Adult Vaccine Update: 2026 Guidelines

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Disclosures

I have no conflicts of interest to disclose

Objectives

- Identify current adult immunization schedule
- Understand the importance of adult immunizations
- Determine vaccine recommendations based on patient-specific factors

CDC Adult Vaccine Schedule

Redirect

This page's content is currently being updated to align with recently revised ACIP vaccine recommendations.

The most up-to-date information is available at the address below.

https://www.cdc.gov/vaccines/imz-schedules/adult-easyread.html

Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2026

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	1 or more doses of updated 2025-2026 vaccine See Notes			2 or more doses of 2025-2026 vaccine See Notes
Influenza inactivated (IIV3, ccIIV3) Influenza recombinant (RIV3)	1 dose annually			1 dose annually (HD-IIV3, RIV3 or aIIV3 preferred)
Influenza inactivated (aIIV3; HD-IIV3)	Solid organ transplant See Notes			
Influenza live, attenuated (LAIV3)				
Respiratory syncytial virus (RSV)	Seasonal administration during pregnancy See Notes		50 through 74 years See Notes	>75 years
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 health care 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, PCV21, PPSV23)			See Notes	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 (19 through 59 years)			
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			
Mpox	2 doses			
Inactivated poliovirus (IPV)	Complete 3-dose series if incompletely vaccinated. Self-report of previous doses acceptable. 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

No recommendation/ Not applicable

Table 2 Recommended Adult Immunization Schedule by Medical Condition or Other Indication, United States, 2026

Vaccine	Pregnancy	Immunocompromised (excluding HIV infection)	HIV infection CD4 percentage and count		Men who have sex with men	Asplenia, complement deficiency	Heart or lung disease	Kidney failure, end-stage renal disease or on dialysis	Chronic liver disease; alcoholism[a]	Diabetes	Health care personnel[b]
			<15% or <200/mm³	≥15% and ≥200/mm³							
COVID-19		See Notes									
Influenza inactivated, recombinant		Solid organ transplant See Notes	1 dose annually								
LAIV3					1 dose annually if age 19–49 years		1 dose annually if age 19–49 years				
RSV	Seasonal administration See Notes	See Notes							See Notes		
Tdap or Td	Tdap: 1 dose each pregnancy	1 dose Tdap, then Td or Tdap booster every 10 years									
MMR	*			See Notes							
VAR	*										
RZV		See Notes									
HPV	*	3-dose series if indicated									
Pneumococcal											
HepA											
HepB	See Notes									Age ≥60 yrs	
MenACWY											
MenB											
Hib		HSCT: 3 doses[c]				Asplenia: 1 dose					
Mpox	See Notes										See Notes
IPV		Complete 3-dose series if incompletely vaccinated. Self-report of previous doses acceptable. See Notes									

- Recommended for all adults who lack documentation of vaccination **OR** lack evidence of past infection
- Not recommended for all adults, but is recommended for some adults based on either age **OR** increased risk for or severe outcomes from disease
- Recommended based on shared clinical decision-making
- Recommended for all adults, and additional doses may be necessary based on medical condition or other indications. See Notes.
- Precaution: Might be indicated if benefit of protection outweighs risk of adverse reaction
- Contraindicated or not recommended *Vaccinate after pregnancy, if indicated
- No guidance/ Not applicable

a. Precaution for LAIV3 does not apply to alcoholism.
b. See Notes for influenza; hepatitis B; measles, mumps, and rubella; and varicella vaccinations.
c. Hematopoietic stem cell transplant

3/1/2026

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Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine			
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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		
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Pneumococcal Disease

- *Streptococcus pneumoniae* is the most common cause of community-acquired bacterial pneumonia in adults

  10-30% of adult CAP cases globally

  Most common cause of bacterial pneumonia that results in hospitalization

- Invasive pneumococcal disease (IPD) can lead to cognitive decline, loss of independence, additional cardiac events, and reduced lifespan following infection
- Increasing antibiotic resistance

Risk Factors for Invasive Pneumococcal Disease.

Age	Comorbid Conditions	Immunocompromising Conditions
>50 y	Chronic heart disease	Chronic renal failure, nephrotic syndrome
	Chronic liver disease	Immunodeficiencies
	Chronic lung disease	Iatrogenic immunosuppression
	Diabetes mellitus	Generalized malignancy
	Cochlear implant	HIV infection
	CSF leak	Hodgkin's disease, leukemia, lymphoma, multiple myeloma
	Smoking	Solid organ transplant
	Alcoholism	Sickle cell disease or other hemoglobinopathies
	Nursing home residence	Congenital or acquired asplenia

Pneumococcal Vaccine

- PCV 15, PCV 20, PCV 21, PPSV 23
- Age 19-49 years with certain underlying medical conditions or other risk factors
- Age 50 years or older
- Have not previously received a PCV vaccine or history is unknown – 1 dose of PCV 15 or 1 dose of PCV 20 or 1 dose of PCV 21
  - If PCV 15 is used, give PPSV 23 after 1 year

Pneumococcal Vaccination Recommendation for Adults, 2025, ACIP.

Age/Group	Recommended Vaccine	Interval
≥50 years (no prior PCV)	PCV15 + PPSV23/ PCV20/PCV21	PPSV23 ≥ 1 year after PCV15 (8 weeks if high risk)
≥50 years (received PCV13)	PCV20/PCV21	≥1 year after PCV13
≥50 years (received PPSV23)	PCV15/PCV20/PCV21	≥1 year after PPSV23
≥50 years (received PCV13 + PPSV23, both before 65)	PCV20/PCV21	≥5 years after last vaccine
≥50 years (received PCV13 + PPSV23, after 65)	PCV20/ PCV21 (Clinical decision)	≥5 years after last vaccine
19–49 years with risk conditions (no prior PCV)	PCV15 + PPSV23/ PCV20/PCV21	PPSV23 ≥ 1 year after PCV15 (8 weeks if high risk)
19–49 years with risk conditions (received PCV13)	PCV20/PCV21	≥1 year after PCV13
19–49 years with risk conditions (received PPSV23)	PCV15/PCV20/PCV21	≥1 year after PPSV23
19–49 years with risk condition [1] (received PCV13 + PPSV23)	PCV20/PCV21	≥5 years after last vaccine

Pneumococcal Vaccine Contraindications

Pneumococcal conjugate (PCV15, PCV20, PCV21)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Severe allergic reaction (e.g., anaphylaxis) to any diphtheria-toxoid-containing vaccine or to its vaccine component	Moderate or severe acute illness with or without fever
Pneumococcal polysaccharide (PPSV23)	Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	Moderate or severe acute illness with or without fever

Varicella Zoster Virus

- Human herpesvirus
- Initial infection - chickenpox
- Can reactivate - herpes zoster (shingles)
- Risk factors include immunosuppression and chronic medical conditions
- Most common complication is postherpetic neuralgia

Zoster Vaccination

Major differences between ZVL and RZV.

Vaccine	ZVL	RZV
Live/recombinant	Live	Recombinant
Main components	Lyophilized preparation of live, attenuated VZV	VZV's gE and the AS01B adjuvant system
Recommendations	Persons at age ≥50 years	Persons at age ≥50 years and immunocompromised/immunosuppressed patients aged ≥18
Major contraindications	Immunosuppression, immunodeficiency, anaphylaxis to a vaccine ingredient; presence of an acute illness at the time of administration	Anaphylaxis following a previous dose of RZV or after a contact to any ingredient of the vaccine; presence of an acute illness at the time of administration
Year of licensure	2006	2017
Dosage	One dose (0.65 mL) intramuscularly or subcutaneously	Two doses (2 × 0.5 mL) intramuscularly, with 2–6 months between each dose

Recombinant Zoster Vaccine (RZV)

- Age 50 years or older
  - 2-dose series
  - 2-6 months apart
  - Regardless of previous herpes zoster or history of zoster vaccine live vaccination
- Special situations
  - Immunocompromising conditions

RZV Contraindications

Zoster recombinant vaccine (RZV)	Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever • Current episode of herpes zoster

Respiratory Syncytial Virus (RSV)

- Approximately 12% of adult respiratory infections that receive medical attention are due to RSV
- In adults that are hospitalized due to RSV, mortality rate is 4-7%
- Approximately 75% of deaths due to RSV occur in people aged 65+

RSV Vaccination

- Pregnant persons of any age
- Age 75 years or older
- Special situations
  - Unvaccinated and at increased risk of severe RSV disease
  - Risk factors

RSV Vaccination

- Risk Factors
  - Chronic cardiovascular disease
  - Chronic lung/respiratory disease
  - End stage renal disease
  - Diabetes mellitus complicated by CKD, neuropathy, retinopathy or other end-organ damage
  - Neurologic or neuromuscular conditions causing impaired airway clearance or respiratory muscle weakness
  - Chronic liver disease
  - Chronic hematologic conditions
  - Severe obesity (BMI >40)
  - Moderate or severe immune compromise
  - Residence in a nursing home

RSV Vaccination Complications

Respiratory syncytial virus vaccine (RSV)	Severe allergic reaction (e.g., anaphylaxis) to a vaccine component	Moderate or severe acute illness with or without fever

Tetanus, Diphtheria, and Pertussis

- Tetanus
  - *Clostridium tetani*
  - Symptoms occur between 3 & 21 days post-exposure
  - Symptoms include lockjaw, dysphagia, painful muscle spasm/stiffness, seizures, headache, and fever
- Diphtheria
  - *Corynebacterium diphtheriae*
  - Respiratory and skin infections
  - Associated with international travel (US)
- Pertussis
  - *Bordetella pertussis*
  - Whooping cough
  - Contagious for up to 2 weeks from onset of symptoms

Tdap/Td Vaccination

- Tdap or Td every 10 years after initial Tdap
  - Must have completed primary series and at least one dose of Tdap at age 10 years or older
  - Unvaccinated/incomplete primary series: one dose of Tdap followed by one dose of Td or Tdap at least 4 weeks later, and a third dose of Td or Tdap 6-12 months later

Tdap/Td Vaccination

- Special situations
  - Pregnancy – 1 dose Tdap during each pregnancy
    - Preferably given during gestational weeks 27-36
  - Wound management
    - Minor wounds – Administer if more than 10 years since last dose
    - All other wounds – Administer if more than 5 years since last dose

Tdap/Td Vaccination Contraindications

Tetanus, diphtheria, and acellular pertussis (Tdap) Tetanus, diphtheria (Td)

- Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component
- For Tdap only: Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures), not attributable to another identifiable cause, within 7 days of administration of previous dose of DTP, DTaP, or Tdap
- Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus-toxoid-containing vaccine
- History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria-toxoid containing or tetanus-toxoid-containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus–toxoid–containing vaccine
- Moderate or severe acute illness with or without fever
- For Tdap only: Progressive or unstable neurological disorder, uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized

Human Papillomavirus (HPV)

- One of the most common sexually transmitted diseases
- Associated with cancers, such as cervical cancer, head/neck squamous cell carcinoma, & anal cancer
- Transmitted primarily through skin-skin or skin-mucosa contact
- Females have 10x higher risk of HPV-related cancers
- Males have higher risk of oral HPV infection

HPV Vaccination

- All persons up through age 26 years
- Shared clinical decision-making for adults age 27-45 years
- Special situations
  - Immunocompromising conditions

HPV Vaccination Contraindications

Human papillomavirus (HPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component. • Pregnancy: HPV vaccination not recommended	Moderate or severe acute illness with or without fever

Influenza

- Viral respiratory illness
  - *Orthomyxoviridae* family
- Incubation period 1-4 days
- Estimated mortality is 290,000 to 650,000 per year
- Most common complication is secondary bacterial infection
- Risk factors
  - Pregnancy
  - Age (young children, elderly)
  - Chronic medical conditions

Influenza Vaccination

- Influenza inactivated (IIV3, ccIIV3)
- Influenza recombinant (RIV3)
- Influenza inactivated (aIIV3, HD-IIV3)
- Influenza live, attenuated (LAIV3)*
- Age 19 years or older
  - One dose of any influenza vaccine appropriate for age/health status annually
- Solid organ transplant recipients aged 19-64 receiving immunosuppressive medications
  - High-dose IIV3 or aIIV3
- Age 65 years or older
  - HD-IIV3, RIV3, or aIIV3

Influenza Vaccination Contraindications

Influenza, egg-based, inactivated injectable (IIV3)	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component (excluding egg)	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Moderate or severe acute illness with or without fever
Influenza, cell culture-based inactivated injectable (ccIIV3) [Flucelvax]	Severe allergic reaction (e.g., anaphylaxis) to any ccIIV of any valency, or to anycomponent of ccIIV3	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, RIV, or LAIV of any valency. If using ccIIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever
Influenza, recombinant injectable (RIV3) [Flublok]	Severe allergic reaction (e.g., anaphylaxis) to any RIV of any valency, or to any component of RIV3	• Guillain–Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, ccIIV, or LAIV of any valency. If using RIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever

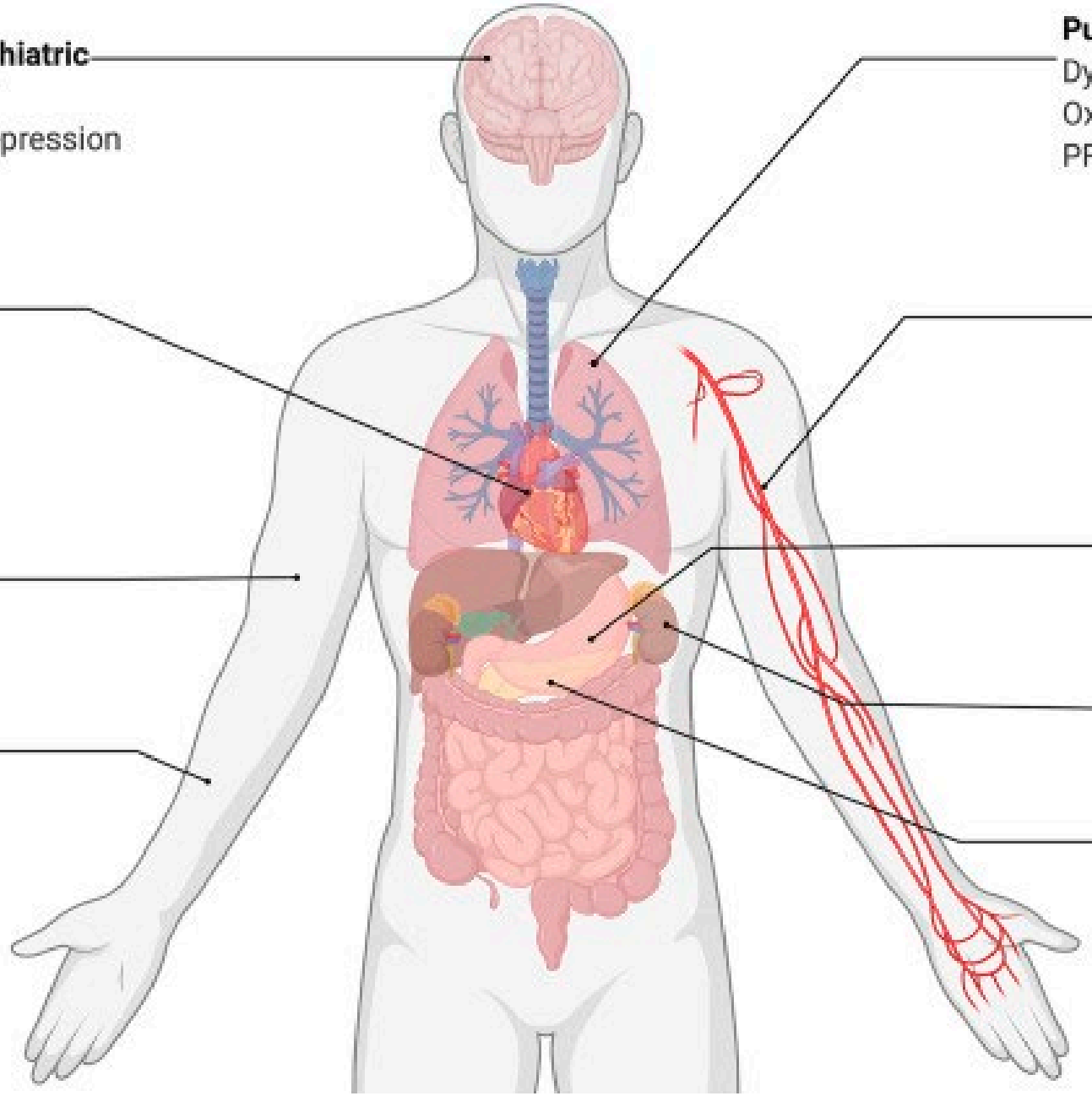
Influenza Vaccination Contraindications

Influenza, live attenuated (LAIV3) [Flumist]	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component3 (excluding egg) • Anatomic or functional asplenia • Immunocompromised due to any cause including, but not limited to, medications and HIV infection • Close contacts or caregivers of severely immunosuppressed persons who require a protected environment • Pregnancy • Cochlear implant • Active communication between the cerebrospinal fluid (CSF) and the oropharynx, nasopharynx, nose, ear, or any other cranial CSF leak • Received influenza antiviral medications oseltamivir or zanamivir within the previous 48 hours, peramivir within the previous 5 days, or baloxavir within the previous 17 days.	• Guillain–Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Asthma in persons aged 5 years or older • Persons with underlying medical conditions (other than those listed under contraindications) that might predispose to complications after wild–type influenza virus infection [e.g., chronic pulmonary, cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus)] • Moderate or severe acute illness with or without fever

COVID-19

- Coronavirus (SARS-CoV-2)
- Spread via direct contact or indirect contact (fomites), small airborne droplets, large droplets
- Risk factors
  - Chronic illness including hypertension, diabetes, obesity, CVD, CKD
  - Immunosuppression
  - Age
- Complications

Long Term Complications of Covid-19



Neuropsychiatric
"Brain Fog"
Anxiety/Depression
PTSD

Pulmonary
Dyspnea
Oxygen Dependence
PFT abnormalities

Cardiovascular
Myocarditis
Heart Failure
Arrhythmias

Hematologic
Venous Thromboembolis

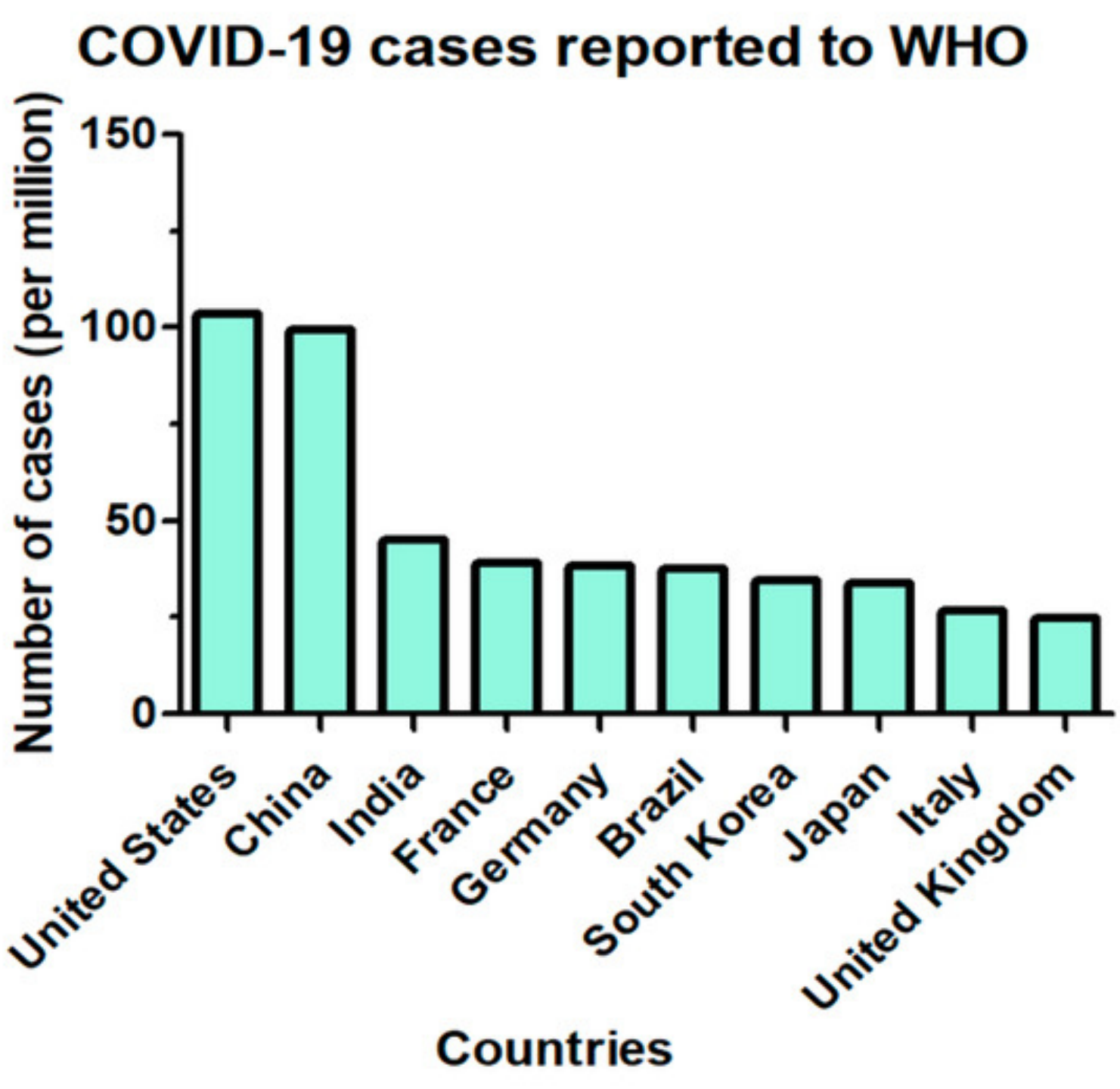
Gastrointestinal
Diarrhea
Nausea/Vomiting
Abdominal pain

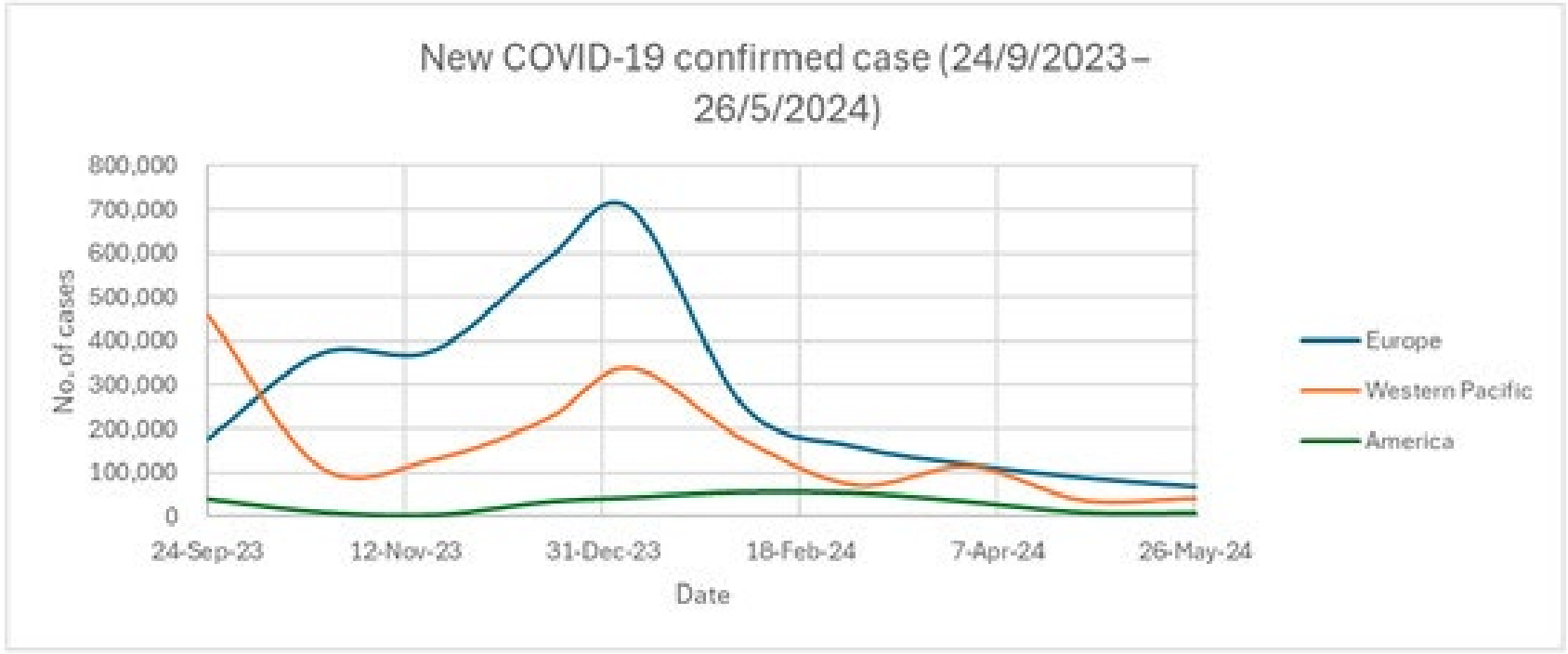
Musculoskeletal
Myalgia
Arthalgia
Physical debility

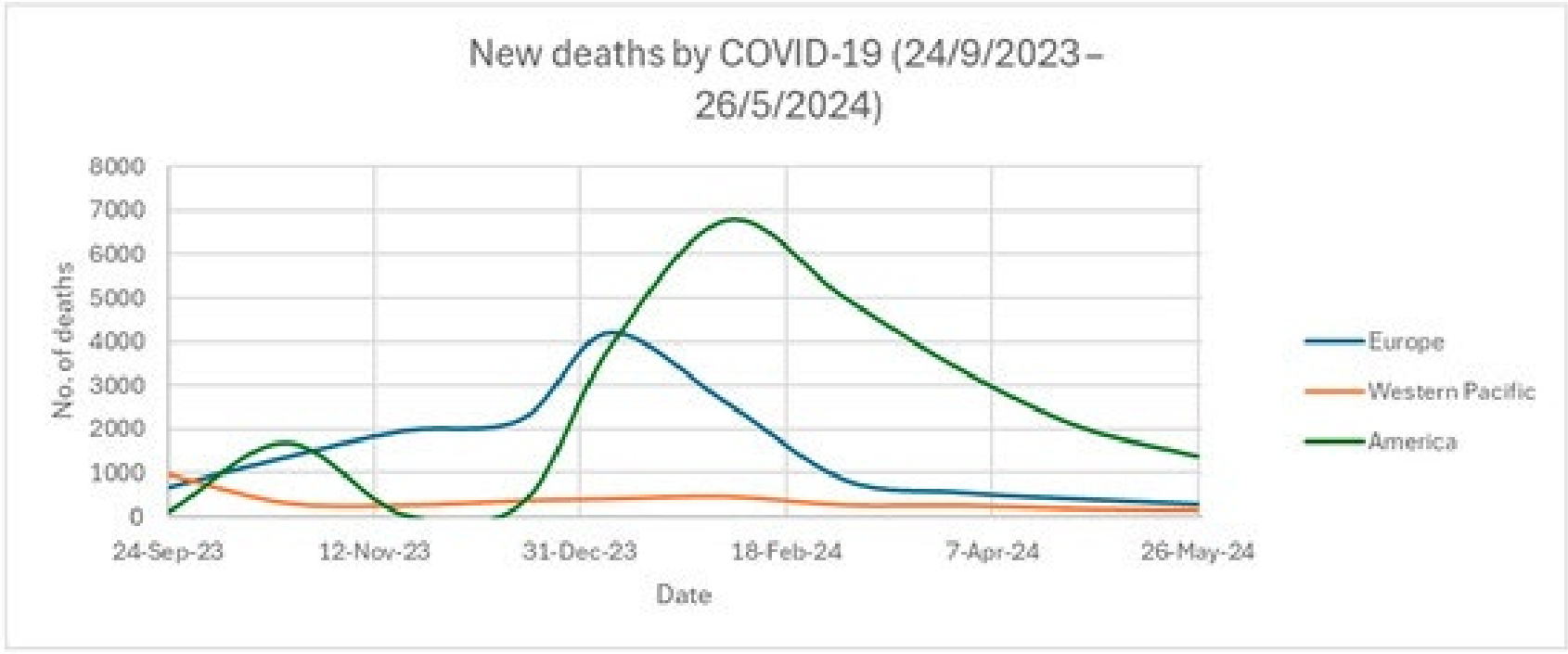
Renal
Kidney Injury

Dermatologic
Rash
Alopecia
Urticaria

Endocrine
Diabetes Mellitus


COVID-19 cases reported to WHO
Number of cases (per million)
150
100
50
0
United States
China
India
France
Germany
Brazil
South Korea
Japan
Italy
United Kingdom
Countries


New COVID-19 confirmed case (24/9/2023 – 26/5/2024)
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
No. of cases
24-Sep-23
12-Nov-23
31-Dec-23
18-Feb-24
7-Apr-24
26-May-24
Date
Europe
Western Pacific
America


New deaths by COVID-19 (24/9/2023 – 26/5/2024)
8000
7000
6000
5000
4000
3000
2000
1000
0
No. of deaths
24-Sep-23
12-Nov-23
31-Dec-23
18-Feb-24
7-Apr-24
26-May-24
Date
Europe
Western Pacific
America

COVID-19 Vaccination

- Age 19-64 years
  - Unvaccinated: 1 dose Moderna, Pfizer-BioNTech, or Novavax
  - Previously vaccinated: 1 dose Moderna, Pfizer-BioNTech, or Novavax at least 8 weeks after most recent dose
- Age 65 years or older
  - Unvaccinated: 1 dose Moderna, Pfizer-BioNTech, or Novavax; administer 2nd dose 6 months later

COVID-19 Vaccination Contraindications

COVID-19 mRNA vaccines [Pfizer-BioNTech, Moderna]	Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component ofan mRNA COVID-19 vaccine. See package inserts and FDA EUA fact sheets for a full list of vaccine ingredients. mRNA COVID-19 vaccines contain polyethylene glycol (PEG).	• Diagnosed non-severe allergy (e.g., urticaria beyond the injection site) to a component of an mRNA COVID-19 vaccine; or non-severe, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of an mRNA COVID-19 vaccine • Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine • Multisystem inflammatory syndrome in children (MIS-C) or multisystem inflammatory syndrome in adults (MIS-A) • Moderate or severe acute illness, with or without fever

Key Points

- Vaccination is a lifelong preventative healthcare intervention
- Adults remain at risk for vaccine-preventable diseases, especially with increasing age and chronic medical conditions
- Goals of vaccination include protecting individuals, reducing disease transmission, and preventing outbreaks
- Shared decision-making is an important part of the vaccine process

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