



Adult Immunization Update

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Lincoln, Nebraska

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Objectives

- Describe updates to the 2023 Adult Immunization Schedule
- Discuss current vaccine recommendation for adults
 - COVID-19
 - Hepatitis B
 - Zoster
 - Pneumococcal
 - Polio
 - Influenza
- Locate relevant immunization resources



2023 ACIP Schedule

Immunization Schedule for ages 19 years or older

Immunization Schedules: Overview

- **Schedule**
 - Adult schedule (age 19 years or older)
- **Updated each year**
 - Represents current, approved ACIP policy
 - Designed for implementation of ACIP policy
- **Published in February**
 - *MMWR* Notice to Readers – announcement of availability on ACIP website
 - *Annals of Internal Medicine* – published in entirety (adult schedule only)

Recommended Adult Immunization Schedule

for ages 19 years or older

UNITED STATES

2023

How to use the adult immunization schedule

- 1 Determine recommended vaccinations by age (Table 1)
- 2 Assess need for additional recommended vaccinations by medical condition or other indication (Table 2)
- 3 Review vaccine types, dosing frequencies and intervals, and considerations for special situations (Notes)
- 4 Review contraindications and precautions for vaccine types (Appendix)

Vaccines in the Adult Immunization Schedule*

Vaccine	Abbreviation(s)	Trade name(s)
COVID-19 vaccine	1rCOV-mRNA 2rCOV-mRNA 1vCOV-sPS	Comirnaty [®] /Hem-BioNTech COVID-19 Vaccine Spikevax [®] /Moderna COVID-19 Vaccine Pfizer-BioNTech COVID-19 Vaccine, Bivalent Moderna COVID-19 Vaccine, Bivalent Novavax COVID-19 Vaccine
Haemophilus influenzae type b vaccine	Hib	ActHIB [®] Hiberix [®] Pedvaxim [®]
Hepatitis A vaccine	HepA	Havrix [®] Vaqta [®]
Hepatitis A and hepatitis B vaccine	HepA/HepB	Twinrix [®]
Hepatitis B vaccine	HepB	Engerix-B [®] Heplisav-B [®] PreHevbrio [®] Recombivax HB [®] Gardasil 9 [®]
Human papillomavirus vaccine	HPV	Many brands
Influenza vaccine (inactivated)	IV4	FluAflon [®] Quadrivalent FluBlock [®] Quadrivalent
Influenza vaccine (live, attenuated)	LIV4	M-M-R II [®]
Measles, mumps, and rubella vaccine	MMR	ProQuad [®]
Meningococcal serogroups A, C, W, Y vaccine	MenACWY-D MenACWY-CRM MenACWY-TT	Menveo [®] MenQuadfi [®]
Meningococcal serogroup B vaccine	MenB-4C MenB-FHbp	Bexsero [®] Trumenb [®]
Pneumococcal conjugate vaccine	PCV15	Vaxneuvance [®]
Pneumococcal polysaccharide vaccine	PPSV23	Pneumovax 23 [®]
Poliovirus vaccine	IPV	IPOL [®]
Tetanus and diphtheria toxoids	Td	Tenivac [®] Tdap [®]
Tetanus and diphtheria toxoids and acellular pertussis vaccine	Tdap	Adacel [®] Boostrix [®]
Varicella vaccine	VAR	Varivax [®]
Zoster vaccine, recombinant	RZV	Shingrix [®]

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Report

- Suspected cases of reportable vaccine-preventable diseases or outbreaks to the local or state health department
- Clinically significant postvaccination reactions to the Vaccine Adverse Event Reporting System at www.vaers.hhs.gov or 800-822-7967

Injury claims

All vaccines included in the adult immunization schedule except PPSV23, RZV, and COVID-19 vaccines are covered by the National Vaccine Injury Compensation Program (VICP). COVID-19 vaccines that are authorized or approved by the FDA are covered by the Countermeasures Injury Compensation Program (CIQP). For more information, see www.hrsa.gov/vaccinecompensation or www.hrsa.gov/cicp.

Questions or comments

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Helpful information

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Scan QR code for access to online schedule

www.cdc.gov/vaccines/schedules/index.html

[Immunization Schedules | CDC](http://www.cdc.gov/vaccines/schedules/index.html)

ACIP Recommended Adult Immunization Schedule for Ages 19 Years of Age and Older

Recommended Adult Immunization Schedule for ages 19 years or older

UNITED STATES
2023

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Recommended by the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/acip) and approved by the Centers for Disease Control and Prevention (www.cdc.gov), American College of Physicians (www.acponline.org), American Academy of Family Physicians (www.aafp.org), American College of Obstetricians and Gynecologists (www.acog.org), American College of Nurse-Midwives (www.midwife.org), American Academy of Physician Associates (www.aapa.org), American Pharmacists Association (www.pharmacist.com), and Society for Healthcare Epidemiology of America (www.shea-online.org).

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	1vCOV-aPS	Novavax COVID-19 Vaccine
<i>Haemophilus influenzae</i> type b vaccine	Hib	ActHIB [®] Hiberix [®] PedvaxHIB [®]
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Hepatitis B vaccine	HepB	Engerix-B [®] Heplisav-B [®] PreHevbrio [®] Recombivax HB [®]
Human papillomavirus vaccine	HPV	Gardasil 9 [®]
Influenza vaccine (inactivated)	IIV4	Many brands
Influenza vaccine (live, attenuated)	LAIV4	FluMist [®] Quadrivalent
Influenza vaccine (recombinant)	RIV4	FluBlok [®] Quadrivalent
Measles, mumps, and rubella vaccine	MMR	M-M-R II [®] Priorix [®]
Meningococcal serogroups A, C, W, Y vaccine	MenACWY-D	Menactra [®]
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	PCV20	Prenvar 20 [™]
Pneumococcal polysaccharide vaccine	PPSV23	Pneumovax 23 [®]
Poliovirus vaccine	IPV	IPOL [®]
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Varicella vaccine	RZV	Shingrix
Zoster vaccine, recombinant		

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ACIP Recommended Adult Immunization Schedule for Ages 19 Years of Age and Older

Recommended Adult Immunization Schedule

for ages 19 years or older

UNITED STATES

2023

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CS18021-A

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ACIP Recommended Adult Immunization Schedule for Ages 19 Years of Age and Older

- Routine vaccination**
- Added description of primary series
 - Hyperlink to see latest booster dose recommendations

Recommended Adult Immunization Schedule

for ages 19 years or older

UNITED STATES
2023

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Scan QR code for access to online schedule.

CSS 10021-A

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Routine vaccination

- PCV15 and PCV20 added

ACIP Recommended Adult Immunization Schedule for Ages 19 Years of Age and Older

Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2023

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	2- or 3- dose primary series and booster (See Notes)			
Influenza inactivated (IIV4) or Influenza recombinant (RIV4)	1 dose annually			
Influenza live, attenuated (LAIV4)	1 dose annually			
Tetanus, diphtheria, pertussis (Tdap or Td)	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (see notes)			
	1 dose Tdap, then Td or Tdap booster every 10 years			
Measles, mumps, rubella (MMR)	1 or 2 doses depending on indication (if born in 1957 or later)			For healthcare personnel, see notes
Varicella (VAR)	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV)	2 doses for immunocompromising conditions (see notes)		2 doses	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PPSV23)	1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see notes)			See Notes
Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine			
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine or condition			
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication, see notes for booster recommendations			
Meningococcal B (MenB)	19 through 23 years	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations		
Haemophilus influenzae type b (Hib)	1 or 3 doses depending on indication			

 Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection
 Recommended vaccination for adults with an additional risk factor or another indication
 Recommended vaccination based on shared clinical decision-making
 No recommendation/Not applicable

ACIP Recommended Adult Immunization Schedule for Ages 19 Years of Age and Older

Table 2 Recommended Adult Immunization Schedule by Medical Condition or Other Indication, United States, 2023

Vaccine	Pregnancy	Immuno-compromised (excluding HIV infection)	HIV infection CD4 percentage and count		Asplenia, complement deficiencies	End-stage renal disease, or on hemodialysis	Heart or lung disease; alcoholism ^a	Chronic liver disease	Diabetes	Health care personnel ^b	Men who have sex with men
			<15% or <200 mm ³	≥15% and ≥200 mm ³							
COVID-19		See Notes									
IIV4 or RIV4 or LAIV4		1 dose annually					Contraindicated		Precaution		1 dose annually
Tdap or Td	1 dose Tdap each pregnancy	1 dose Tdap, then Td or Tdap booster every 10 years									
MMR	Contraindicated ^a	Contraindicated		1 or 2 doses depending on indication							
VAR	Contraindicated ^a	Contraindicated			2 doses						
RZV		2 doses at age ≥19 years				2 doses at age ≥50 years					
HPV	Not Recommended ^a	3 doses through age 26 years			2 or 3 doses through age 26 years depending on age at initial vaccination or condition						
Pneumococcal (PCV15, PCV20, PPSV23)		1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see notes)									
HepA				2, 3, or 4 doses depending on vaccine							
HepB	3 doses (see notes)	2, 3, or 4 doses depending on vaccine or condition									
MenACWY		1 or 2 doses depending on indication, see notes for booster recommendations									
MenB	Precaution	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations									
Hib		3 doses HSCT-recipients only					1 dose				

 Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection
 Recommended vaccination for adults with an additional risk factor or another indication
 Recommended vaccination based on shared clinical decision-making
 Precaution—vaccination might be indicated if benefit of protection outweighs risk of adverse reaction
 Contraindicated or not recommended—vaccine should not be administered.
 No recommendation/Not applicable

^a. Precaution for LAIV4 does not apply to alcoholism. ^b. See notes for influenza; hepatitis B; measles, mumps, and rubella; and varicella vaccinations. ^c. Hematopoietic stem cell transplant.

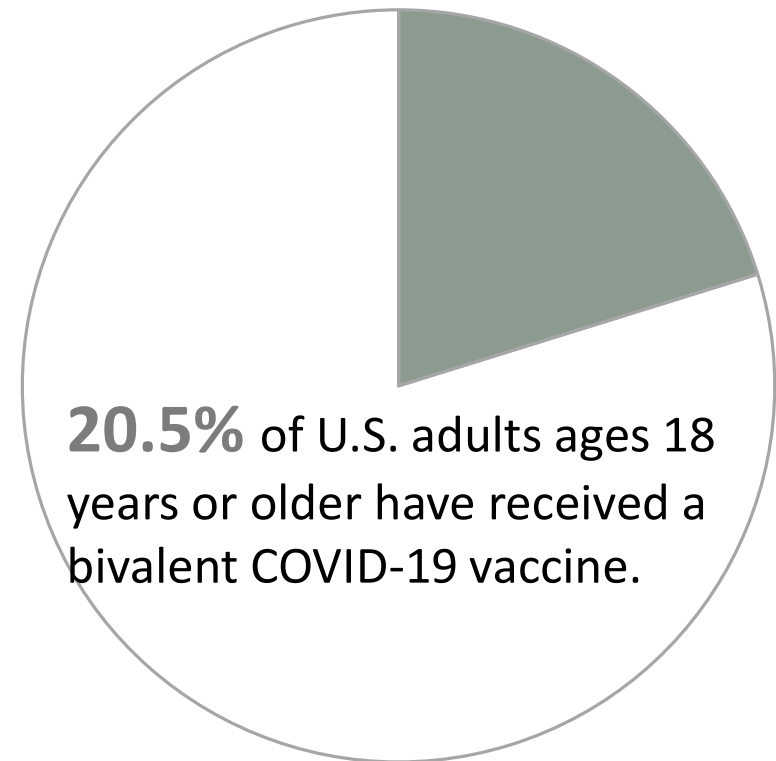
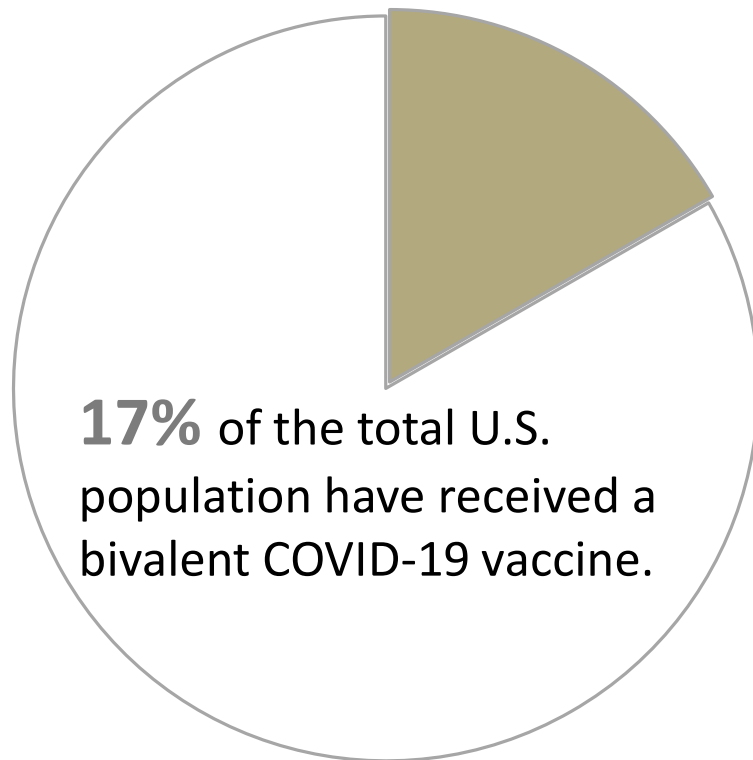


COVID-19

COVID-19

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	2- or 3- dose primary series and booster (See Notes)			

Bivalent COVID-19 Vaccination Coverage Rates Are Low



Types of COVID-19 Vaccines

- The following COVID-19 vaccines, categorized into three vaccine types, are currently approved under a Biologics License Application (BLA) or authorized under an Emergency Use Authorization (EUA) by FDA.
 - mRNA Vaccines
 - Moderna COVID-19 Vaccine, Bivalent
 - Pfizer-BioNTech COVID-19 Vaccine, Bivalent
 - Protein Subunit Vaccines
 - Novavax COVID-C19 Vaccine, Adjuvanted

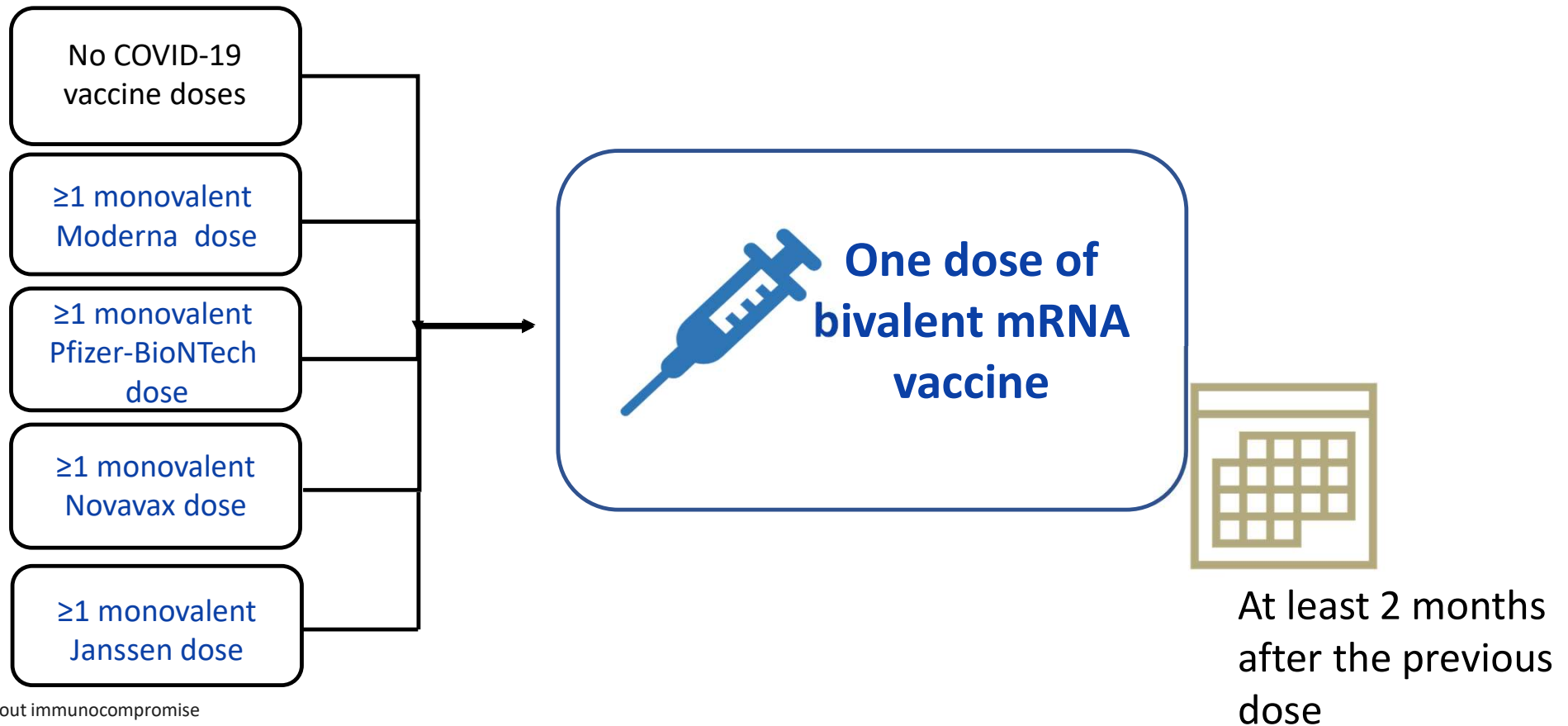
New Recommendations for Persons* 6 Years of Age or Older Who **HAVE NOT** Received Bivalent Vaccine



One dose of
bivalent mRNA
vaccine

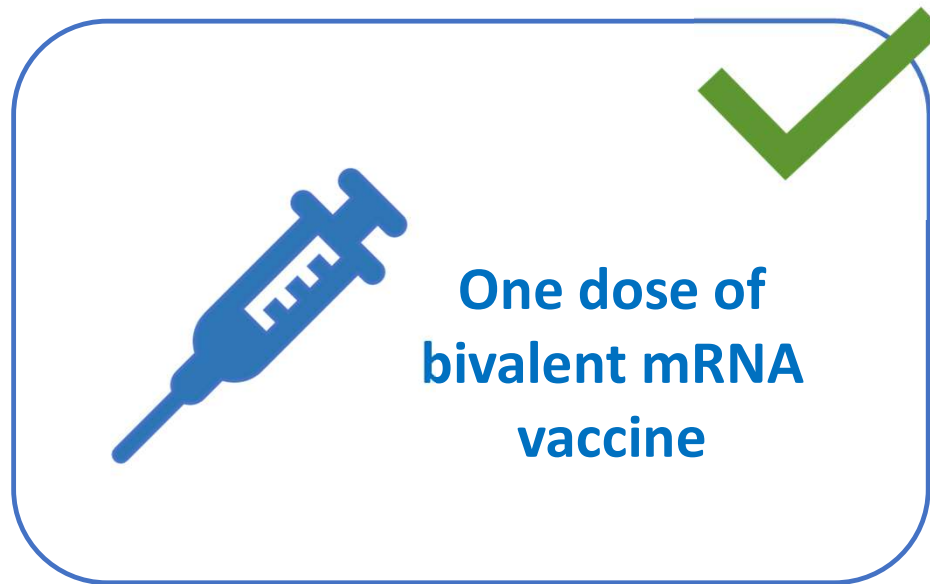
*Without immunocompromise

New Recommendations for Persons* 6 Years of Age or older Who **HAVE NOT** Received Bivalent Vaccine



*Without immunocompromise

New Recommendations for Persons* 6 Years of Age or older Who **HAVE** Received Bivalent Vaccine

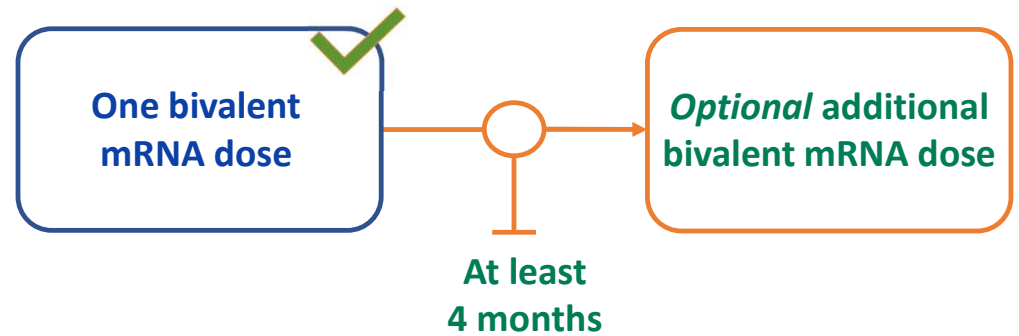


Vaccination is complete.
No additional doses are
indicated at this time.

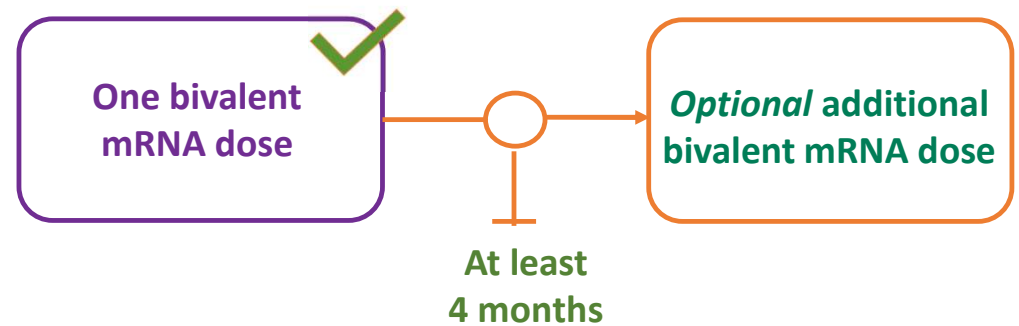


New Recommendations for those at Higher Risk of Severe Disease: People 65 Years of Age or Older

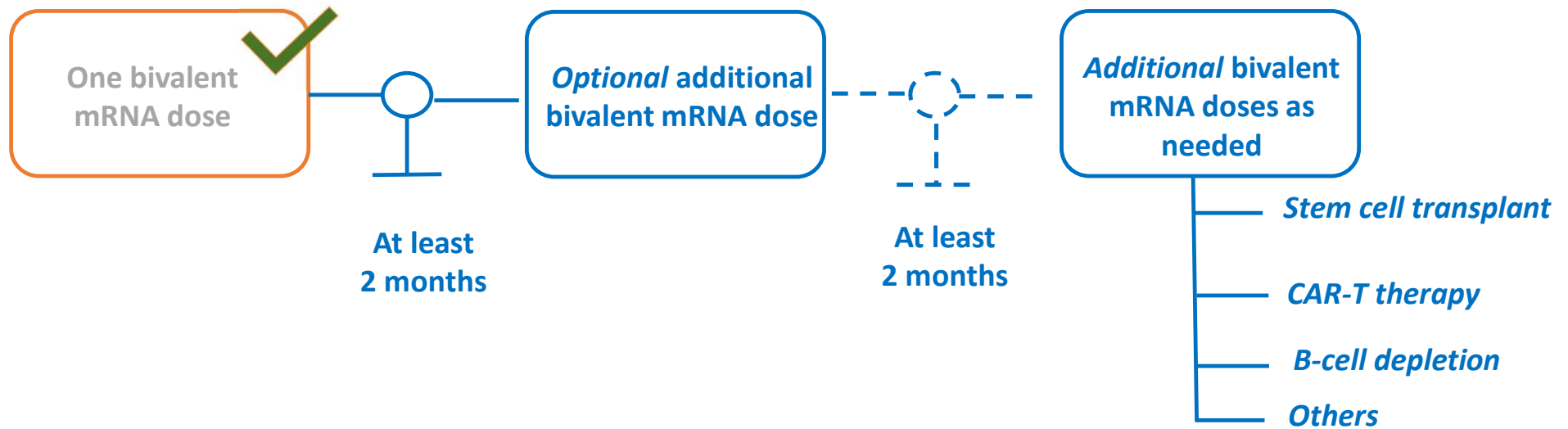
People 65 years and older who have NOT received a bivalent mRNA dose



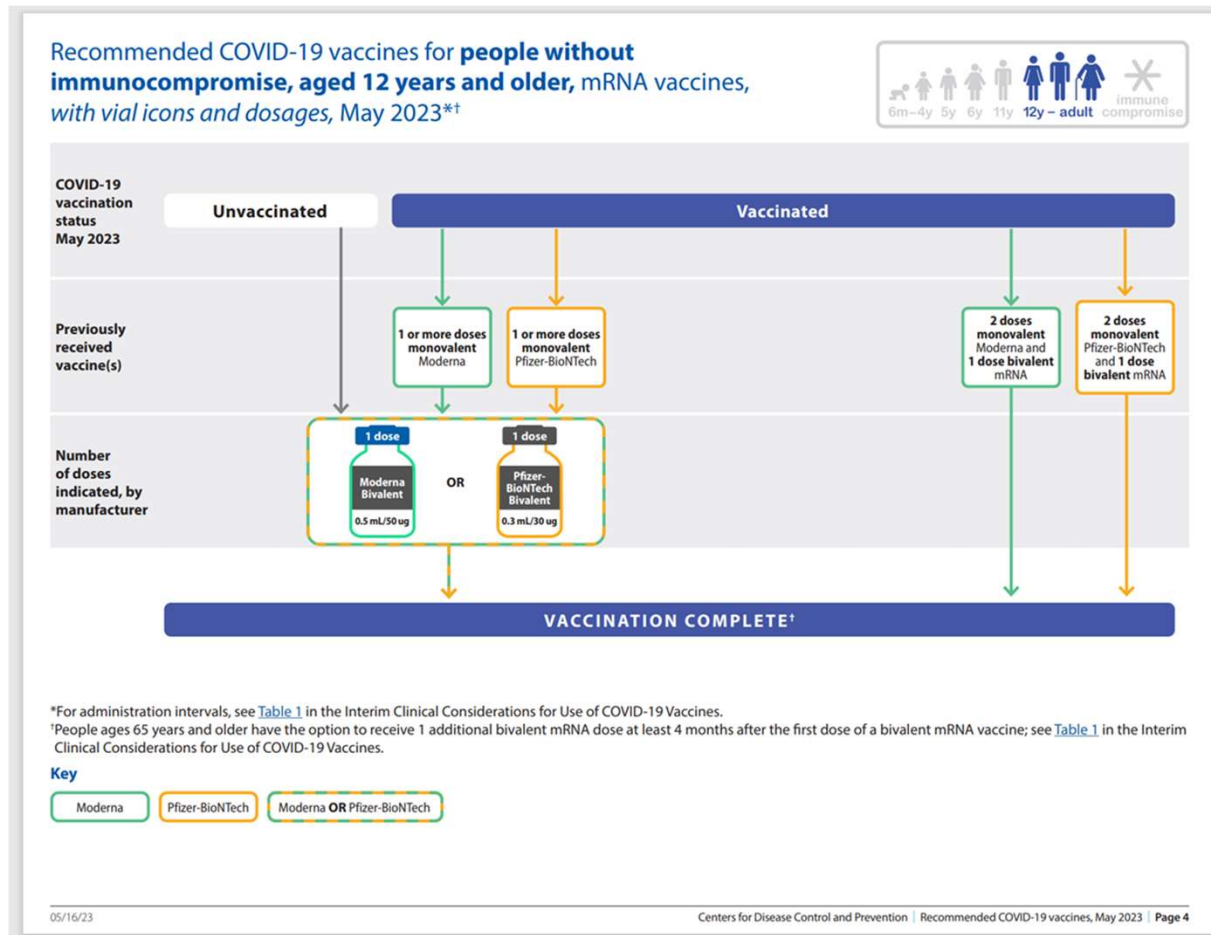
People 65 years and older who have already received a bivalent mRNA dose



New Recommendations for Persons* 6 Years of Age or older **with Immunocompromise** who Have Already Received a Bivalent mRNA Vaccine



Schedule for People ages 12 years and older who are **NOT** Moderately or Severely Immunocompromised



Novavax: People ages 12 years and older who are **NOT** Moderately or Severely Immunocompromised

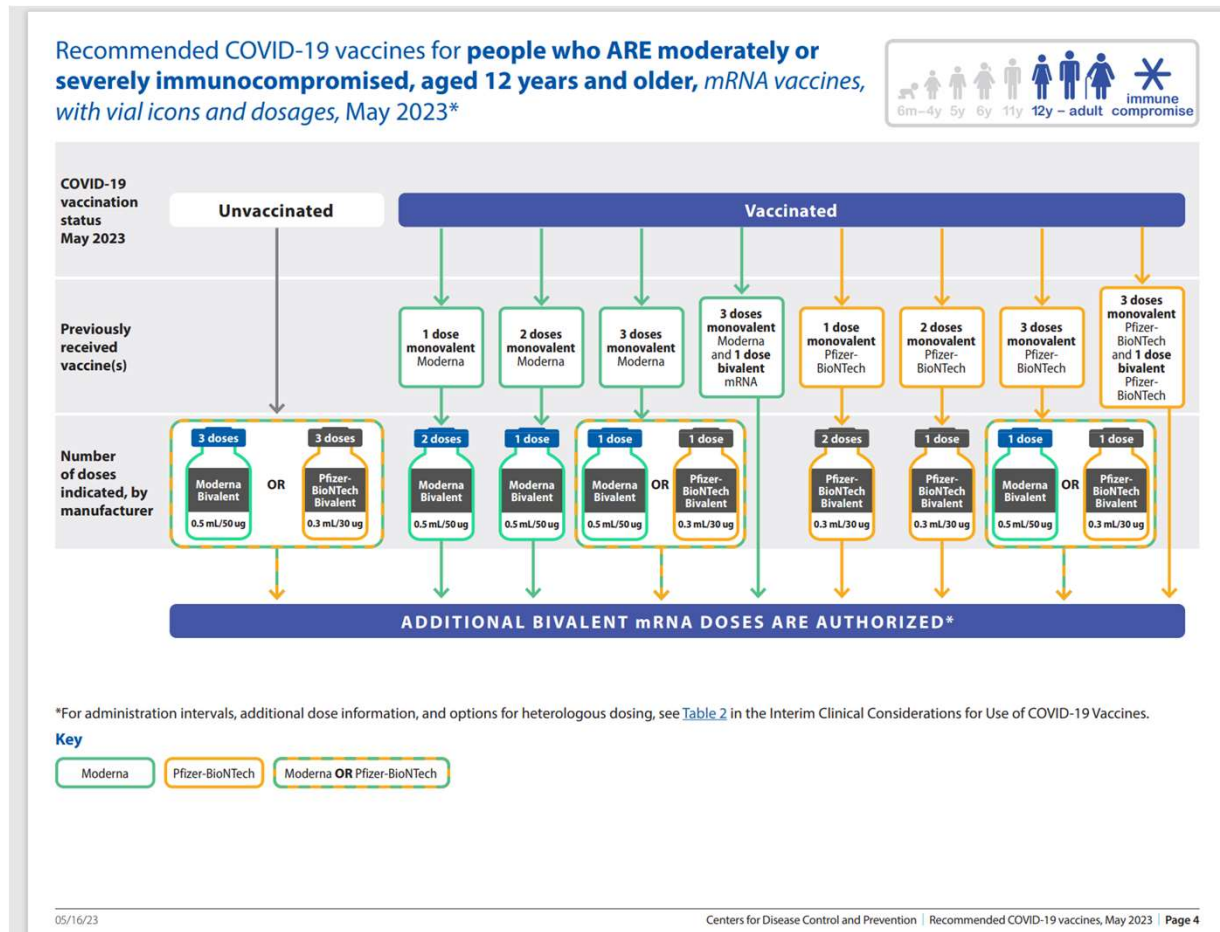
Novavax COVID-19 Vaccine

People ages 12 years and older who previously received 1 or more doses of Novavax COVID-19 Vaccine are recommended to receive 1 bivalent mRNA vaccine dose.

COVID-19 vaccination history	Bivalent vaccine	Number of bivalent doses indicated	Dosage (mL/ug)	Vaccine vial cap and label colors	Interval between doses
1 or more doses of Novavax vaccine	Moderna	1	0.5 mL/50 ug	Dark blue cap; gray label border	At least 8 weeks after last monovalent dose
	—or— Pfizer BioNTech	1	0.3 mL/30 ug	Gray	At least 8 weeks after last monovalent dose

People ages 65 years and older have the option to receive 1 additional bivalent mRNA vaccine dose at least 4 months after the first dose of a bivalent mRNA vaccine. If Moderna is used, administer 0.5 mL/50 ug (dark blue cap and label with a gray border); if Pfizer-BioNTech is used, administer 0.3 mL/30 ug (gray cap and label with a gray border).

Schedule for People ages 12 years and older **who are** Moderately or Severely Immunocompromised



Novavax: People ages 12 years and **who are** Moderately or Severely Immunocompromised

Novavax COVID-19 Vaccine

People ages 12 years and older who previously received 1 or more doses of Novavax COVID-19 Vaccine are recommended to receive 1 bivalent mRNA vaccine dose.

COVID-19 vaccination history	Bivalent vaccine	Number of bivalent doses indicated*	Dosage (mL/ug)	Vaccine vial cap and label colors	Interval between doses
1 or 2 doses of Novavax vaccine	Moderna __or__	1	0.50 mL/50 ug	Dark blue cap; gray label border	At least 8 weeks after last monovalent dose
	Pfizer BioNTech	1	0.3 mL/30 ug	Gray	At least 8 weeks after last monovalent dose

* People ages 12 years and older who are moderately or severely immunocompromised have the option to receive 1 additional dose of Moderna COVID-19 Vaccine (0.5 mL/50 ug; dark blue cap and label with a gray border) or Pfizer-BioNTech COVID-19 Vaccine (0.3 mL/30 ug; gray cap and label with a gray border) at least 2 months following the last recommended bivalent COVID-19 vaccine dose. Further additional dose(s) may be administered, informed by the clinical judgement of a healthcare provider and personal preference and circumstances. Any further additional doses should be administered at least 2 months after the last COVID-19 vaccine dose.

Contraindications and Precautions to Covid-19 Vaccine

- History of anaphylaxis after any vaccine other than COVID-19 vaccine or after any injectable therapy (i.e., intramuscular, intravenous, or subcutaneous vaccines or therapies [excluding subcutaneous immunotherapy for allergies, i.e., “allergy shot”
- History of a non-severe, immediate (onset less than 4 hours) allergic reaction after a dose of one type of COVID-19 vaccine have a precaution to the same type of COVID-19 vaccine.
- People with an allergy-related contraindication to one type of COVID-19 vaccine have a precaution to the other types of COVID-19 vaccines.
- Special situation: People with a known allergy to polysorbate have a contraindication to both Novavax and Janssen COVID-19 vaccines.*†
- Moderate or severe acute illness, with or without fever
- History of MIS-C or MIS-A
- History of myocarditis or pericarditis after a dose of an mRNA or Novavax COVID-19 vaccine



Hepatitis B

ACIP HepB Vaccine Recommendations: Adult

- Adults 19–59 years of age and adults 60 years and older at risk for HBV infection **should** receive a Hep B vaccine
- Adults 60 year and older without identified risk factors **may** receive Hep B

Vaccine	19–26 yrs	27–49 yrs	50–64 yrs	≥65 yrs
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine or			condition



Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection



Range of recommended ages for certain high-risk groups

Hepatitis B-Containing Vaccine Products*

Vaccine product	Age indications
Single-component vaccines	
Engerix-B	
Pediatric formulation	Birth–19 years
Adult formulation	20 years and older
Recombivax HB	
Pediatric formulation	Birth–19 years
Adult formulation	20 years and older
Hepelisav-B	18 years and older
Prehevbrio	18 years and older
Combination vaccines	
Pediarix—DTaP, HepB, and IPV vaccines	6 weeks–6 years
Vaxelis—DTaP, IPV, Hib, and HepB vaccines	6 weeks–4 years
Twinrix—HepA and HepB vaccines	18 years and older

Notes

Recommended Adult Immunization Schedule for ages 19 years or older, United States, 2023

For vaccine recommendations for persons 18 years of age or younger, see the Recommended Child and Adolescent Immunization Schedule.

COVID-19 vaccination

Routine vaccination

- **Primary series:** 2-dose series at 0, 4-8 weeks (Moderna) or 2-dose series at 0, 3-8 weeks (Novavax, Pfizer-BioNTech)
- **Booster dose:** see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html

Special situations

Persons who are moderately or severely immunocompromised

• Primary

- 3-dose

- 3-dose

- 2-dose

• Boost

clinical

• Pre-ex

compl

[vaccines/covid-19/clinical-considerations/interim-considerations-us.html#immunocompromised](https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#immunocompromised)

Note: Current COVID-19 schedule available at www.cdc.gov/vaccines/covid-19/downloads/COVID-19-immunization-schedule-ages-6months-older.pdf. For more information on Emergency Use Authorization (EUA) indications for COVID-19 vaccines, please visit www.fda.gov/emergency-preparedness-and-response/coronavirus

Routine vaccination

- Revised the descriptions of the 2-, 3-, and 4-dose series.

Routine vaccination

- Note describes that Heplisav-B and PreHevbrio are not recommended in pregnancy

Haemophilus influenzae type b vaccination

Special situations

- **Anatomical or functional asplenia (including sickle cell disease):** 1 dose if previously did not receive Hib; if elective splenectomy, 1 dose, preferably at least 14 days before splenectomy
- **Hematopoietic stem cell transplant (HSCT):** 3-dose series 4 weeks apart starting 6–12 months after successful transplant, regardless of Hib vaccination history

Hepatitis A vaccination

Routine vaccination

- Chronic liver disease (e.g., persons with hepatitis B, hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice the upper limit of normal)

- HIV infection

- Travel in countries with high or intermediate endemic hepatitis A (HepA-HepB [Twinrix] may be administered on an accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months)

- Close, personal contact with international adoptee (e.g., household or regular babysitting) in first 60 days after arrival from country with high or intermediate endemic hepatitis A (administer dose 1 as soon as adoption is planned, at least 2 weeks before adoptee's arrival)

- Pregnancy if at risk for infection or severe outcome from infection during pregnancy

- Settings for exposure, including health care settings targeting services to injection or noninjection drug users or group homes and nonresidential day care facilities for developmentally disabled persons

Hepatitis B vaccination

Routine vaccination

- **Age 19 through 59 years: complete a 2- or 3- or 4-dose series**

- 2-dose series only applies when 2 doses of Heplisav-B* are used at least 4 weeks apart

- 3-dose series Engerix-B, PreHevbrio*, or Recombivax HB at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 8 weeks / dose 1 to dose 3: 16 weeks]

- 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 5 months])

- 4-dose series HepA-HepB (Twinrix) accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months

*Note: Heplisav-B and PreHevbrio are not recommended in pregnancy due to lack of safety data in pregnant women

Notes

Recommended Adult Immunization Schedule, United States, 2023

- **Age 60 years or older with** known risk factors for hepatitis B virus infection **should** complete a HepB vaccine series.
- **Age 60 years or older without** known risk factors for hepatitis B virus infection **may** complete a HepB vaccine series.

- Risk factors for hepatitis B virus infection include:

- **Chronic liver disease** (e.g., persons with hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice upper limit of normal)
- **HIV infection**
- **Sexual exposure risk** (e.g., sex partners of hepatitis B surface antigen [HBsAg]-positive persons; sexually active persons not in mutually monogamous relationships; persons seeking evaluation or treatment for a sexually transmitted infection; men who have sex with men)
- **Current or recent injection drug use**
- **Percutaneous or mucosal risk for exposure to blood** (e.g., household contacts of HBsAg-positive persons; residents and staff of facilities for developmentally disabled persons; health care and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids; persons on maintenance dialysis, including in-center or home hemodialysis and peritoneal dialysis, and persons who are predialysis; patients with diabetes)
- **Incarceration**
- **Travel in countries with high or intermediate endemic hepatitis B**

Special situations

- **Patients on dialysis:** complete a 3- or 4-dose series
 - 3-dose series Recombivax HB at 0, 1, 6 months (note: use Dialysis Formulation 1 mL = 40 mcg)
 - 4-dose series Engerix-B at 0, 1, 2, and 6 months (note: use 2 mL dose instead of the normal adult dose of 1 mL)

Human papillomavirus vaccination

Routine vaccination

- HPV vaccination recommended for all persons through age 26

Age

- 2-dose series at 0, 6 months intervals; dose 2 administered 12 weeks / dose 1 administered

Age 9–14 years

- 1 dose or 2 doses less than 5 months apart: 1 additional dose

- Age 9–14 years at initial vaccination and received 2 doses at least 5 months apart: HPV vaccination series complete, no additional dose needed

- **Interrupted schedules:** If vaccination schedule is interrupted, the series does not need to be restarted
- No additional dose recommended when any HPV vaccine series has been completed using the recommended dosing intervals.

Shared clinical decision-making

- Some adults age 27–45 years: Based on shared clinical decision-making, 2- or 3-dose series as above

Special situations

- Age ranges recommended above for routine and catch-up vaccination or shared clinical decision-making also apply in special situations
- Immunocompromising conditions, including HIV infection: 3-dose series, even for those who initiate vaccination

until 3 inadv

Routine vaccination

- Risk factors for Hepatitis B infection are listed

Influenza vaccination

Routine vaccination

- Age 19 years or older: 1 dose any influenza vaccine

- For the 2022–2023 season, see www.cdc.gov/mmwr/volumes/71/rr/rr7101a1.htm

- For the 2023–2024 season, see the 2023–2024 ACIP influenza vaccine recommendations.

Special situations

- **Egg allergy, hives only:** any influenza vaccine appropriate for age and health status annually
- **Egg allergy—any symptom other than hives** (e.g., angioedema, respiratory distress or required epinephrine or another emergency medical intervention): Any influenza vaccine appropriate for age and health status may be administered. If using egg-based IIV4 or LAIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions.
- **Close contacts** (e.g., caregivers, healthcare workers) of severely immunosuppressed persons who require a protected environment: these persons should not receive LAIV4. If LAIV4 is given, they should avoid contact with/caring

Special situations

- Describes regimen for patients on hemodialysis

Hepatitis B Serologic Testing

- All adults are recommended to be screened:
 - Anti-HBs = antibody to hepatitis B surface antigen
 - HBsAg = hepatitis B surface antigen
 - Total anti-HBc = total antibody to hepatitis B core antigen
- Those who screen as susceptible should still follow ACIP recommendations for vaccination

[Screening and Testing for Hepatitis B Virus Infection: CDC Recommendations — United States, 2023 | MMWR](#)

[Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices | MMWR \(cdc.gov\)](#)



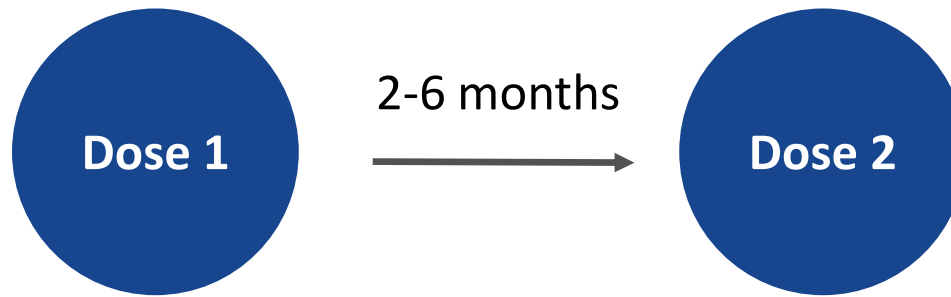
Recombinant Zoster Vaccine (RZV)

Recombinant Zoster Vaccine (Shingrix)

Previous Recommendation	New Recommendation
<p>Recombinant zoster vaccine (RZV) is recommended for the prevention of herpes zoster and related complications for:</p> <ul style="list-style-type: none">• Immunocompetent adults aged ≥ 50 years	<p>Recombinant zoster vaccine (RZV) is recommended for the prevention of herpes zoster and related complications for:</p> <ul style="list-style-type: none">• Immunocompetent adults aged ≥ 50 years• Adults aged ≥ 19 years who are or will be immunodeficient or immunosuppressed due to disease or therapy

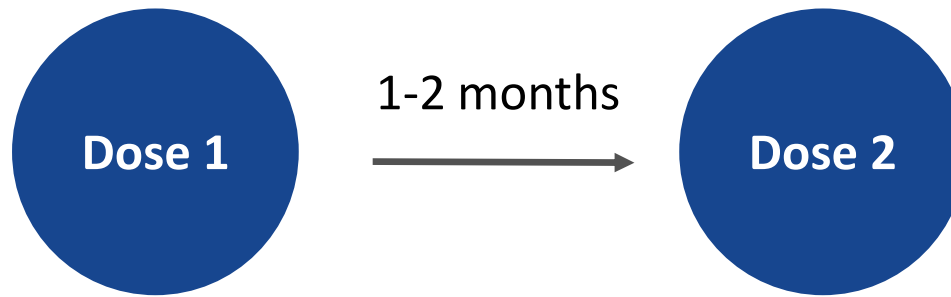
Zoster Vaccine: Shingrix (RZV)

- Schedule: 2 doses, 2 to 6 months apart



Zoster Vaccine: Shingrix (RZV)

- Potential alternate schedule for **immunocompromised** patients:
- 2 doses, 1-2 months apart



Zoster Vaccine: Patients who are **Immunocompromised**

- No documented history of varicella, varicella vaccination, or shingles:
 - Refer to ACIP varicella vaccine recommendations for further guidance, including **postexposure prophylaxis guidance**.

Zoster Adult Vaccination Schedule: Pregnancy

Consider delaying RZV until after pregnancy.

- No recommendation for pregnancy testing before vaccination

Consider vaccination without regard to breastfeeding status if RZV is otherwise indicated.

- No known risk to mothers who are breastfeeding or their infants





Pneumococcal

Serotypes in Pneumococcal Vaccine Products

	1	3	4	5	6A	6B	7 F	9V	14	18 C	19 A	19 F	23 F	22 F	33 F	8	10 A	11 A	12 F	15 B	2	9N	17 F	20	
PCV13	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow												
PCV15	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green										
PCV20	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Blue	Blue	Blue	Blue	Blue	Blue				
PPSV23	Yellow	Yellow	Yellow	Yellow	White	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Blue	Blue	Blue	Blue	Blue	Blue	Orange	Orange	Orange	Orange

- **PCV15 non-PCV13:** includes serotypes **22F** and **33F**
- **PCV20 non-PCV13:** includes serotypes **22F, 33F, 8, 10A, 11A, 12F, and 15B**
- **PPSV23 non-PCV20:** includes serotypes **2, 9N, 17F, and 20**

Pneumococcal Vaccination Schedule for Adults

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
Pneumococcal (PCV15, PCV20, PPSV23)	1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see notes)			See Notes
				See Notes

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection

Recommended vaccination for adults with an additional risk factor or another indication

Recommended vaccination based on shared clinical decision-making

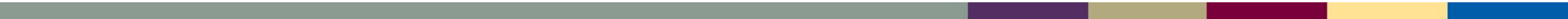
Notes and full schedule available at: <https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html>

Pneumococcal Vaccination Recommendations for Adults

Adults 19 through 64 years	Previous Recommendation	New Recommendation
None of the conditions listed below	No recommendation	No recommendation
Chronic medical conditions**	PPSV23	PCV20 OR PCV15 and PPSV23
Cochlear implant, CSF leak	Both PCV13* and PPSV23	
Immunocompromising conditions	Both PCV13* and PPSV23, repeat PPSV23 after 5 years	
Adults 65 years or older	Previous Recommendation	New Recommendation
None of the conditions listed below	PCV13* based on shared clinical decision making; PPSV23 for all	PCV20 OR PCV15 and PPSV23
Chronic medical conditions**	PCV13* based on shared clinical decision making; PPSV23 for all	
Cochlear implant, CSF leak	Both PCV13* and PPSV23	
Immunocompromising conditions	Both PCV13* and PPSV23	

If not previously administered; **Examples include alcoholism, chronic heart/liver/lung disease, diabetes, cigarette smoking

Pneumococcal: Underlying Medical Conditions or Other Risk Factors

- Alcoholism
 - Chronic heart/liver/lung disease
 - Chronic renal failure
 - Cigarette smoking
 - Cochlear implant
 - Congenital or acquired asplenia
 - CSF leak
 - Diabetes mellitus
 - Generalized malignancy
 - Human immunodeficiency virus
 - Hodgkin disease
 - Immunodeficiency
 - Iatrogenic immunosuppression
 - Leukemia, lymphoma, multiple myeloma
 - Nephrotic syndrome
 - Sickle cell disease or other hemoglobinopathies
 - Solid organ transplant
- 

Notes

Recommended Adult Immunization Schedule, United States, 2023

Pneumococcal vaccination

Routine vaccination

• Age 65 years or older who have:

- **Not previously received a dose of PCV13, PCV15, or PCV20 or whose previous vaccination history is unknown:** 1 dose PCV15 OR 1 dose PCV20. If PCV15 is used, this should be followed by a dose of PPSV23 given at least 1 year after the PCV15 dose. A minimum interval of 8 weeks between PCV15 and PPSV23 can be considered for adults with an immunocompromising condition,* cochlear implant, or cerebrospinal fluid leak to minimize the risk of invasive pneumococcal disease caused by serotypes unique to PPSV23 in these vulnerable groups.

- **Previously received only PCV7:** follow the recommendation above.

- **Previously received only PCV13:** 1 dose PCV20 at least 1 year after the PCV13 dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.

- **Previously received only PPSV23:** 1 dose PCV15 OR 1 dose PCV20 at least 1 year after the PPSV23 dose. If PCV15 is used, it need not be followed by another dose of PPSV23.

- **Previously received both PCV13 and PPSV23 but NO PPSV23 was received at age 65 years or older:** 1 dose PCV20 at least 5 years after their last pneumococcal vaccine dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.

- **Previously received both PCV13 and PPSV23, AND PPSV23 was received at age 65 years or older:** Based on shared clinical decision-making, 1 dose of PCV20 at least 5 years after the last pneumococcal vaccine dose.

• For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html

Special situations

• Age 19–64 years with certain underlying medical conditions or other risk factors** who have

- **Not previously received a PCV13, PCV15, or PCV20 or whose previous vaccination history is unknown:** 1 dose PCV15 OR 1 dose PCV20. If PCV15 is used, this should be followed by a dose of PPSV23 given at least 1 year after the PCV15 dose. A minimum interval of 8 weeks between PCV15 and PPSV23 can be considered for adults with an immunocompromising condition,* cochlear implant, or cerebrospinal fluid leak

- **Previously received only PCV7:** follow the recommendation above.

- **Previously received only PCV13:** 1 dose PCV20 at least 1 year after the PCV13 dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.

- **Previously received only PPSV23:** 1 dose PCV15 OR 1 dose PCV20 at least 1 year after the PPSV23 dose. If PCV15 is used, it need not be followed by another dose of PPSV23.

- **Previously received both PCV13 and PPSV23 but have not completed the recommended series:** 1 dose PCV20 at least 5 years after their last pneumococcal vaccine dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.

• For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html

***Note:** Immunocompromising conditions include chronic renal failure, nephrotic syndrome, immunodeficiency, iatrogenic immunosuppression, generalized malignancy, human immunodeficiency virus, Hodgkin disease, leukemia, lymphoma, multiple myeloma, solid organ transplants, congenital or acquired asplenia, sickle cell disease, or other hemoglobinopathies.

****Note:** Underlying medical conditions or other risk factors include alcoholism, chronic heart/liver/lung disease, chronic renal failure, cigarette smoking, cochlear implant, congenital or acquired asplenia, CSF leak, diabetes mellitus, generalized malignancy, HIV, Hodgkin disease, immunodeficiency, iatrogenic immunosuppression, leukemia, lymphoma, multiple myeloma, nephrotic syndrome, solid organ transplants, or sickle cell disease or other hemoglobinopathies.

Polio vaccination

Routine vaccination

Routine poliovirus vaccination of adults residing in the United States is not necessary.

Special situations

• Adults at increased risk of exposure to poliovirus with:

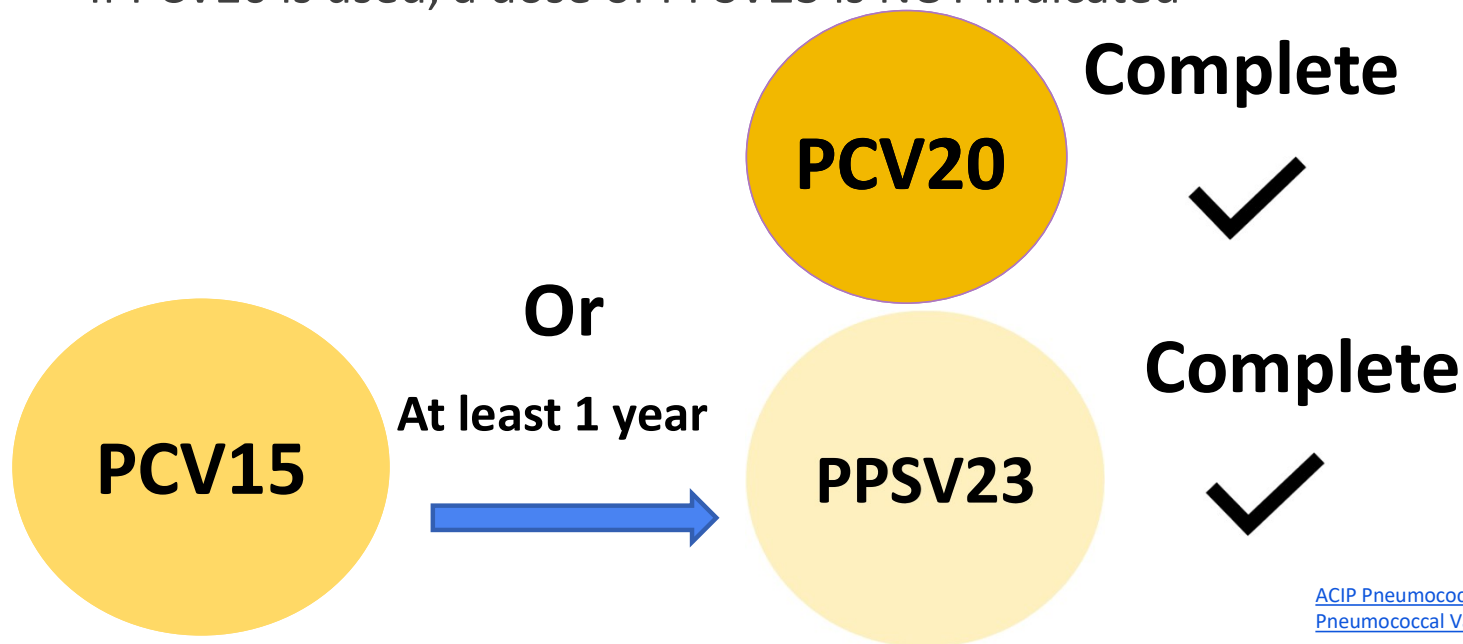
- No evidence of a complete polio vaccination series (i.e., at least 3 doses): administer remaining doses (1, 2, or 3 doses) to complete a 3-dose series

- Evidence of completed polio vaccination series (i.e., at least 3 doses): may administer one lifetime IPV booster

For detailed information, see: www.cdc.gov/vaccines/vpd/polio/hcp/recommendations.html

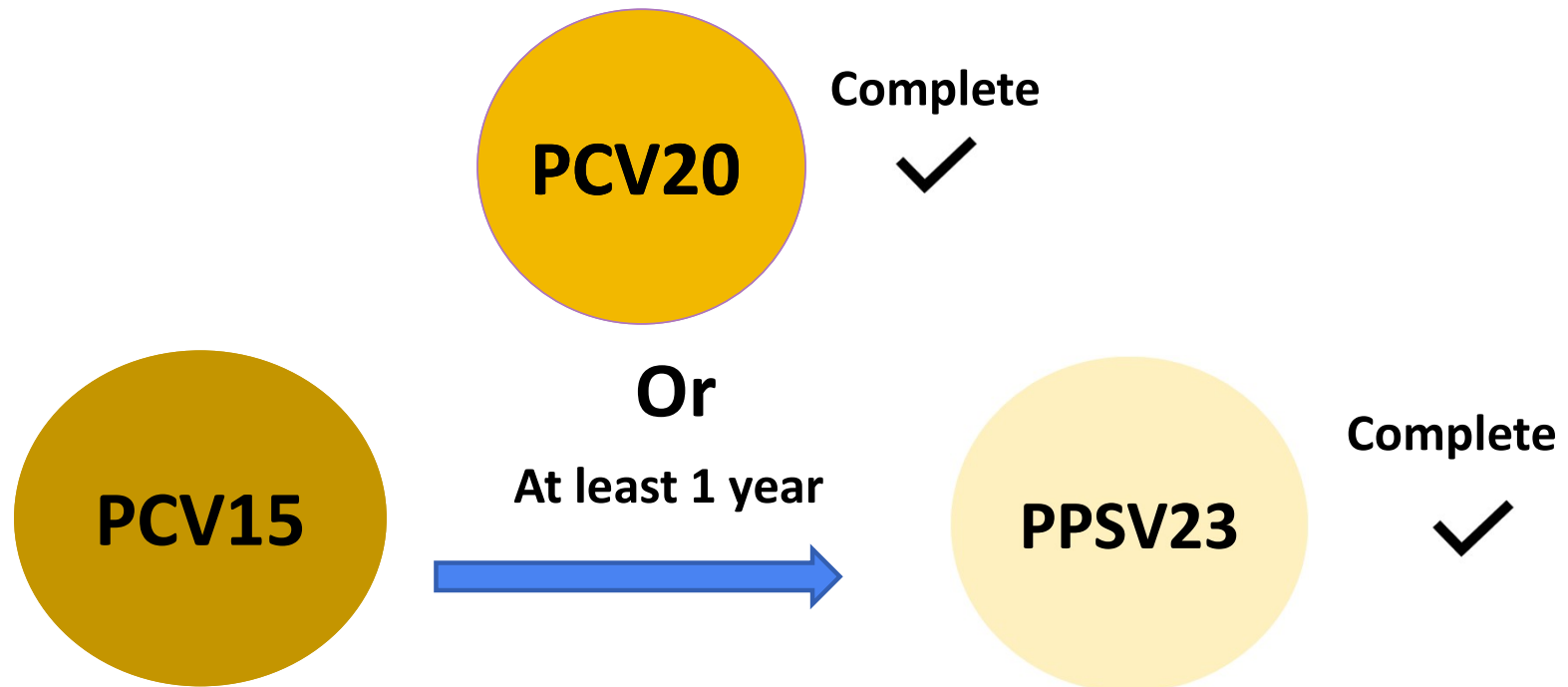
Pneumococcal Vaccination Recommendations for Adults: Ages 65+, **Unvaccinated**

- Administer 1 dose of PCV20 or PCV15
 - If PCV15 is used, this should be followed by a dose of PPSV23 at least one year later
 - If PCV20 is used, a dose of PPSV23 is NOT indicated

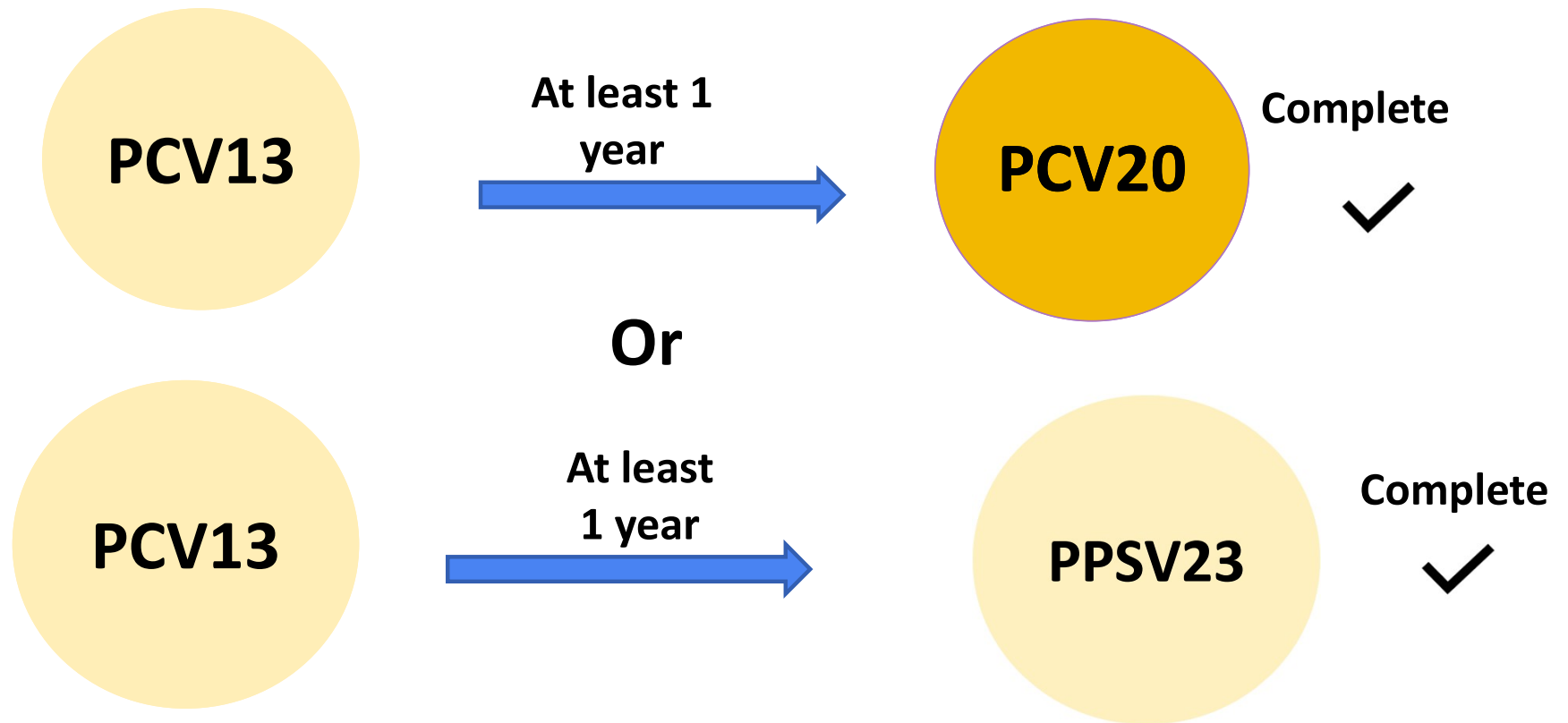


Pneumococcal Vaccination Recommendations for Adults: Ages 19–64, **Unvaccinated or PCV Unknown**

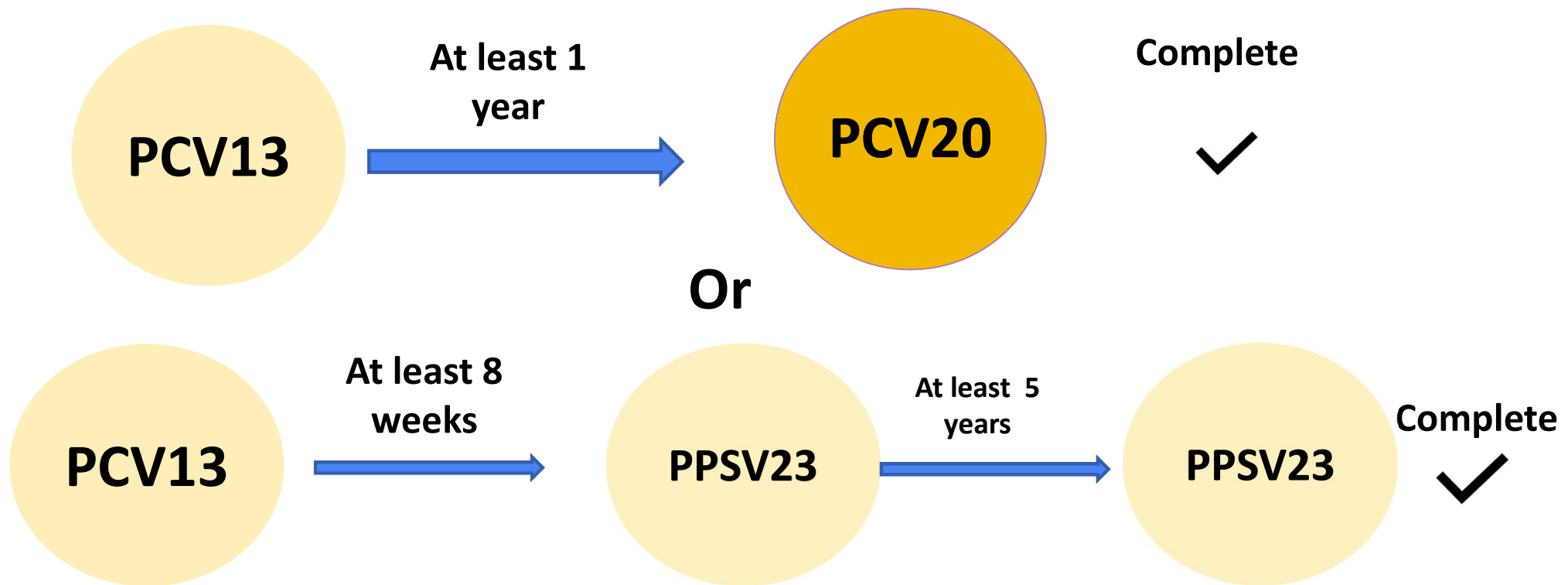
- Administer 1 dose of PCV20 or PCV15 + PPSV23



Pneumococcal Vaccination Recommendations for Adults: Ages 65+, **Received 1 dose of PCV13**

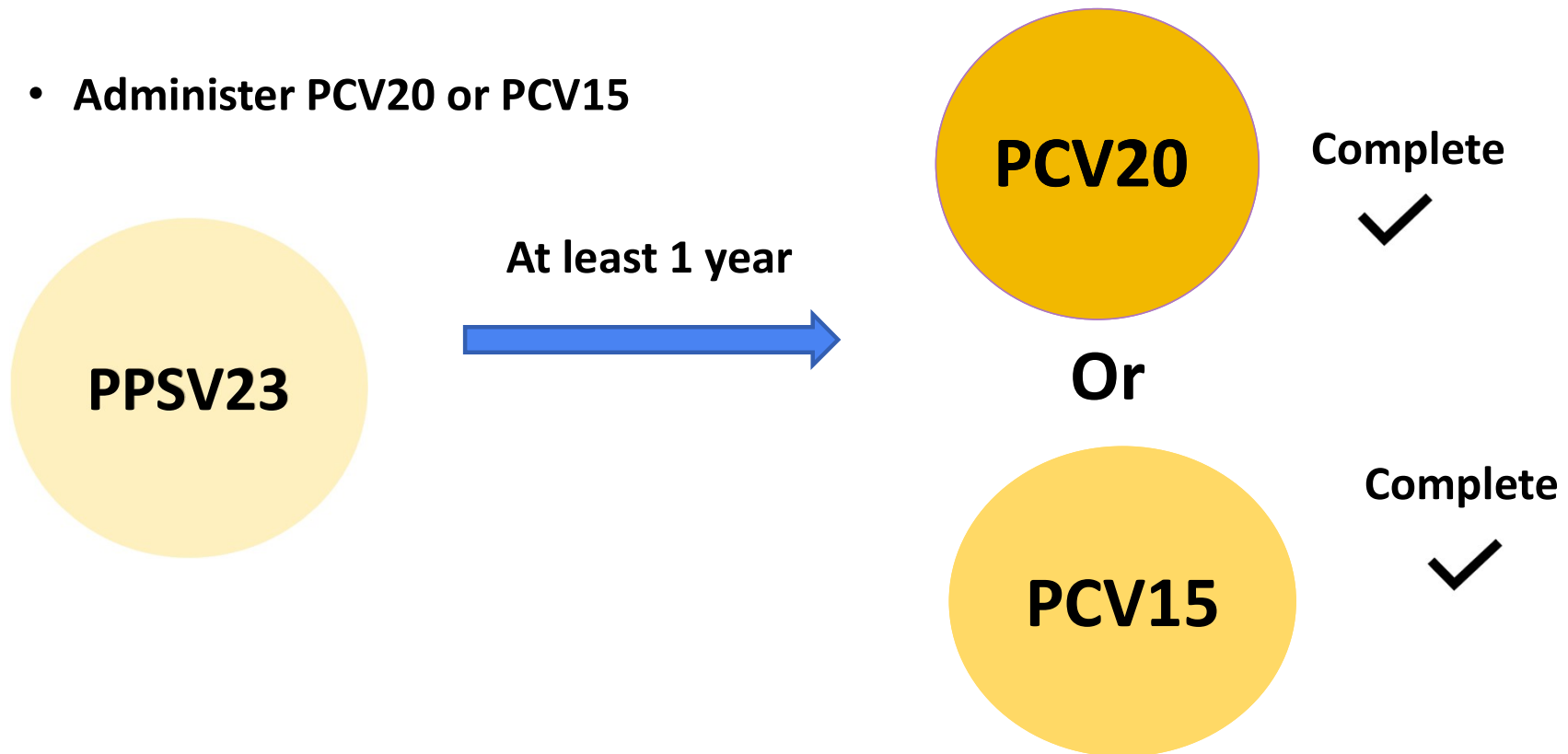


Pneumococcal Vaccination Recommendations for Adults: Ages 19–64 (Risk-Based), **Received 1 dose of PCV13**



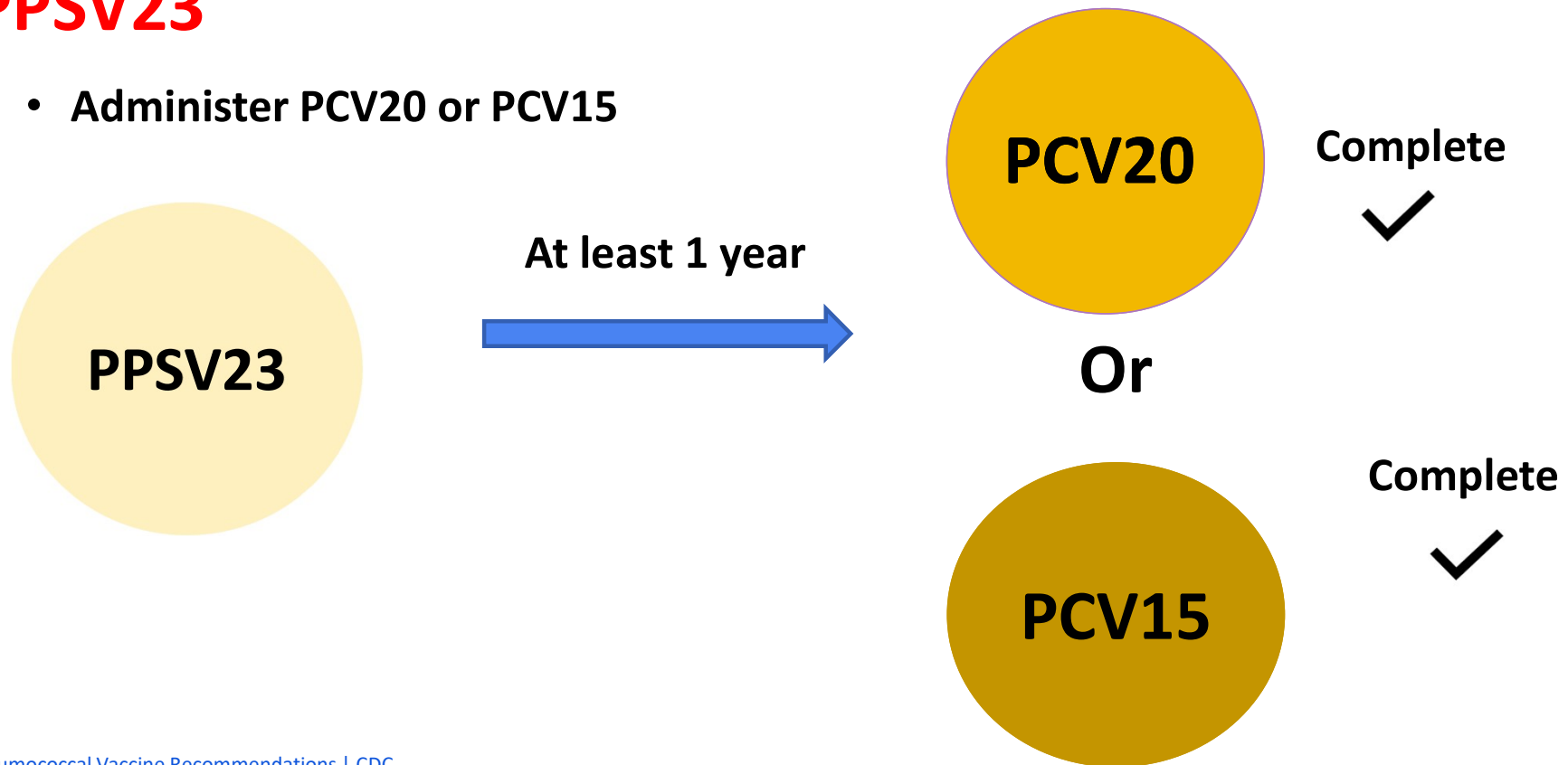
Pneumococcal Vaccination Recommendations for Adults: Ages 65+, **Received PPSV23**

- Administer PCV20 or PCV15



Pneumococcal Vaccination Recommendations for Adults: Ages 19–64 (Risk-Based), **Received PPSV23**

- Administer PCV20 or PCV15



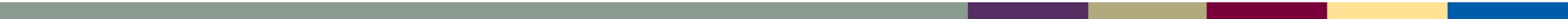
Pneumococcal Vaccination Recommendations for Adults: Adults **65+**

- Previous **PCV13** AND **PPSV23** but **no or unknown** PPSV23 at or after age 65 years
 - 1 dose PCV20 at least 5 years after last pneumo vaccine dose OR complete recommended PPSV23 series
- Previous **PCV13** AND **PPSV23** (AND PPSV23 was received **at age 65 years or older**)
 - 1 dose of PCV20 at least 5 years after the last pneumo vaccine dose based on shared clinical decision making



Polio

ACIP Polio Immunization Adult Recommendations

- Routine vaccination of U.S. residents age 18 years and older not previously recommended
 - Adults who are unvaccinated or have incomplete vaccination who are **at increased** risk for exposure should receive vaccination
 - Other adults who are unvaccinated or have incompletely vaccination should talk with their healthcare provide
 - **Adults who completed their polio vaccination but who are at increased risk of exposure to poliovirus may receive one lifetime IPV booster**
- 

Adults at Increased Risk of Exposure



Laboratory workers handling specimens that may contain polioviruses



Travelers to areas where poliomyelitis is endemic or epidemic



Health care personnel treating patients who could have polio or have close contact with a person who could be infected with poliovirus



Unvaccinated or incompletely vaccinated adults:

- Whose children will be receiving oral poliovirus vaccine (for example, international adoptees or refugees)
- Who live or work in a community where poliovirus is circulating

ACIP Polio Immunization Adult Recommendations

- **Schedule for unvaccinated adults:**
 - The first dose at any time
 - The second dose 1 to 2 months later
 - The third dose 6 to 12 months after the second
- Adults who have had one or two doses of polio vaccine in the past should receive the remaining one or two doses

ACIP Polio Immunization Adult Recommendations

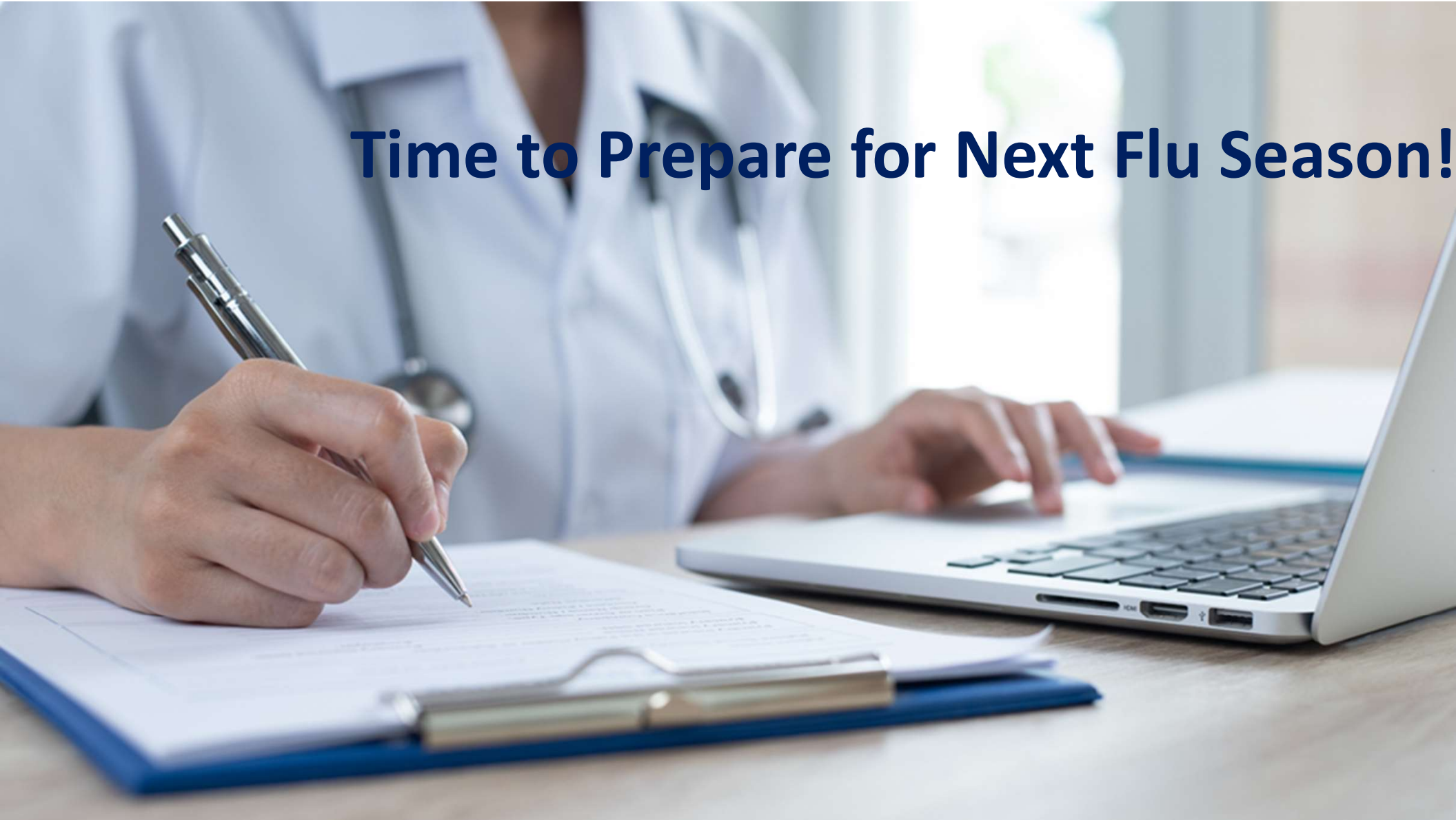
- Incomplete series
 - Administer remaining doses in series based on immunization history
 - No need to restart a valid, documented series
 - Valid = minimum intervals met
- Previously completed series
 - Administer 1 dose of IPV to those at risk





Influenza

Time to Prepare for Next Flu Season!



ACIP Polio 2022-2023 ACIP Recommendations: Influenza

- Annual influenza vaccination is recommended for persons 6 months of age and older without contraindications or precautions
- Note: Influenza vaccine products vary with different age-indications contraindications, and recommendations.



ACIP 2022-2023 ACIP Recommendations: Influenza



Ages 65 years and older
ACIP recommends any high dose or
adjuvanted influenza vaccine.

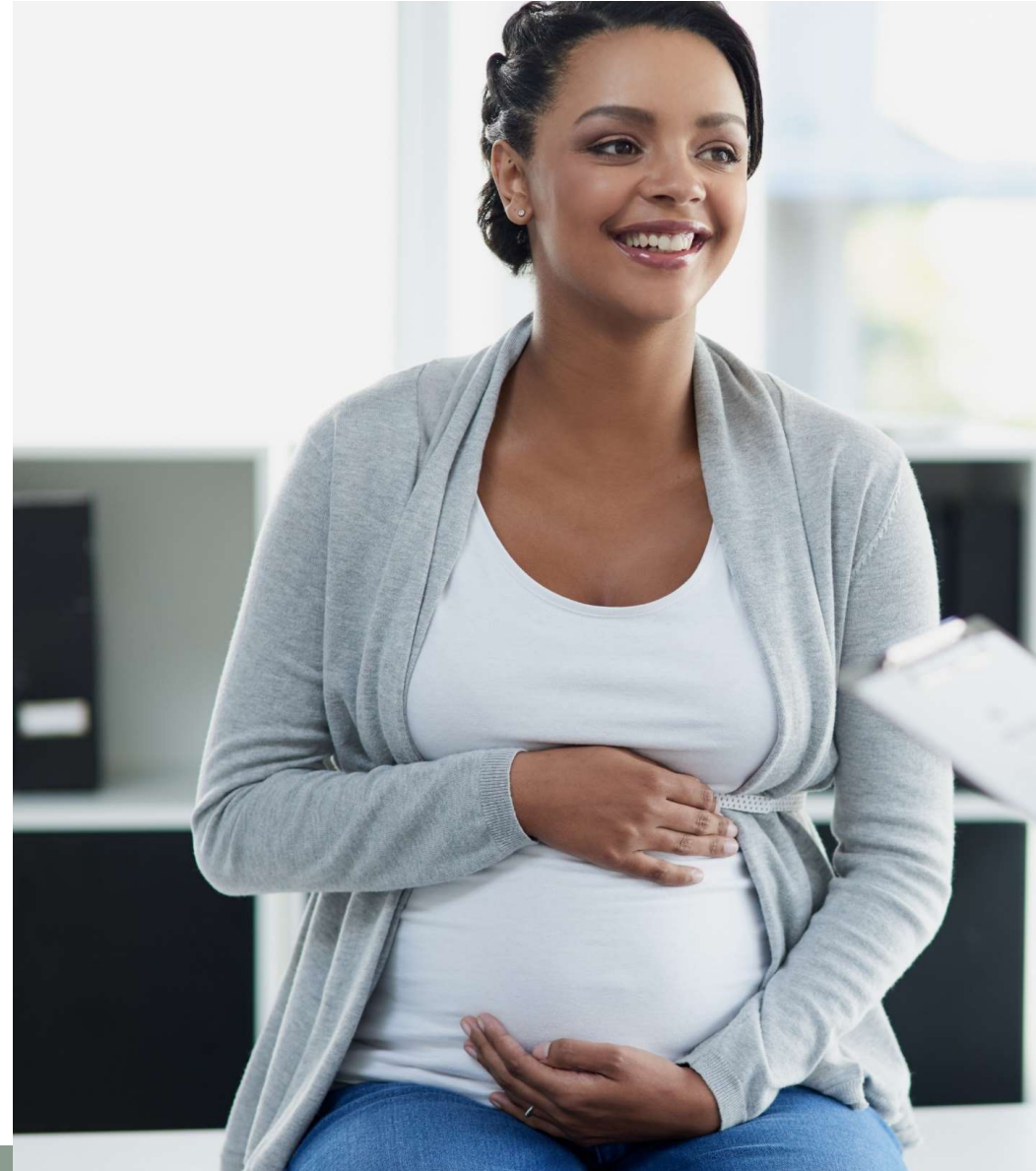
[Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2022–23 Influenza Season | MMWR \(cdc.gov\)](#)

ACIP 65 Years Old and Older: Higher Dose and Adjuvanted Vaccines

- ACIP recommends preferential use of higher dose or adjuvanted influenza vaccines for persons 65 years old or older
- Includes these vaccines:
 - Higher dose: High-dose influenza vaccine (Fluzone High-Dose), Recombinant Influenza Vaccine (Flublok)
 - Adjuvanted: Adjuvanted influenza vaccine (Fluad)
 - No preference between these three
- If none of the three are available, vaccinate with another age-appropriate influenza vaccine

Pregnant People

- **At serious risk for influenza-related complications**
- **Complications include severe illness and pneumonia**
- **At increased risk of influenza-related hospitalization**
- **Risk of influenza-related hospitalization increases later in pregnancy**



Vaccination resources for healthcare providers

CDC vaccination resources for healthcare providers

- Clinical Materials and Training Programs
- Schedules App
- Pneumococcal Vaccination App
- Pneumococcal Vaccine Timing for Adults
- Storage and Handling Toolkit



Immunization Schedules

CDC > Schedules Home > For Healthcare Providers

Adult Immunization Schedule by Age

[Print](#)

Recommendations for Ages 19 Years or Older, United States, 2023

Using the schedule

To make vaccination recommendations, healthcare providers should:

1. Determine needed vaccines **based on age** ([Table 1](#))
2. Assess for **medical conditions and other indications** ([Table 2](#))
3. Review **special situations** ([Vaccination Notes](#))
4. Review **contraindications and precautions to vaccination** ([Appendix](#))

Vaccines You May Need

[Recommended vaccines for adults](#)

[Get personalized recommendations](#)

[Get email updates](#)

The Immunization Schedule

[Table 1. By age](#)

[Table 2. By indications](#)

[Vaccination notes](#)

[Appendix](#)

Download the Schedule

[Printable schedule, color](#) 

[Printable schedule, black & white](#) 

[Download the mobile schedule app](#)

More Schedule Resources

[Compliant version of the schedule](#)

[Schedule changes and guidance](#)

[Vaccines in the schedule](#)

[Syndicate the schedules on your website](#)

Download "CDC Vaccine Schedules" free for iOS and Android devices.



Product Specs

Version: 10.0.1

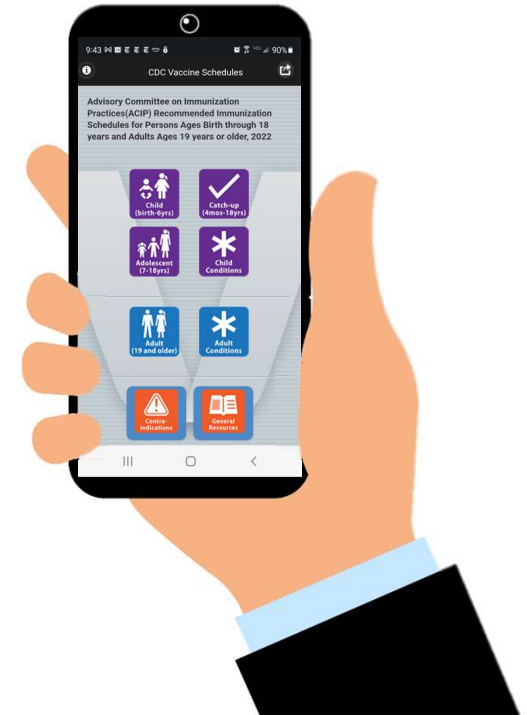
Requirements: Requires iOS 11.0 or later and Android 5.1 or later; optimized for tablets and useful on smartphones.

Updates: Changes in the app are released through app updates.

Download app free for iOS



Download app free for Android



New Recommendations CDC COVID-19 Vaccine Clinical Resources

COVID-19 Vaccination

- Product info by U.S. Vaccine +
- Interim Clinical Considerations -**
- Use of COVID-19 Vaccines in the U.S.
- Use of COVID-19 Vaccines in the U.S.: Appendices
- FAQs for the Interim Clinical Considerations
- Archived COVID-19 Vaccination Schedules
- Myocarditis and Pericarditis Considerations
- Clinical Care +
- Provider Requirements and Support +
- Training and Education
- Vaccine Recipient Education +
- Health Departments +
- Planning & Partnerships +
- Vaccine Effectiveness Research
- COVID-19 Vaccine Data Systems +

Use of COVID-19 Vaccines in the United States

[Print](#)

Interim Clinical Considerations

Summary of recent changes (last updated March 16, 2023):

- New recommendation for children ages 6 months–4 years who previously completed a 3-dose monovalent Pfizer-BioNTech primary series to receive 1 bivalent Pfizer-BioNTech booster dose at least 2 months after completion of the monovalent primary series.
- Vaccination providers are now required to report cases of myocarditis and pericarditis after receipt of a Janssen COVID-19 Vaccine to the Vaccine Adverse Event Reporting System (VAERS).

Reference Materials

- [Summary Document for Interim Clinical Considerations](#) (Updated 12/12/2022)
- [Interim COVID-19 Immunization Schedule](#) (Updated 12/12/2022)
- [COVID-19 Vaccination Schedule Infographic](#)
- [COVID-19 Vaccination Schedule Infographic \(Immunocompromised\)](#)
- [Special Situations for COVID-19 Vaccination of Children and Adolescents: Age Transitions and Interchangeability](#) (Updated 12/09/2022)
- [FAQs for the Interim Clinical Considerations](#)

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COVID-19 Vaccines, Recommendations, and Schedules

Overview of COVID-19 vaccination	Guidance for people who are not immunocompromised
	Guidance for people who are immunocompromised

U.S. COVID-19 Vaccine Product Information

[Español](#) | [Print](#)

Find a suite of information and materials that are needed for each specific COVID-19 vaccine that cover administration, storage and handling, safety, and reporting.

Janssen/J&J

Pfizer-BioNTech

Moderna

Novavax

Interim COVID-19 Immunization Schedule for Ages 6 months and older

Find guidance for COVID-19 vaccination schedules based on age and medical condition.

Prevaccination Screening Checklist

[COVID-19 Prevaccination Guidelines](#)

Download a prevaccination checklist in multiple languages.

[Select Language](#)

Requirements, Trainings, and Resources

Identification, Disposal, and Reporting of COVID-19 Vaccine Wastage	Secretarial Directive on Eligibility to Receive Particular COVID-19 Vaccine Boosters (September 25, 2021)
Vaccine Storage and Handling Toolkit	Secretarial Directive on Eligibility to Receive Particular COVID-19 Vaccine Boosters (October 22, 2021)
Training and Education	

[Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC](#)
[U.S. COVID-19 Vaccine Product Information | CDC](#)

COVID-19 Resources

- **Covid-19 Vaccine Interim Clinical Consideration**

- [Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC](#)

- **Covid-19 Vaccine Standing Orders**

- [U.S. COVID-19 Vaccine Product Information | CDC](#)

- **Covid -19 Vaccine Infographics**

- [COVID-19 vaccines infographic May 2023 \(cdc.gov\)](#)
- [COVID-19 Vaccines Infographic \(Immunocompromised\) \(cdc.gov\)](#)

- **Covid-19 Vaccine Schedule**

- [COVID-19 Vaccine—Interim COVID-19 Immunization Schedule for Persons 6 Months of Age and Older \(cdc.gov\)](#)

- **Moderna Bivalent Vaccine Vial Infographic**

- [Moderna COVID-19 Vaccine: Storage and Handling Summary \(cdc.gov\)](#)



Pneumococcal Vaccine Timing for Adults

Make sure your patients are up to date with pneumococcal vaccination.

Adults ≥65 years old Complete pneumococcal vaccine schedules

Prior vaccines	Option A	Option B
None*	PCV20	PCV15 → ≥1 year† → PPSV23
PPSV23 only at any age	→ ≥1 year → PCV20	→ ≥1 year → PCV15
PCV13 only at any age	→ ≥1 year → PCV20	→ ≥1 year† → PPSV23
PCV13 at any age & PPSV23 at <65 yrs	→ ≥5 years → PCV20	→ ≥5 years§ → PPSV23

* Also applies to people who received PCV7 at any age and no other pneumococcal vaccines

† Consider minimum interval (8 weeks) for adults with an immunocompromising condition, cochlear implant, or cerebrospinal fluid leak (CSF) leak

§ For adults with an immunocompromising condition, cochlear implant, or CSF leak, the minimum interval for PPSV23 is ≥8 weeks since last PCV13 dose and ≥5 years since last PPSV23 dose; for others, the minimum interval for PPSV23 is ≥1 year since last PCV13 dose and ≥5 years since last PPSV23 dose

Shared clinical decision-making for those who already completed the series with PCV13 and PPSV23

Prior vaccines	Shared clinical decision-making option
Complete series: PCV13 at any age & PPSV23 at ≥65 yrs	→ ≥5 years → PCV20 Together, with the patient, vaccine providers may choose to administer PCV20 to adults ≥65 years old who have already received PCV13 (but not PCV15 or PCV20) at any age and PPSV23 at or after the age of 65 years old.

www.cdc.gov/pneumococcal/vaccination.html



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

Vaccines and Preventable Diseases

Vaccines & Preventable Diseases Home > Vaccines by Disease > Pneumococcal > For Healthcare Professionals



Home Vaccines & Preventable Diseases Home

Vaccines by Disease

Chickenpox (Varicella) +

Dengue +

Diphtheria +

Flu (Influenza) +

Hepatitis A +

Hepatitis B +

Hib +

Human Papillomavirus (HPV) +

Measles +

Meningococcal +

Mumps +

Pneumococcal -

What Everyone Should Know

For Healthcare Professionals

PneumoRecs VaxAdvisor Mobile App for Vaccine Providers

i The PneumoRecs VaxAdvisor Mobile App was updated on February 9, 2022, to reflect CDC's new adult pneumococcal vaccination recommendations.

The *PneumoRecs VaxAdvisor* mobile app helps vaccination providers quickly and easily determine which pneumococcal vaccines a patient needs and when. The app incorporates recommendations for all ages so internists, family physicians, pediatricians, and pharmacists alike will find the tool beneficial.

Users simply:

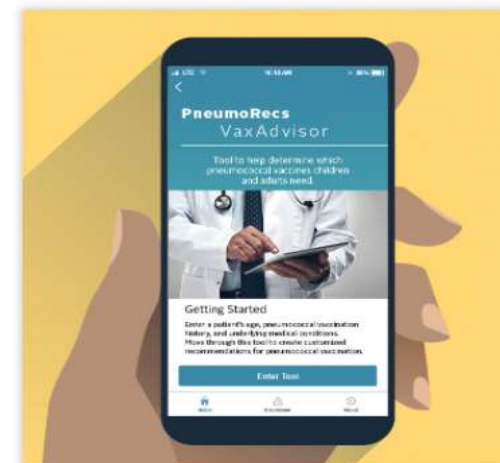
- Enter a patient's age.
- Note if the patient has specific underlying medical conditions.
- Answer questions about the patient's pneumococcal vaccination history.

Then the app provides patient-specific guidance consistent with the immunization schedule recommended by the U.S. Advisory Committee on Immunization Practices (ACIP).

Download the App Today

Download *PneumoRecs VaxAdvisor* for free:

- [iOS devices](#)



PneumoRecs VaxAdvisor is available for download on iOS and Android mobile devices.



Healthcare Providers / Professionals

[Healthcare Professionals / Providers Home](#) > [Administration Tools](#) > [Vaccine Storage & Handling](#)



 [Healthcare Professionals / Providers Home](#)

[Clinical Resources](#) +

[Administration Tools](#) -

[Vaccine Storage & Handling](#) -

[Storage and Handling Resources](#)

[Storage and Handling Toolkit](#)

[You Call The Shots: Vaccine Storage and Handling](#)

[Vaccine Administration](#) +

[Vaccines for Children \(VFC\)](#) +

[VIS](#)

[Reminder Systems and Strategies](#)

[Patient Education](#) +

[Immunization Training](#)

[Vaccine-Preventable Diseases](#)

Vaccine Storage and Handling Toolkit

COVID-19 Vaccination Provider Requirements

The Vaccine Storage and Handling Toolkit has been updated with a COVID-19 Vaccine Addendum with information on Storage and Handling best practices for COVID-19 vaccines. All vaccination providers participating in the COVID-19 Vaccination Program must store and handle COVID-19 vaccines under proper conditions to maintain the cold chain as outlined in the toolkit and addendum.

This addendum will be updated with specific storage and handling information for each COVID-19 product. Please sign up for email alerts on this page to be notified when updates are made or check this website often.

For more information about COVID-19 vaccination provider requirements and resources on enrollment, ordering, and data in support of vaccination visit [COVID-19 Vaccination Provider Requirements and Support | CDC](#)

The 2021 Vaccine Storage and Handling Toolkit is a comprehensive guide that reflects best practices for vaccine storage and handling from Advisory Committee on Immunization Practices (ACIP) recommendations, product information from vaccine manufacturers, and scientific studies.

The toolkit has been updated for 2021 to clarify language including:

- Beyond use date (BUD)
- Routine maintenance for vaccine storage units
- New definition added to the glossary
- COVID-19 vaccine information



Vaccine Storage and Handling Toolkit

Updated with COVID-19 Vaccine Storage and Handling Information
Addendum added September 29, 2021



CDC vaccination resources for healthcare providers

- **Schedules App**
 - <https://www.cdc.gov/vaccines/schedules/hcp/schedule-app.html>
- **Pneumococcal Vaccination App**
 - <https://www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html>
- **Pneumococcal Vaccine Timing for Adults**
 - <https://www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf>
- **Storage and Handling Toolkit**
 - <https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html>
- **Clinical Considerations for Use of COVID-19 Vaccines**
 - <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html>

CDC Contact Information

- **Immunization call center**
 - 1-800-232-4636 (1-800-CDC-INFO)
 - 8:00 am through 8:00 pm
 - English or Spanish
 - Questions about immunization or vaccine-preventable diseases, to find vaccination locations, or to order single copies of immunization materials
- **Email**
 - nipinfo@cdc.gov
 - Health care providers can submit questions about immunization or vaccine-preventable diseases.
 - Response usually within 24 hours
 - CISAeval@cdc.gov
 - U.S. health care providers can request consultation with CISA Project about complex vaccine safety questions for patients who reside in U.S.
 - Clinical Immunization Safety Assessment Project (CISA) needs access to medical records

Thank You!

Questions?

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

