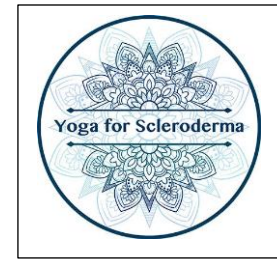


Safety First: COVID in our Immunocompromised Community

October 9, 2021



COVID in our immunocompromised community:

- Hospitalization with COVID: immunocompetent 5%
<http://dx.doi.org/10.15585/mmwr.mm6915e3>
underlying health conditions 40%.
<http://dx.doi.org/10.15585/mmwr.mm6913e2>

Vaccine effectiveness for immunocompromised:

- Vaccine response is less robust in immunocompromised, they get 59% to 72% instead of the 88% protection (94% to 96% pre-Delta) against hospitalization and death.
<https://www.ajmc.com/view/taking-immunosuppressants-fauci-says-get-the-covid-19-vaccine>
<https://www.npr.org/sections/health-shots/2021/08/14/1027597108/6-things-to-know-if-youre-immunocompromised-and-considering-a-3rd-shot>
- Immune suppressant drugs: 2 weeks after second shot, 46% of immunosuppressed individuals had no discernible antibodies. <https://jamanetwork.com/journals/jama/fullarticle/2779852>
- Effectiveness may be improved by a “booster” shot for both immunocompromised and immunosuppressed. <https://www.acpjournals.org/doi/10.7326/L21-0282>
- FDA expands the EUA for both mRNA vaccines to include immunocompromised and immunosuppressed adults on August 13, 2021. CDC immediately recommended the third shot for this group, between 3% and 4% of the general population.
<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/immuno.html>

COVID Cootie Carriers, let's not be a Pathogen Pitstop for the Delta Variant:

- Pre-Delta: Up to 33% of COVID cases are asymptomatic or have symptoms so mild they go unnoticed.
<https://www.acpjournals.org/doi/full/10.7326/M20-6976>
- Pre-Delta: Vaccines are 75-85% effective against symptomatic infection in the immunocompetent, 64% effective in immunocompromised, so after vaccination, chances of a mild or asymptomatic symptomatic case are still about 25-35%.
<https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/fully-vaccinated-people.html>
scroll way down this is a big recap.
- Delta update: Delta is 2 to 3 times more contagious than previous variants, viral loads are 1,000 times higher in infected individuals.
<https://virological.org/t/viral-infection-and-transmission-in-a-large-well-traced-outbreak-caused-by-the-delta-sars-cov-2-variant/724>
- Delta update: Delta reduces the effectiveness of the first dose of an mRNA vaccine from 80% to 30%, so the difference between first shot and fully vaccinated after 2 weeks is huge.
<https://www.cdc.gov/mmwr/volumes/70/wr/mm7020e2.htmwhich>
<https://www.gov.uk/government/news/vaccines-highly-effective-against-b-1-617-2-variant-after-2-doses>

Mask Effectiveness:

- Mask type: cotton reduces wearer's virus uptake by 20% to 40%, N-95 reduces wearer's virus uptake by 80% to 90%.
<https://doi.org/10.1128/mSphere.00637-20>
- Cloth mask over medical procedure mask blocks 85% of virus particles.
<https://www.cdc.gov/mmwr/volumes/70/wr/mm7007e1.htm#suggestedcitation>