



Effects of disease modifying therapies on vaccines

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Vaccination in MS patients

- Live attenuated vaccines are generally not recommended in patients on immunosuppressive therapies
 - MMR, varicella, shingles, influenza (nasal)
- Most other vaccine types are thought to be generally safe in MS patients
 - Inactivated – Influenza, Shingrix
 - Toxioid – Tetanus, diphtheria
 - Polysaccharide subunit – pneumonia vaccine
- Some DMTs may impact the efficacy of vaccines

National MS Society

Recommendations/guidelines for COVID19 vaccine



- Based on expert consensus and available data
 - Pfizer BioNTech and Moderna vaccines are safe for people with MS and they are safe to use with MS DMTs
 - Most DMTs are not expected to affect the responses to the Pfizer BioNTech or Moderna vaccines

- Given the potential serious health consequences of COVID-19 disease, getting the vaccine when it becomes available to you may be more important than optimally timing the vaccine with your DMT

Disease modifying therapies

Interferon Beta

- Rebif
- Betaseron
- Avonex
- Plegridy

Glatiramer Acetate

- Copaxone
- Glatopa

Teriflunomide

- Aubagio

Fumarates

- Tecfidera
- Vumerity
- Bafietram

S1P1inhibitors

- Gilenya
- Mayzent
- Zeposia

B cell depleting therapies

- Ocrevus
- Kesimpta
- Rituxan

Natalizumab

- Tysabri

Others

- Lemtrada
- Mavenclad

DMTs and vaccines

- **Interferon beta** – Rebif, Betaseron, Avonex, Plegridy
 - Several studies have shown that interferon beta therapies do not affect the efficacy of the flu, tetanus and pneumonia vaccines
- **Glatiramer acetate (GA)** – Copaxone, Glatopa
 - In studies, patients on GA had similar response to healthy controls to the influenza vaccine
 - In one study, patients treated with GA had lower response rates than patients on interferon beta

DMTs and vaccines

- **Fumarates** – Tecfidera, Vumerity, Bafietram
 - Tecfidera treated patients had similar response to patients treated with interferon beta
 - Tetanus-diphtheria toxoid, pneumococcal and meningococcal vaccines
- **Teriflunomide** – Aubagio
 - In some studies, patients treated with Aubagio had mildly reduced response to the influenza vaccine
 - Aubagio may have a modest negative effect on the effectiveness of vaccines.

DMTs and vaccines

- **S1P1 inhibitors** – Gilenya, Mayzent, Zeposia
 - Gilenya – reduced the response to several vaccines
 - Tetanus toxoid, influenza and H1N1 vaccines
- **B cell depleting therapies** – Ocrevus, Rituxan, Kesimpta
 - Ocrevus and Rituximab – significantly affected the response to several vaccines – flu, pneumococcal, KLH
 - Discuss timing of COVID19 vaccine with your neurologist

DMTs and vaccines

- **Natalizumab** – Tysabri
 - Tysabri treated patients had similar response to the influenza vaccine compared to healthy controls.
- **Cladribine** – Mavenclad
 - No studies have been reported in MS patients
- **Alemtuzumab** – Lemtrada
 - Vaccination within 6 months of treatment resulted in a smaller proportion of responders

Summary

- Some DMTs may affect the response to vaccines
 - Ocrevus, Rituxan, Kesimpta (B cell depleting therapies)
 - Gilenya, Mayzent, Zeposia (S1P1 inhibitors)
- Most other DMTs do not have a significant effect on the response to vaccines
- Discuss timing of the COVID19 vaccine with your neurologist

Contact information

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- Contact your provider
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Multiple Sclerosis and the COVID19 vaccine

- Do you have multiple sclerosis (MS) or a similar disorder like neuromyelitis optica (NMO) or MOG-antibody related disorder?
- You may qualify for an interesting study with the OSU MS center.

The Ohio State Department of Neurology is currently enrolling for a research study to determine the effectiveness of the COVID19 vaccine in patients with MS and similar diseases.

YOU MAY QUALIFY IF:

- You are age 18 years and above
- You have a diagnosis of MS, NMO or MOG-antibody related disorder
- You plan on taking the COVID19 vaccine when it becomes available

Participants will have blood samples taken before and after they receive the COVID19 vaccine.

For more information, please call 614-293-6486 or email misty.green@osumc.edu

Thank You

