

Update on COVID-19, vaccinations and Sjogren's

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What have we learned about COVID risk in patients with rheumatic disease



COVID-19
Global Rheumatology Alliance

The Global Rheumatology Community's Response
to the Worldwide COVID-19 Pandemic



COVID-19 and RHEUMATIC DISEASE

<https://rheum-covid.org/>



Risk Factors for Hospitalization and Death COVID-19 Global Rheumatology Alliance

- Older age and more traditional co-morbidities continue to be the main risk factors for severe COVID-19
 - Heart disease, obesity, chronic lung disease, pregnancy
- In patients with Sjogren's, certain medications are risk factors too:
 - Being on prednisone 10 mg or more daily
 - Receiving treatment with rituximab

Risk for COVID-19 Infection, Hospitalization and Death by Age Group

Risk for COVID-19 Infection, Hospitalization, and Death By Age Group

Rate compared to 5–17-years old ¹	0–4 years old	5–17 years old	18–29 years old	30–39 years old	40–49 years old	50–64 years old	65–74 years old	75–84 years old	85+ years old
Cases ²	<1x	Reference group	2x	2x	2x	2x	1x	1x	2x
Hospitalization ³	2x	Reference group	6x	10x	15x	25x	40x	65x	95x
Death ⁴	1x	Reference group	10x	45x	130x	440x	1300x	3200x	8700x

All rates are relative to the 5–17-year-old age category. Sample interpretation: Compared with 5–17-year-olds, the rate of death is 45 times higher in 30–39-year-olds and 8,700 times higher in 85+-year-olds.



Centers for Disease Control and Prevention
 CDC 24/7: Saving Lives, Protecting People™

July 25, 2021

COVID-19 vaccine recommendations

- Pfizer – 2 doses, 3 weeks apart
- Moderna – 2 doses, 4 weeks apart
- J&J – 2 doses, ≥ 8 weeks apart

Pfizer-BioNTech COVID-19 Vaccine FDA approved August 23, 2021 for ages 16 years and up



Clarifying Boosting Recommendations

- Who gets what? When?
 - **Booster dose** → non-immunocompromised
 - **Additional dose** → immunocompromised



EUA for “3rd dose” of mRNA COVID-19 vaccines for immunocompromised

- August 12, 2021 FDA modified EUA for Pfizer and Moderna vaccines to allow for administration of a 3rd “additional” dose for **certain immunocompromised people**
 - Preferably with the same mRNA vaccine as the initial 2-dose series
 - Given at least 28 days following 2nd dose
 - If Moderna → full dose

For our patients, the 3rd dose is not really a booster, but is now part of the recommended immunizations for those with compromised immune systems, who might not generate a robust response after just 2 shots

Additional COVID-19 vaccine dose recommendations for IMID patients

- Patients receiving immunosuppressing or immunomodulating drugs:
 - Any dose of chronic prednisone usage, methotrexate, sulfasalazine, mycophenolate, leflunomide, cyclophosphamide, azathioprine, cyclosporine, tacrolimus, IL-6 inhibitors, JAK inhibitors, TNF inhibitors, Rituximab, bemilimumab, IL-17 and IL-12/23 inhibitors, abatacept
 - Active treatment for cancer, including lymphoma. This does not include excisional treatment for non-melanoma skin cancers.
 - Receipt of a solid organ transplant that requires ongoing immunosuppressive therapy
 - Receipt of CAR-T cell or hematopoietic stem cell transplant within the past 2 years or ongoing immunosuppressive therapy
 - Moderate or severe primary immunodeficiency disorder, including combined variable immunodeficiency
 - Advanced or untreated HIV infection

Additional dose

FDA authorization for *booster* shots non-immunocompromised

- For select groups who received their 2nd Pfizer or Moderna vaccine \geq 6 months ago:
- “*Should*”
 - \geq 65 years
 - Residents \geq 18 years living in long-term care facilities
 - 50-64 years with certain underlying medical conditions
- “*May*”
 - 18-49 with *at-risk* conditions – to make decisions based on their individual risk
 - Health care workers and others whose jobs put them at risk

FDA authorized “**Mix and Max**” strategy

EUA for Johnson & Johnson second dose

- 1 additional dose
- ≥ 2 months after primary dose
- To **anyone** ≥ 18 years old who receive the J&J primary dose

Now, a 4th dose!!

Immunocompromised

“moderately to severely immunocompromised people ≥ 18 years who received a 2-dose mRNA primary series and an additional mRNA dose (3 total mRNA vaccine doses) are eligible for a single COVID-19 booster dose (Pfizer, Moderna or J&J), at least **6 months** after completing their 3rd mRNA vaccine dose”

COVID-19 and Flu Vaccine

- Flu vaccine for all – not to be skipped this year!
- Ok to co-administer during same visit, if it will increase vaccine uptake
 - Different injection sites, preferably different arms



Fear of Sjogren's Flare after the COVID vaccine

- There are no data to suggest significantly increased risk of any rheumatic disease after the COVID vaccine
- In general, we like to consider the relative risk of dying from COVID vs. flare of Sjogren's
- People with multiple autoimmune diseases are not at greater risk of flare

Level of immunocompromised in Sjogren's patients varies

- Largely dependent on what drug you are receiving as treatment
- Drugs that compromise the immune system:
 - Prednisone and other steroids
 - Methotrexate
 - Rituximab
 - Cellcept (mycophenolate)
- Drugs that do NOT compromise the immune system:
 - Plaquenil (hydroxychloroquine),
 - NSAIDs (advil, etc)

Drugs that we know reduce the effectiveness of COVID vaccines

- **Rituximab**
- Methotrexate
- Cellcept (mycophenolate)
- Higher doses of prednisone
- If you are taking these medications, you should discuss with your rheumatologist about timing of the vaccine

Full Length |  Free Access

American College of Rheumatology Guidance for COVID-19 Vaccination in Patients With Rheumatic and Musculoskeletal Diseases: Version 2

Jeffrey R. Curtis , Sindhu R. Johnson, Donald D. Anthony, Reuben J. Arasaratnam, Lindsey R. Baden, Anne R. Bass, Cassandra Calabrese, Ellen M. Gravallese, Rafael Harpaz, Andrew Kroger ... [See all authors](#) 

First published: 15 June 2021 | <https://doi.org/10.1002/art.41877>

Rituximab and COVID vaccine

- Rituximab significantly reduces the effectiveness of COVID vaccines
- In general, we recommend to wait as long after last rituximab infusion as possible, and 2-4 weeks before next infusion, if possible



COVID Vaccine Breakthrough

The current top five symptoms of COVID-19 among vaccinated people

All variants (including current dominant delta variant), UK self-reported symptoms from ZOE COVID study, up to June 23 2021.



1. headache



2. runny nose



3. sneezing



4. sore throat



5. loss of smell.



The Conversation/ZOE COVID Symptom Study app, CC BY-ND

- Increased incidence of breakthrough infection in rheumatic disease patients
- Depends on several factors, including which immunosuppressive drug
- Biggest risk factors for breakthrough:
 - Older age
 - Being on rituximab
- These factors are also associated with being sicker with breakthrough infection, in particular rituximab, and in particular if you have more than one risk factor

Other questions

- How long does it take for the 3rd shot to take full effect?
 - 14 days
- Any news on other formulas for vaccine like pill, nasal spray.
 - Not in the near future!
- Will COVID vaccines/boosters become annual like the flu shot?
 - TBD...

Thank You

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