



ACIP General Best Practice Guidelines for Immunization – Background and Posted Revisions since April 2017

Andrew Kroger, MD MPH

Medical Officer

Centers for Disease Control and Prevention – U.S.A.









Advisory Committee on Immunization Practices

October 25, 2018

Atlanta, GA

Background

<https://www.cdc.gov/vaccines/hcp/acip-recs/index.html>




https://www.cdc.gov/vaccines/hcp/acip-recs/index.html

ACIP Vaccine Recommendation... x cdc.gov


Comprehensive Recommendations and Guidelines

Archived ACIP Recs

Vaccine Recommendations for Emergency Situations

 **Get Email Updates**

To receive email updates about this page, enter your email address:

What's this? 

Related Links

[Vaccines & Immunizations](#)

[VFC Resolutions](#)

[ACIP Web Site](#)

[CDC's International Travelers Yellow Book](#)

[Clinical Travel Notices, Updates, and Vaccine Shortages](#)

Vaccine-Specific ACIP Recommendations

Anthrax	Meningococcal
BCG	Pneumococcal
Cholera	Polio
DTaP/Tdap/Td UPDATED	Rabies
Hepatitis A	Rotavirus
Hepatitis B UPDATED	Smallpox (Vaccinia)
Hib	Typhoid
HPV	Varicella (Chickenpox)
Influenza	Yellow Fever
Japanese Encephalitis	Zoster (Shingles)
Measles, Mumps and Rubella	
MMRV	

ACIP Abbreviations

These [abbreviations](#) provide a uniform approach to vaccine references used in ACIP Recommendations that are published in the *MMWR*, the *Pink Book*, and the *AAP Red Book*; and in the U.S. immunization schedules for children, adolescents, and adults.

Comprehensive ACIP Recommendations and Guidelines

- General Best Practice Guidelines on Immunization
- Immunization of Health-Care Personnel
 - See also: [Influenza Vaccination of Health-Care Personnel](#)

NOTE: Web version indicates the reports above are "archived" only because they were published in MMWR before January 2013. The recommendations listed above ARE CURRENT.

- See also:

<https://www.cdc.gov/vaccines/hcp/acip-recs/index.html>

https://www.cdc.gov/vaccines/hcp/acip-recs/index.html

ACIP Vaccine Recommendation... x cdc.gov

Comprehensive Recommendations and Guidelines

Archived ACIP Recs

Vaccine Recommendations for Emergency Situations

Get Email Updates

To receive email updates about this page, enter your email address:

What's this? **Submit**

Related Links

- Vaccines & Immunizations
- VFC Resolutions
- ACIP Web Site
- CDC's International Travelers Yellow Book
- Clinical Travel Notices, Updates, and Vaccine Shortages

Vaccine-Specific ACIP Recommendations

Anthrax	Meningococcal
BCG	Pneumococcal
Cholera	Polio
DTaP/Tdap/Td UPDATED	Rabies
Hepatitis A	Rotavirus
Hepatitis B UPDATED	Smallpox (Vaccinia)
Hib	Typhoid
HPV	Varicella (Chickenpox)
Influenza	Yellow Fever
Japanese Encephalitis	Zoster (Shingles)
Measles, Mumps and Rubella	
MMRV	

ACIP Abbreviations

These [abbreviations](#) provide a uniform approach to vaccine references used in ACIP Recommendations that are published in the *MMWR*, the *Pink Book*, and the *AAP Red Book*; and in the U.S. immunization schedules for children, adolescents, and adults.

Comprehensive ACIP Recommendations and Guidelines

- **General Best Practice Guidelines on Immunization**
- Immunization of Health-Care Personnel
 - See also: Influenza Vaccination of Health-Care Personnel

NOTE: Web version indicates the reports above are "archived" only because they were published in MMWR before January 2013. The recommendations listed above ARE CURRENT.

- See also:

Browser address bar showing the URL: <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>

ACIP Recs Home	
Vaccine-Specific Recommendations	+
Recs Listed by Date	
Comprehensive Recommendations and Guidelines	-
General Best Practice Guidelines	-
Introduction	
Methods	
Timing and Spacing of Immunobiologics	
Contraindications and Precautions	
Preventing and Managing Adverse Reactions	
Vaccine Administration	
Storage and Handling of Immunobiologics	
Altered Immunocompetence	
Special Situations	

General Best Practice Guidelines for Immunization



Kroger AT, Duchin J, Vázquez M

[Printer friendly version](#)  [1.05 MB, 191 pages]

Purpose and topics covered in this report...

Method of development of: Timing and Spacing, Contraindications and Precautions, Preventing and Managing Adverse Reactions...

Vaccine scheduling, supply and lapsed schedule, spacing of doses, simultaneous and nonsimultaneous administration, licensed combination vaccines, interchangeability of formulations, extra doses, conjugate vaccines...

CONTRAINDICATIONS AND PRECAUTIONS

[List of Errata/Updates](#)

General Best Practice Guidelines for Immunization

Target Audience: Immunization Program Practice Nurses, Nurse Practitioners, Pharmacists, Physician Assistants, DNP, Nurse Practitioner, Immunization Educators

Objectives: The purpose of this Practice Guideline is to provide immunization updates and support the General Best Practice Guidelines for Immunization as published in 2013. It is aligned with the following 2 of 3 objectives: 1) Increase the frequency of immunization; 2) Increase the percentage of the eligible population that is immunized; 3) Increase the percentage of immunization at school immunizations; 4) Targeted Subgroups; 5) Vaccination Barriers; 6) Immunization Program; and 7) Vaccine Information.

Learning Objectives:

- 1. Identify vaccine contraindications for community and school.
- 2. Identify vaccine contraindications for school and community.
- 3. Describe immunization program for school immunization.
- 4. Describe immunization program for school immunization.
- 5. Identify vaccine barriers and vaccine delivery for school immunization.
- 6. Identify vaccine barriers and vaccine delivery for school immunization.
- 7. Identify vaccine barriers and vaccine delivery for school immunization.

Word Count: 100 words

Source: <https://www.cdc.gov/vaccines/imz/downloads/pdf/13p0007.pdf>

Video, Transcript, and CE Details: [General Best Practice Guidelines for Immunization course](#)

General Best Practices: Topics

- Introduction
- Methods
- Timing and spacing of immunobiologics
- Contraindications and precautions
- Preventing and managing adverse reactions
- Reporting adverse events after vaccination
- Vaccine administration
- Storage and handling of immunobiologics
- Altered immunocompetence
- Special situations
- Vaccination records
- Vaccination programs
- Vaccine information sources

<https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>

ACIP General Best Practice ... x cdc.gov

Vaccine Recommendations and Guidelines of the ACIP

ACIP Recs Home

Vaccine-Specific Recommendations +

Recs Listed by Date

Comprehensive Recommendations and Guidelines -

General Best Practice Guidelines -

Introduction

Methods

Timing and Spacing of Immunobiologics

Contraindications and Precautions

Preventing and Managing Adverse Reactions

Vaccine Administration

Storage and Handling of Immunobiologics

Altered Immunocompetence

Special Situations

CDC > ACIP Recs Home > Comprehensive Recommendations and Guidelines

General Best Practice Guidelines for Immunization

[f](#) [t](#) [+](#)

General Best Practice Guidelines for Immunization

Kroger AT, Duchin J, Vázquez M

[Printer friendly version](#) [1.05 MB, 191 pages]

INTRODUCTION

Purpose and topics covered in this report...

METHODS

Method of development of: Timing and Spacing, Contraindications and Precautions, Preventing and Managing Adverse Reactions...

TIMING AND SPACING OF IMMUNOBIOLOGICS

Vaccine scheduling, supply and lapsed schedule, spacing of doses, simultaneous and nonsimultaneous administration, licensed combination vaccines, interchangeability of formulations, extra doses, conjugate vaccines...

CONTRAINDICATIONS AND PRECAUTIONS

General Best Practice Guidelines for Immunization

[Link to Errata/Updates](#)

Continuing Education

General Best Practice Guidelines for Immunization

Significance: Immunization Practice Guidelines for Healthcare Providers, Part 1: General Best Practice Guidelines for Immunization, 2012.

Description: The General Best Practice Guidelines for Immunization update and replace the General Best Practice Guidelines for Immunization, 2002. The update includes new information on vaccine safety, vaccine storage and handling, vaccine administration, and vaccine scheduling. The update also includes new information on vaccine safety, vaccine storage and handling, vaccine administration, and vaccine scheduling.

Learning Objectives:

1. Identify vaccine contraindications for children and adults.
2. Describe the common vaccine adverse events and their management.
3. Describe the common vaccine adverse events and their management.
4. Describe the common vaccine adverse events and their management.
5. Describe the common vaccine adverse events and their management.

CE Credit: 1.00 CE credit

Video, Transcript, and CE Details: [General Best Practice Guidelines for Immunization course](#)

<https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>

ACIP General Best Practice ... x cdc.gov

Search...

Vaccine Recommendations and Guidelines of the ACIP

CDC > ACIP Recs Home > Comprehensive Recommendations and Guidelines

ACIP Recs Home

- Vaccine-Specific Recommendations +
- Recs Listed by Date
- Comprehensive Recommendations and Guidelines -
- General Best Practice Guidelines**
- Introduction
- Methods
- Timing and Spacing of Immunobiologics
- Contraindications and Precautions
- Preventing and Managing Adverse Reactions
- Vaccine Administration
- Storage and Handling of Immunobiologics
- Altered Immunocompetence
- Special Situations

General Best Practice Guidelines for Immunization

[f](#) [t](#) [+](#)

General Best Practice Guidelines for Immunization

K. G. A. J., Duchin J., Vazquez M.

[Printer friendly version](#) [1.05 MB, 191 pages]

INTRODUCTION

Purpose and topics covered in this report...

METHODS

Method of development of: Timing and Spacing, Contraindications and Precautions, Preventing and Managing Adverse Reactions...

TIMING AND SPACING OF IMMUNOBIOLOGICS

Vaccine scheduling, supply and lapsed schedule, spacing of doses, simultaneous and nonsimultaneous administration, licensed combination vaccines, interchangeability of formulations, extra doses, conjugate vaccines...

CONTRAINDICATIONS AND PRECAUTIONS

General Best Practice Guidelines for Immunization

[List of Errata/Updates](#)

Continuing Education

General Best Practice Guidelines for Immunization

Significance: Immunization Practice Guidelines for Healthcare Providers, Part 1: General Best Practice Guidelines for Immunization.

Objectives: The General Best Practice Guidelines for Immunization update and replace the General Best Practice Guidelines for Immunization published in 2012. The update includes the following objectives: 1) General Best Practice Guidelines for Immunization; 2) Contraindications and Precautions; 3) Preventing and Managing Adverse Reactions; 4) Vaccine Administration; 5) Storage and Handling of Immunobiologics; 6) Special Situations; 7) Immunocompetence; 8) Immunization Programs; and 9) Immunization Systems.

Learning Objectives:

1. Identify vaccine contraindications for children and adults.
2. Describe the common vaccine schedule for children and adults.
3. Describe the common vaccine schedule for immunocompetent adults.
4. Describe the common vaccine schedule for immunocompetent adults.
5. Describe the common vaccine schedule for immunocompetent adults.
6. Describe the common vaccine schedule for immunocompetent adults.
7. Describe the common vaccine schedule for immunocompetent adults.
8. Describe the common vaccine schedule for immunocompetent adults.
9. Describe the common vaccine schedule for immunocompetent adults.

CE Details: Video, Transcript, and CE Details: [General Best Practice Guidelines for Immunization course](#)

General Best Practice Guidelines for Immunization

Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP)

Kroger AT, Duchin J, Vázquez M



<https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>

ACIP General Best Practice ... x cdc.gov

Vaccine Recommendations and Guidelines of the ACIP

CDC > ACIP Recs Home > Comprehensive Recommendations and Guidelines

ACIP Recs Home

- Vaccine-Specific Recommendations +
- Recs Listed by Date
- Comprehensive Recommendations and Guidelines -
- General Best Practice Guidelines -**
- Introduction
- Methods
- Timing and Spacing of Immunobiologics
- Contraindications and Precautions
- Preventing and Managing Adverse Reactions
- Vaccine Administration
- Storage and Handling of Immunobiologics
- Altered Immunocompetence
- Special Situations

General Best Practice Guidelines for Immunization

[f](#) [t](#) [+](#)

General Best Practice Guidelines for Immunization

Kroger AT, Duchin J, Vázquez M

[Printer friendly version](#) [1.05 MB, 191 pages]

INTRODUCTION

Purpose and topics covered in this report...

METHODS

Method of development of: Timing and Spacing, Contraindications and Precautions, Preventing and Managing Adverse Reactions...

TIMING AND SPACING OF IMMUNOBIOLOGICS

Vaccine scheduling, supply and lapsed schedule, spacing of doses, simultaneous and nonsimultaneous administration, licensed combination vaccines, interchangeability of formulations, extra doses, conjugate vaccines...

CONTRAINDICATIONS AND PRECAUTIONS

General Best Practice Guidelines for Immunization

[List of Errata/Updates](#)

Continuing Education

General Best Practice Guidelines for Immunization

Significance: Immunization Practice Guidelines for Healthcare Providers, Part 1: General Best Practice Guidelines for Immunization (ACIP).

Objectives: The General Best Practice Guidelines for Immunization update and replace the General Best Practice Guidelines for Immunization (ACIP) (2012). The update will address the following objectives: (1) General Best Practice Guidelines for Immunization; (2) Contraindications and Precautions; (3) Preventing and Managing Adverse Reactions; (4) Vaccine Administration; (5) Storage and Handling of Immunobiologics; (6) Special Situations; (7) Immunocompetence; (8) Immunization Programs; and (9) Immunization Systems.

Learning Objectives:

1. Identify vaccine contraindications for children and adults.
2. Describe the criteria for vaccine administration and the criteria for vaccine storage.
3. Describe the criteria for vaccine storage and handling.
4. Describe the criteria for vaccine storage and handling.
5. Describe the criteria for vaccine storage and handling.

CE Details: Video, Transcript, and CE Details: [General Best Practice Guidelines for Immunization course](#)

Vaccine Recommendations and Guidelines of the ACIP

ACIP Recs Home

Vaccine-Specific
Recommendations



Recs Listed by Date

Comprehensive
Recommendations and
Guidelines



General Best Practice
Guidelines

Archived ACIP Recs

Vaccine Recommendations
for Emergency Situations

CDC > [ACIP Recs Home](#) > [Comprehensive Recommendations and Guidelines](#)

List of Errata/Updates

General Best Practice Guidelines for Immunization: Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP)



Latest Entry: 9/24/2018

September 20, 2018

- [PAGE 29](#) [38 pages]

[Timing and Spacing of Immunobiologics](#)

Table 3-1

Serogroup B meningococcal vaccine now appears on the table.

- [PAGE 52](#) [19 pages]

[Contraindications and Precautions](#)

Table 4-1

DTaP ROW / PRECAUTIONS COLUMN

"Fever within 48 hours after vaccination with a previous dose of DTP or DTaP" is no longer a precaution to DTaP vaccine.

- [PAGE 59](#) [19 pages]

[Contraindications and Precautions](#)

Table 4-2

DTaP ROW

"Fever within 48 hours after vaccination with a previous dose of DTP or DTaP" is no longer a precaution to DTaP vaccine.

On This Page

- [September 2018](#)
- [July 2018](#)
- [May 2018](#)
- [October 2017](#)



Get Email Updates

To receive email updates
about this page, enter your
email address:

[What's this?](#)

Submit

Related Links

[Vaccines & Immunizations](#)

Errata/Updates

Pertussis Containing Vaccines

- **DTaP (Dose 3 – Dose 4) minimum intervals (10/23/2017)**
 - Prospective – 6 months
 - Retrospective – 4 months
 - 4 day grace period can be applied to 6 month interval prospectively
 - 4 day grace period can be applied to 4 month interval retrospectively

- **Four precautions to DTaP removed**
 - Fever $\geq 105^{\circ}$ F within 48 hrs following a dose of DTaP (09/20/18)
 - Persistent, inconsolable crying lasting ≥ 3 hrs within 48 hrs following a dose of DTaP (07/18/18)
 - Collapse or shock-like state with 48 hrs following a dose of DTaP (07/18/18)
 - Seizure within 72 hrs following a dose of DTaP (07/18/18)

Serogroup B Meningococcal Vaccine (09/20/18)

TABLE 3-1. Recommended and minimum ages and intervals between vaccine doses^{(a),(b),(c),(d)}

Vaccine and dose number	Recommended age for this dose	Minimum age for this dose	Recommended interval to next dose	Minimum interval to next dose
MenB-1	Healthy adolescents: 16-23 years	16 years	MenB-4C: 4 weeks MenB-FHbp: 6 months ^(c)	MenB-4C: 4 weeks MenB-FHbp: 6 months ^(c)
	Persons at increased risk: ≥10 years	10 years	MenB-4C: 4 weeks MenB-FHbp: 1-2 months ^(c)	MenB-4C: 4 weeks MenB-FHbp: 1 month
MenB-2	Healthy adolescents: 16-23 years (+1 month)	16 years (+1 month)	—	—
	Persons at increased risk: ≥10 years (+1 month)	10 years (+1 month)	MenB-4C: — MenB-FHbp: 4-5 months ^(c)	MenB-4C: — MenB-FHbp: 4 months ^(c)
MenB-3 ^(t)	Persons at increased risk: ≥ 10 years (+ 6 months ^(c))	10 years (+ 6 months ^(c))	—	—

(c) Calendar months

Hepatitis A (07/18/18)

- **Dosages of Immunoglobulin (IG) updated (no need to adjust interval to MMR or Varicella vaccines)**
- **IG and Hepatitis A should be administered in different limbs**
 - Joins two other couplets
 - TIG and tetanus-containing vaccines
 - HBIG and hepatitis B vaccines

Varicella Vaccine

■ **Contraindication (10/23/17)**

- Family history of altered immunocompetence – with footnote explaining the concern is with congenital immunodeficiencies and the intervention is to screen through histories of first-degree relatives or use of laboratory evidence if available

■ **Precaution**

- Use of aspirin or aspirin-containing products (actually a recommendation to delay the medicine 6 weeks after giving the vaccine (07/18/18)
- Receipt of specific antiherpesvirus antiviral drugs 24 hours before vaccination (avoid use of these antiherpesvirus drugs for 14 days after vaccination) (10/23/18)

Zoster (RZV) Vaccine (07/18/18)

■ Vaccine Administration

- Only 0.5 cc's should be withdrawn from a vial even if the vial is overfilled
- Does NOT apply to other vaccines (recommendation to withdraw the entire contents)

Live Attenuated Influenza Vaccine (LAIV) (10/23/18)

■ Contraindication

- Influenza antiviral medications within the previous 48 hours

Vaccine Administration Discussion Topic

May Health Care Personnel with Labeled Contraindications and/or Precautions Administer Vaccine?

- There is no current discussion of this in the General Best Practices
- There is a well known vaccine-specific recommendations (LAIV)
- General Recommendations Work Group debated if this could be generalized

Literature Review

- Health care personnel
 - Risk of adverse reactions based on administration of vaccine
 - Potential outcomes (withholding vaccine vs administering vaccine)
-
- Databases searched:
 - Embase, Cinhal, Scopus, PsycInfo, and Medline

Literature Review – 82 Unique Items

Database	Strategy	Run Date	Records
Medline (OVID) 1946-	vaccinator* OR (administrator* adj5 vaccin*) OR (administering adj5 vaccin*) AND (occupational health OR occupational safety OR occupational injur* OR occupational risk* OR occupational hazard* OR occupational disease* OR occupationally-acquired OR workplace injur* OR workplace illness* OR work-related injur* OR work-related illness* OR work-related disease* OR precaution* OR contraindicat* OR needlestick injur*)	7/13/2018	53
Embase (OVID) 1947-	vaccinator* OR (administrator* adj5 vaccin*) OR (administering adj5 vaccin*) AND (occupational health OR occupational safety OR occupational injur* OR occupational risk* OR occupational hazard* OR occupational disease* OR occupationally-acquired OR workplace injur* OR workplace illness* OR work-related injur* OR work-related illness* OR work-related disease* OR precaution* OR contraindicat* OR needlestick injur*)	7/13/2018	65 -42 duplicates =23 unique items
PsycInfo (OVID) 1967-	vaccinator* OR (administrator* adj5 vaccin*) OR (administering adj5 vaccin*) AND (occupational health OR occupational safety OR occupational injur* OR occupational risk* OR occupational hazard* OR occupational disease* OR occupationally-acquired OR workplace injur* OR workplace illness* OR work-related injur* OR work-related illness* OR work-related disease* OR precaution* OR contraindicat* OR needlestick injur*)	7/13/2018	2 -2 duplicates =0 unique items
CINAHL (Ebsco)	vaccinator* OR (administrator* N5 vaccin*) OR (administering N5 vaccin*) AND ("occupational health" OR "occupational safety" OR "occupational injur*" OR "occupational risk*" OR "occupational hazard*" OR "occupational disease*" OR occupationally-acquired OR "workplace injur*" OR "workplace illness*" OR "work-related injur*" OR "work-related illness*" OR "work-related disease*" OR precaution* OR contraindicat* OR "needlestick injur*")	7/13/2018	5 -4 duplicates =1 unique items
Scopus	TITLE-ABS-KEY(vaccinator* OR (administrator* N5 vaccin*) OR (administering N5 vaccin*)) AND TITLE-ABS-KEY("occupational health" OR "occupational safety" OR "occupational injur*" OR "occupational risk*" OR "occupational hazard*" OR "occupational disease*" OR occupationally-acquired OR "workplace injur*" OR "workplace illness*" OR "work-related injur*" OR "work-related illness*" OR "work-related disease*" OR precaution* OR contraindicat* OR "needlestick injur*")	7/13/2018	25 -5 duplicates =20 unique items

Literature Search – 3 Articles Relevant to Topic

- Centers for Disease Control and Prevention. Recommendations for using smallpox vaccine in a prevent vaccination program: supplemental recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Healthcare Infection Control Practices Advisory Committee (HICPAC). MMWR 2003;52(No. RR-7):1-18.
- Leira HL, Baalsrud KJ. Fish vaccinology. In: Gudding R, Lillehaug A, Midtlyng PJ, Brown F, eds. Dev Biol Stand, Basel: Karger; 1997.
- Windsor PA, Bush R, Links I, Eppelston J. Injury caused by self-inoculation with a vaccine of a Freund's complete adjuvant nature (Gudair™) used for control of ovine paratuberculosis. Australian Veterinary Journal April 2005;83(4):216-20.

Language for Discussion – To Be Placed in Vaccine Administration Section

- Health Care Provider Exposure to Vaccine Antigen
- Providers are sometimes concerned when they have the same contraindications or precautions as their patients from whom they withhold or defer vaccine. For administration of routinely recommended vaccines, there is no evidence of risk of exposure of vaccine antigen to the health care provider, so conditions in the provider labeled as contraindications and precautions to a vaccine antigen are not a reason to withdraw from this function of administering the vaccine antigen to someone else.

Language for Discussion – To Be Placed in Vaccine Administration Section

- Historic concerns about exposure to vaccine antigen are limited to non-parenteral vaccines in which some degree of environmental exposure is unavoidable (LAIV), situations in which adverse reactions from allergy or self-inoculation is likely due to reduced attenuation of vaccine virus (Smallpox), or the technical process of administration is complicated by vaccine recipients that struggle vigorously, leading to needle stick injury and reactions due to allergy or self-inoculation (veterinary vaccinology).

ACIP General Recommendations Work Group

■ ACIP

- Paul Hunter

■ Liaisons

- Marie-Michele Leger (AAPA)
- Susan Lett (CSTE)
- Charles (Chad) Rittle (ANA)
- Pam Rockwell (AAFP)
- Mark Sawyer (AAP)
- Lynn Trefren (AIM)
- David Weber (SHEA)

■ Non-Federal Subject Matter Experts

- Walter Orenstein
- Deborah Wexler
- Richard Zimmerman