

COVID-19 Vaccine: Understanding Third Doses and Boosters



Don't wear a mask... actually, wear a mask. Spray your groceries with bleach... no, that's silly and unnecessary. Boosters are for everyone... no, boosters are only for older adults and those with chronic conditions. No, we were right the first time—boosters are for everyone (age 12+).

I already struggle with dizziness related to MS. But keeping up with the ever-changing COVID-19 guidance really makes my head spin.

As a 2021-22 Vaccine Science Fellow with the [American Academy of Family Physicians](#) and an MS Warrior, I have been particularly interested in the vaccine recommendations for people living with MS. At first, I wondered if the vaccines would be safe for those of us taking disease-modifying therapies (they are). Then I wondered if they would work (they do). Now I'm trying to figure out how many vaccines I need, which type and when I should get them. It's confusing, and the guidelines continue to evolve as we learn more. So, here's what we know now:

The Basics

- The COVID-19 vaccines available in the U.S.—the two-dose Pfizer-BioNTech and Moderna (the “mRNA vaccines”), and the single-dose Johnson & Johnson Janssen (J & J) vaccine—are all safe for people with MS.
- The mRNA vaccines are effective at preventing serious illness, hospitalization and death

from COVID-19 and are now the preferred vaccines of the Centers for Disease Control and Prevention (CDC). However, those who are unable or unwilling to receive an mRNA vaccine will continue to have access to the J & J vaccine.

- They are **safe and effective** in people with MS.
- They are recommended for everyone ages 5 and up (however, the Pfizer vaccine is the only one authorized for kids 5-17).
- For almost everyone, the benefits far outweigh any potential (very small) risks of getting a vaccine.
- The vaccines are the most effective tool we have to beat COVID-19.

Efficacy

We also now know that vaccine effectiveness decreases over time, and as new surges and variants emerge—such as the Delta variant, and most recently Omicron—we have needed to redouble our efforts to protect as many people as possible. Extra vaccine doses are a critical part of that strategy.

Booster Shots: Recommended for Everyone to Reinforce Protection

The CDC now recommends booster vaccines for everyone age 12 and older. Boosters are safe, and they serve as a way to reinforce prior vaccine-acquired immunity to COVID-19.

Third Dose and Booster: Recommended for Immunocompromised to Ensure Adequate Protection

People who are immunocompromised need third doses of a Pfizer or Moderna shot and are also eligible for a booster. If, like me, you take one of the disease-modifying drugs that can reduce your immune response to a vaccine, and you received two doses of an mRNA vaccine, you need a third dose of the COVID-19 vaccine and a booster to help ensure adequate protection.

[Check out the list of the applicable medicines](#) that have been associated with reduced or absent antibody response to the vaccine.

Third Dose and Booster Schedules

Below are 2 charts that detail the timing of third dose and booster shots, broken down by vaccine type and eligibility. Click on each to expand.

Immunocompromised Schedule Guidance

Pfizer-BioNTech (mRNA)

Age: 5-11 years

Number of primary doses: 3

Number of booster doses: N/A

Vaccination schedule:

- Dose #1
 - Wait 21 days for dose #2
 - Dose #2
 - Wait 28 days for dose #3
 - Dose #3
 - A booster dose is not applicable at this time
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Pfizer-BioNTech (mRNA)

Age: 12 years or older

Number of primary doses: 3

Number of booster doses: 1

Vaccination schedule:

- Dose #1
 - Wait 21 days for dose #2
 - Dose #2
 - Wait 28 days for dose #3
 - Dose #3
 - Wait at least 3 months for booster dose
 - Booster dose
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Moderna (mRNA)

Age: 18 years or older

Number of primary doses: 3

Number of booster doses: 1

Vaccination schedule:

- Dose #1
 - Wait 28 days for dose #2
- Dose #2
 - Wait 28 days for dose #3
- Dose #3
 - Wait at least 3 months for booster dose
- Booster dose (booster dose is half strength of primary dose)

J & J*

Age: 18 years or older

Number of primary doses: 1 J & J followed by 1 mRNA

Number of booster doses: 1

Vaccination schedule:

- J & J dose
 - Wait 28 days for mRNA dose
- mRNA dose
 - Wait at least 2 months for booster dose
- Booster dose (preferably mRNA)

*For those who got J & J as their first dose, the guidance varies based on how many and what type of additional doses you have already received. Review the [CDC guidance](#) for more details.

General MS Population Schedule Guidance

Pfizer-BioNTech (mRNA)

Age: 5-11 years

Number of primary doses: 2

Number of booster doses: N/A

Vaccination schedule:

- Dose #1
 - Wait 21 days for dose #2
- Dose #2
- A booster dose is not applicable at this time

Pfizer-BioNTech (mRNA)

Age: 12 years or older

Number of primary doses: 2

Number of booster doses: 1

Vaccination schedule:

- Dose #1
 - Wait 3-8 weeks* for dose #2
- Dose #2

- Wait at least 5 months for booster dose
- Booster dose

* According to the CDC, waiting 8 weeks between dose 1 and dose 2 may be optimal for some people ages 12 years and older, especially for males ages 12 to 39 years of age. Talk with your healthcare provider and [check the CDC](#) to determine the best timing for you.

Moderna (mRNA)

Age: 18 years or older

Number of primary doses: 2

Number of booster doses: 1

Vaccination schedule:

- Dose #1
 - Wait 4-8 weeks* for dose #2
- Dose #2
 - Wait at least 5 months for booster dose
- Booster dose (booster dose is half strength of primary dose)

* According to the CDC, waiting 8 weeks between dose 1 and dose 2 may be optimal for some people ages 12 years and older, especially for males ages 12 to 39 years of age. Talk with your healthcare provider and check the CDC to determine the best timing for you.

J & J

Age: 18 years or older

Number of primary doses: 1

Number of booster doses: 1

Vaccination schedule:

- Dose #1
 - Wait at least 2 months for booster dose
- Booster dose (preferably mRNA)

As an example, if you are at least 12 years old and got your second shot of the Pfizer vaccine on February 1 and are immunocompromised, you should get your third dose on March 2 or later and then your booster on or after June 2; if you finished the 2-shot series of the Moderna

vaccine in the same scenario, you would follow the same schedule. Immunocompromised people who received the Johnson & Johnson vaccine should wait 28 days and get an mRNA dose and then wait at least 2 months for a booster, preferably of an mRNA vaccine.

For now, nearly everyone with MS should do the following:

1. If you're not vaccinated, please get an mRNA shot as soon as possible. Misinformation is abundant, and I urge you to seek information from reliable sources, including [the CDC](#) and [the Society](#). Vaccines will help protect you and everyone around you.
2. Check out [the Society's website](#) and talk to your healthcare provider for guidance on timing your vaccine with your MS medication to enhance vaccine effectiveness.
3. Urge everyone around you to get vaccinated. By doing so, they are helping to protect not only themselves, but you and everyone else they interact with.
4. If you are getting a third dose of Moderna, ensure it's the full dose not the booster dose, which is only a half dose.
5. If you had a single J & J vaccine and you are taking a DMT that can reduce vaccine immunity, you are eligible for a second dose and a booster dose, for a total of three doses.
6. If you don't take a medicine that can reduce vaccine immunity, you are 12 years or older, and you received your second mRNA vaccine at least five months ago, you should get a booster with an mRNA COVID-19 vaccine.

Of course, we continue to face unknowns. When I saw my neurologist in early December, we talked about one of them: Will I need a fourth dose of the COVID-19 vaccine? I got my third dose of the Pfizer vaccine six months after my second dose, so does it count as a third dose or a booster (is your head spinning, too?)?

Researchers continue to study how immunity to the disease changes over time. We don't know if some of us will end up needing even more doses or maybe an annual vaccine, like the flu shot. We do know SARS-CoV-2, the virus that causes COVID-19, can mutate into new variants, and it may change enough to reduce vaccine effectiveness over time. Vaccine manufacturers are already working to modify existing vaccines to be more protective against emerging variants. As the virus changes, so will the recommendations for vaccines and potentially other safety measures.

Those of us with MS are used to living with uncertainty. We never know when we might have a flare or a bad day challenged by mobility issues, brain fog, fatigue or some bizarre new symptom we never could have imagined. We learn to cope, to live in the moment, to adjust expectations. With the COVID-19 pandemic, we've made further adaptations, and we know to expect the unexpected, the inevitability of change. Over the next few months, I urge you to stay in touch with your healthcare provider and follow evolving guidance from the Society and CDC to decide if and when you might need further vaccines. And do your best to harness that courage and strength that comes from battling MS as we enter a new year challenged by the pandemic that just won't stop.

Editor's Note: For more information on COVID-19 vaccines and MS, visit the [Society's coronavirus resources page](#). This blog was originally published on December 13, 2021 and was updated on March 10, 2022.

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