

# COVID-19 Vaccination Information for the General Public and People with Skeletal Dysplasias

*There have been many questions from LPA members about the new COVID-19 vaccines. The purpose of this document is to provide information about the vaccines to you and your family. Members of the Medical Advisory Board (MAB) of the LPA wrote and reviewed this document. However, this is NOT a medical recommendation for or against vaccination for COVID-19. You must discuss this with your healthcare provider. New information about COVID-19 will become available as more clinical trials are performed and more people receive the vaccine. Therefore healthcare recommendations about COVID-19 and vaccines against it will change over time.*

Submitted on behalf of the Medical Advisory Board of the Little People of America, Inc by Julie Hoover-Fong, MD, PhD, William Mackenzie, MD and Michael Bober, MD, PhD



## **As of January 2021:**

**Vaccines available:** There are 2 vaccinations currently available in the United States (US) against COVID-19. They are produced by 2 different companies and referred to by the name of the companies:

- Pfizer-BioNTech - approved for use in people 16 years of age and older
- Moderna - approved for use in people 18 years of age and older

These 2 vaccines are available in the US through Emergency Use Authorization (EUA) by the Food & Drug Administration (FDA). If ongoing clinical trials of these vaccines indicate they remain safe and effective, they will likely be approved by the FDA. There are over 100 other companies developing vaccines against COVID-19 worldwide. Their vaccines are being studied in clinical trials now. If safe and effective against COVID-19, they may also become available in the future.

**Vaccines for children:** There are currently no COVID-19 vaccines available for children under 16 years of age (average stature or short stature). Clinical trials are underway to study the safety and efficacy of the Pfizer and Moderna vaccines in children over 12 years of age. If safe and effective and authorized by the FDA for EUA, vaccines for children may be available in 2021 or later. Trials for younger children (under 12 years of age) will likely begin this year, but we may not have these data until the end of 2021 or 2022. Fortunately, data about COVID-19 infections indicate children have a milder illness overall as compared to adults.

**Body size/weight vaccine recommendations:** There is no

minimum weight recommendations for adults to receive the COVID-19 vaccinations currently available. Based on the minimum weight of a typical average stature adult female, many short stature adults are comparable in weight and should be able to receive the current vaccinations. Short stature adults with dysplasia diagnoses weighing significantly less should discuss this with their physician.

**Two (2) vaccine doses needed to be effective:** You must receive 2 doses of either COVID-19 vaccine in order for it to be effective in preventing clinical disease in 94 to 95% of people. The 2 doses of the Pfizer vaccine are given 3 weeks apart and the Moderna doses are given 4 weeks apart. Do not mix the vaccines; you should receive both doses from the same manufacturer. New trials are underway to determine if one dose is sufficient to protect you from COVID-19.

**Effectiveness of current COVID-19 vaccines:** The Pfizer-BioNTech COVID-19 vaccine has 95% efficacy in preventing disease and the Moderna COVID-19 vaccine has 94% efficacy after receipt of both doses.

**mRNA vaccines:** The current COVID-19 vaccines are modified mRNA (messenger RNA) vaccines. These vaccines do not contain virus and cannot cause COVID-19 disease. Once this type of vaccine is given, genetic instructions in the mRNA direct cells in the body to produce a viral protein. Our immune system then recognizes this protein as foreign and makes antibodies against it. These antibodies provide the vaccinated individual with the ability to fight off future exposure to the coronavirus and prevent COVID-19 disease.

It is important to understand that mRNA from this type of vaccine does NOT enter the nucleus of cells. The nucleus is

where our cellular DNA is stored. Instead, once the vaccine mRNA completes its job of making an inactive portion of the coronavirus, it is rapidly broken down and eliminated from our bodies (like all other mRNA).

**After you receive your vaccines:** You should still follow current infection-reducing practices including wearing a mask, staying 6 feet or more away from others, avoid gatherings/crowds, repeated handwashing, limit travel. All the vaccines have been studied in the setting of ongoing public health measures including masking and public distancing. Based on the data currently available, we don't know how long immunity against COVID-19 lasts after vaccination OR how much transmission of the virus may (or may not) be affected by the vaccination. These studies are still ongoing.

**More questions:**

**Who develops vaccine recommendations and how?** The Centers for Disease Control (CDC) makes recommendations about administration of vaccines based on expert opinion of the Advisory Committee on Immunization Practices (ACIP), information from the FDA based on data they received in Emergency Use Authorization (EUA) applications from pharmaceutical companies, and best practice guidelines for immunizations and public health. The CDC will continuously review new data from all sources as it becomes available and will update recommendations about vaccinations against COVID-19. The CDC website has excellent information about COVID-19. <https://www.cdc.gov/coronavirus/2019-ncov/>

**Can you prevent infection with COVID-19 if you receive the 1st vaccination dose immediately after exposure to an infected person?** Probably not. The median incubation period (time from exposure to showing the infection) is 4 to 5 days (range 2-14 days). The vaccine does not reach maximal efficacy until you receive both doses which cannot occur until 21 to 28 days after the first.

**Should you get a vaccine if you've been exposed to an infected person?** Yes, but only after you have completed your quarantine period. If you were exposed to an infected person and have

contracted the infection yourself (but may not be showing signs of the infection) you can still pass it on to healthcare providers and the general public. Avoid these contacts until you complete your quarantine.

**Should you get a vaccine if you've had COVID-19?** Yes, but it is recommended to wait at least 90 days after your infection.

Should immunocompromised patients receive the COVID-19 vaccine? People with HIV, other immunodeficiency conditions (e.g. cartilage hair hypoplasia) or taking immunosuppressive medications may be at increased risk of severe COVID-19 manifestations. There are minimal data available about COVID-19 infections in these patients and their response to the vaccine. People in this group should consult their physician.

**What are potential side effects and adverse events of the COVID-19 vaccine?** When considering when and if to get the vaccine, it is important to understand that there is no risk-free choice. Currently the risk of side effects and adverse events are less than the risk of contracting COVID-19 and having the long term consequences of an infection. Common reactions include soreness at the injection site for a few days. About 50% of people receiving the vaccine develop a systemic reaction such as headache, chills, fatigue, muscle pain and/or fever lasting 1-2 days. These reactions indicate your immune system is responding to the vaccine; you do not have a COVID-19 infection from the vaccine. Currently there are 21 cases of serious adverse events after receiving a COVID-19 vaccine; this is less than 0.001% of recipients.

**For more detailed information about COVID-19 and the vaccines, please use the links below.**

Understanding mRNA COVID-19 vaccines:

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/rent-vaccines/mrna.html>

Morbidity and Mortality Weekly Reports (from the Centers for Disease Control and Prevention): <http://www.cdc.gov/mmwr>.