine. In that study, Xeljanz, which is the medication that was studied, did not affect the response to influenza vaccine, so there isn't that much concern regarding the effect of this medication on vaccine responses. The [International Organization for the Study of IBD](#) has recommended that individuals who are on these medications to continue them while getting the COVID vaccine. In contrast, the [American College of Rheumatology](#) has recommended to hold your medication for one week after vaccination. Again, there isn't that much data to support this latter point of view. I would recommend people who are taking this class of medications to talk to their physician to see what's best for them, because whenever you hold your medication, there's a risk that you will have a flare.

Lastly, Methotrexate is the big one where there is a divergence of thought. Many people who have rheumatoid arthritis are on this medication. The International Organization for IBD does not recommend holding Methotrexate if you're on it in relation to your vaccination. In the rheumatology world, multiple studies that have been done show that Methotrexate doesn't significantly affect responses to influenza vaccines. But there are two studies from a Korean group that showed that if you hold Methotrexate for two weeks after getting the influenza vaccine, people tended to have higher antibody responses to the influenza vaccine.

Based on that, American College of Rheumatology has recommended that people who are on Methotrexate and, and this is a big "and," have stable disease to consider holding their Methotrexate for one week after immunization. This study was done with two weeks, but they're recommending one week and thus, are making a compromise.

There are a lot of caveats about this. A major one is that in one of the studies, people who held their Methotrexate had more flares of their rheumatoid arthritis - there's that risk. The other issue is that the benefit of holding the Methotrexate depended on the dose; so people who were on a higher dose had more benefits than people who were on the lower dose. But you can imagine if somebody is on a higher dose, they probably have more severe disease, and they may have a higher chance of having a flare if they hold it.

It is recommended that this is a shared decision with your rheumatologist and with your physician, and you should talk to them and see if it's best for you to hold your methotrexate. I'm not telling patients to hold their methotrexate because I believe in the idea that "don't let perfect be the enemy of the good."



I think it's really important for people to get vaccinated as soon as possible. The whole idea is to get them while they're hot, get your vaccine, don't delay them because we don't know when it's going to be available next.

