COVID-19 Update

Meg Fisher, MD

November 15, 2021
Disclaimer

Information about COVID-19 and SARS-CoV-2, the virus that causes the illness is evolving daily. Recommendations change frequently. What you hear today may be outdated soon.

Trusted sources of up-to-date information:

– NJ Department of Health - [www.nj.gov/health/](http://www.nj.gov/health/)
– Centers for Disease Control and Prevention - [www.cdc.gov](http://www.cdc.gov)
– American Academy of Pediatrics – [www.aap.org](http://www.aap.org) and [www.healthychildren.org](http://www.healthychildren.org)
COVID-19

Disease caused by SARS-CoV-2

Spread primarily by droplets (spit particles)

Most droplets fall to the ground within 3 to 6 feet

Transmission
How to help prevent the spread

- Wear a mask that covers your nose and mouth
- Stay at least 6 feet (about 2 arms lengths) from others
- Avoid crowds and sick people
- Wash your hands often
- Get vaccinated

COVID-19 Cases in the US and in NJ

November 12, 2021

https://covid.cdc.gov/covid-data-tracker/#trends_dailycases

November 14, 2021


Preliminary, pre-decisional, and deliberative. Based on input provided by State agency leaders and staff, to date, and subject to change. Content is descriptive only and is not meant to constitute legal, clinical, or policy advice.
COVID-19 Basics

• Disease varies from no symptoms to mild cold to pneumonia to multiorgan involvement and death – to date 759,552 deaths in US; 25,274 in NJ

• Disease in children usually either no or mild symptoms, but not always, 911 deaths in US, 8 in NJ
  • Multisystem inflammatory syndrome – Children (MIS-C) is a rare post-infectious complication – as of November 1 - 5,526 cases, 48 deaths reported to CDC; as of November 15, - 141 cases, 0 deaths reported in New Jersey

COVID-19 and Children

• Over 140,000 children lost a parent, grandparent or caregiver to COVID-19
  • 1 of every 753 White children
  • 1 of every 612 Asian children
  • 1 of every 412 Hispanic children
  • 1 of every 310 Black children
  • 1 of every 168 American Indian/Alaska Native children
• Most children missed a year of in person school
• All missed a multitude of celebrations and events
Post-COVID Conditions

- Long COVID, long-haul COVID, post-acute COVID

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Symptom</th>
<th>Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing difficulty</td>
<td>Tired or fatigued</td>
<td>Worse after activity</td>
</tr>
<tr>
<td>“Brain fog”</td>
<td>Cough</td>
<td>Pain: chest or stomach</td>
</tr>
<tr>
<td>Headache</td>
<td>Palpitations</td>
<td>Joint or muscle pain</td>
</tr>
<tr>
<td>Pins-and-needles feeling</td>
<td>Diarrhea</td>
<td>Sleep problems</td>
</tr>
<tr>
<td>Fever</td>
<td>Dizzy on standing</td>
<td>Rash</td>
</tr>
<tr>
<td>Mood changes</td>
<td>Smell/taste changes</td>
<td>Menstrual changes</td>
</tr>
</tbody>
</table>

- Incidence: 5 to 80%

COVID-19 vaccines are

SAFE  EFFECTIVE  FREE
for all

You can get a vaccine if you are uninsured, and/or undocumented

covid19.nj.gov/vaccine
COVID-19 Vaccines

• Messenger RNA (mRNA) vaccines
  • Pfizer – EUA 12/11/20 – for ages 16 years and older; EUA 5/10/21 for ages 12 to 17; Licensed 8/23/21 for ages 16 and older (Comirnaty); third dose EUA 8/12; booster EUA 9/22; ages 5 to 11 EUA 10/29/21
  • Moderna – EUA 12/18/20 – for ages 18 years and older; third dose 8/12; booster EUA 10/20/21

• Adenovirus vector
  • J&J Janssen – EUA 2/27/21 – for ages 18 years and older; booster EUA 10/20/21

About mRNA COVID-19 Vaccines

- Messenger RNA codes for the spike protein of the virus
- Carrier is a lipid nanoparticle
- Lipid allows the mRNA to enter cells
- Code is read and spike protein produced
- Immune system responds with antibodies and cell mediated immunity
- Two dose series, 3 doses if immune compromised, booster after 6 months for older adults and those with risks

https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mRNA.html
J&J Janssen COVID-19 Vaccine

- Code for the spike protein inserted into an altered human adenovirus (Ad26.COV2.S)
- Replication incompetent virus
- Adenovirus enters cells and releases code for the spike protein
- Immune systems responds to the spike protein
- Given as a single dose, booster after 2 months for all

Side Effects of mRNA COVID-19 Vaccines

• Most common complaint was pain at the shot site
  – Other common symptoms included fatigue, fever, and headache
  – These are common side effects after getting vaccinated

• Side effects less common in people over 50 years of age

• Side effects more common after the second dose

• Serious side effects occur but are rare
  • Anaphylaxis (severe allergic reaction)
  • Myocarditis and pericarditis

https://www.fda.gov/media/144246/download; https://www.fda.gov/media/144434/download
Side Effects of the Adenovirus Vector COVID-19 vaccines

• Most common complaint was pain at the injection site
  – Other common symptoms included fatigue, fever, and headache
  – These are common side effects after getting vaccinated
• Side effects less common in people over 60 years of age
• Single dose
• Serious side effects are rare but occur
  • Thrombocytopenia and thrombosis
  • Guillain-Barré Syndrome

Fertility

• No evidence of any effect of these COVID-19 vaccines on either male or female fertility
• No biologic reason to expect it
• No clinical evidence
• ACOG recommends vaccine for all eligible people who may consider future pregnancy, as well as all pregnant and breastfeeding women

COVID-19 Variants

• Arise as viruses multiply

• Variants of interest – changes in binding protein, therapy, possible increased illness and transmission
  • Many: arising in US and globally

• Variants of concern – increased transmission and illness, decreased susceptibility to antibodies and therapy
  • B1.1.7 alpha UK; B1.351 beta So Africa; B1.617.2 delta India; P1 gamma Japan/Brazil

• Variants of high consequence – reduced susceptibility to preventive measures and countermeasures
  • None yet

COVID-19 Variants
New Jersey – December 2020 to October 2021

COVID-19 Vaccines

• Children ages 5 to 17 Primary Series
  • Pfizer only, 2 doses, 3 weeks apart, lower dose for ages 5-11

• Adult Primary Series
  • Pfizer, 2 doses, 3 weeks apart
  • Moderna, 2 doses, 4 weeks apart
  • J&J, 1 dose

• Third dose for immunocompromised
  • Pfizer or Moderna, same dose as primary series

• Boosters: mixing and matching allowed for all
  • Pfizer, 6 months after second dose, most people, same dose
  • Moderna, 6 months after second dose, most people, half dose
  • J&J, 2 months, all people
# Guide to Vaccine Eligibility (last updated: 11/03/2021)

<table>
<thead>
<tr>
<th>Individuals</th>
<th>When can I receive this dose?</th>
<th>What brands are available?</th>
<th>What are the eligibility requirements?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5-11</strong></td>
<td><strong>1st Dose</strong></td>
<td>Pfizer</td>
<td>Ages 5-11</td>
</tr>
<tr>
<td></td>
<td><strong>2nd Dose</strong></td>
<td></td>
<td>3 weeks (21 days) after 1st dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ages 5-11</td>
</tr>
<tr>
<td><strong>12-17</strong></td>
<td><strong>1st Dose</strong></td>
<td>Pfizer</td>
<td>Ages 12-17</td>
</tr>
<tr>
<td></td>
<td><strong>2nd Dose</strong></td>
<td></td>
<td>3 weeks (21 days) after 1st dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ages 12-17</td>
</tr>
<tr>
<td><strong>18+</strong></td>
<td><strong>1st Dose</strong></td>
<td>Any time</td>
<td>Any time</td>
</tr>
<tr>
<td></td>
<td><strong>2nd Dose</strong></td>
<td>Pfizer</td>
<td>3 weeks (21 days) after 1st dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 weeks (28 days) after 1st dose</td>
</tr>
<tr>
<td></td>
<td><strong>3rd dose</strong></td>
<td>Pfizer, Moderna, J&amp;J</td>
<td>Adults who are moderately to severely immunocompromised*</td>
</tr>
<tr>
<td></td>
<td><strong>Booster</strong></td>
<td>Pfizer, Moderna</td>
<td>6 months after second dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 months after first dose</td>
</tr>
</tbody>
</table>

* Immunocompromised = An individual with a weakened immune system due to certain health conditions.
Note: Immunocompromised persons may receive a booster dose 6 months after their additional doses (third doses) of an mRNA vaccine.
** Underlying medical conditions = For example, cancer, diabetes, hypertension and other conditions that increase risk for severe COVID-19 illness.
*** High-risk settings = For example, healthcare workers, teachers, and others whose job puts them at risk of COVID-19 exposure.
**** Long term care = For example, individuals living in residential care, assisted living, nursing homes etc. that increase risk for COVID-19 exposure.

When can I receive this dose?
- Anytime
- 3 weeks (21 days) after 1st dose
- 4 weeks (28 days) after 1st dose
- 6 months after second dose
- 2 months after first dose

What brands are available?
- Pfizer
- Moderna
- J&J
- Moderna (can get any booster)
- J&J (can get any booster)

What are the eligibility requirements?
- Ages 5-11
- Ages 12-17
- All Adults
- Adults who are moderately to severely immunocompromised*
- Ages 65 and older
- Ages 18 and older who have underlying medical conditions**, who work or live in high-risk settings***, or who live in long term care****

All booster doses are interchangeable

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Ready to get vaccinated?
Visit COVID19.nj.gov/vaccine

Additional questions?
The NJ COVID-19 Vaccine Call Center is available at: 855-568-0545
US Study: Vaccine effectiveness (primary series) against infection reduced for each vaccine brand\textsuperscript{1,2}

2. Note that this assumes the primary series was completed by the end of February. VE was measured in March and end of September
Protect Yourself and your families for the Holidays:
Get a booster dose!
You can make an appointment for the COVID-19 vaccine, get help with the scheduling system, check registration status, and ask vaccine questions by phone.

Interpreters are available.

Call 855-568-0545
Everyone 12 or older who lives, works, or studies in New Jersey is now eligible for the COVID-19 vaccine.

COVID-19 vaccines are safe and highly effective at preventing you from getting sick. They are one of the most important tools to ending the COVID-19 pandemic and getting back to what you love.

ON THIS PAGE
How to get vaccinated
Get help getting an appointment
Learn more about vaccination
Vaccine statistics

How to get vaccinated

Find a vaccine appointment
Use the NJ Vaccine Appointment Finder to find vaccination locations near you with available appointments.

NJ Vaccine Appointment Finder

Visit a megasite for walk-in appointments
All six vaccine megasites are open for walk-in vaccinations, typically during the following times:
Vaccination Rates in New Jersey

Daily report on vaccination (as 11/14/2021)

### Primary vaccine courses (NJ & non-NJ residents vaccinated in NJ) by age category, % of total population

<table>
<thead>
<tr>
<th>Age Category</th>
<th>Course Completed</th>
<th>Course Initiated</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-11</td>
<td>4.5%</td>
<td>N/A</td>
</tr>
<tr>
<td>12-15</td>
<td>59.2%</td>
<td>N/A</td>
</tr>
<tr>
<td>16-17</td>
<td>71.6%</td>
<td>N/A</td>
</tr>
<tr>
<td>18-29</td>
<td>76.0%</td>
<td>N/A</td>
</tr>
<tr>
<td>30-49</td>
<td>84.1%</td>
<td>N/A</td>
</tr>
<tr>
<td>50-64</td>
<td>90.6%</td>
<td>N/A</td>
</tr>
<tr>
<td>65-79</td>
<td>100%</td>
<td>N/A</td>
</tr>
<tr>
<td>80+</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5-17</td>
<td>32.4%</td>
<td>N/A</td>
</tr>
<tr>
<td>18-64</td>
<td>84.3%</td>
<td>N/A</td>
</tr>
<tr>
<td>65+</td>
<td>100%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Booster doses by age category, % of eligible population

<table>
<thead>
<tr>
<th>Age Category</th>
<th>Booster Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-11</td>
<td>N/A</td>
</tr>
<tr>
<td>12-15</td>
<td>N/A</td>
</tr>
<tr>
<td>16-17</td>
<td>N/A</td>
</tr>
<tr>
<td>18-29</td>
<td>6.6%</td>
</tr>
<tr>
<td>30-49</td>
<td>12.6%</td>
</tr>
<tr>
<td>50-64</td>
<td>18.9%</td>
</tr>
<tr>
<td>65-79</td>
<td>40.2%</td>
</tr>
<tr>
<td>80+</td>
<td>40.3%</td>
</tr>
<tr>
<td>5-17</td>
<td>N/A</td>
</tr>
<tr>
<td>18-64</td>
<td>14.3%</td>
</tr>
<tr>
<td>65+</td>
<td>40.3%</td>
</tr>
</tbody>
</table>

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1. Pfizer and Moderna booster dose includes 3rd/ additional doses administered to immunocompromised population
2. Eligible population represents value two weekdays prior (e.g., if Monday, represents the previous Thursday). The data may increase as more sites report
3. Value over 100% due to numerator including NJ and non-NJ residents while eligible population includes NJ residents only
4. 5-11 category comprises all recipients tagged in NJISS as Pfizer Pediatric formulation doses

Note: Includes all individuals who were vaccinated within New Jersey (those who live, work, or study within New Jersey). Excludes vaccines administered through select federal programs (e.g., Bureau of Prisons, Veterans Health, Indian Health Service, and Department of Defense) as well as NJ residents vaccinated in other states.

Source: NJISS, Vtrcks

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Natural Versus Vaccine Immunity

• More unknowns than known
• Natural immunity seems solid for several months
• Vaccine immunity seems solid as well
  • Trials with all 3 vaccines show protection at least 6 months, longer for many, waning for some
  • Immunity against the known variants is solid
• Both natural and vaccine immunity vary by age and other factors
• Vaccine will boost natural immunity

https://www.cdc.gov/vaccines/covid-19/hcp/answering-questions.html
Safety at School

- Masks for everyone while inside
- Maintain 3 foot distance
- Vaccines for all eligible people
- Cohort younger children
- Contact tracing
- Isolation for infected people
- Quarantine for unvaccinated close contacts

Help us spread the word!
The COVID-19 vaccine is safe, effective, and free for all

@NJDeptoofHealth
#VaccinesWork
#LetsGetNJVaccinated
Thank you