



# Update on Immunizations for Adults with Diabetes

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Advancements in Diabetes Webinar

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# Disclaimer

The findings and opinions expressed in this presentation are those of the author and do not necessarily reflect the view of the Indian Health Service (IHS) or the Centers for Disease Control and Prevention (CDC).

# Overview

- Background
- Immunization Recommendations
  - Adults
  - Persons with Diabetes
  - Adolescents
- Current Immunization Coverage
- Improving immunization coverage
  - RPMS/EHR reporting and tools
  - Strategies and Best Practices
- Resources

# Why Do People with Diabetes Need Immunizations?

- People with diabetes may have a harder time fighting off infections due to weaker immune systems and could be at increased risk for more serious complications from an illness compared to people without diabetes
  - Influenza can raise blood glucose levels to very high levels
  - Higher rates of hepatitis B among people with diabetes than compared to people without diabetes
  - Increased risk for illness or death from pneumonia
- Immunization provides the best protection against vaccine-preventable diseases
- Vaccines are one of the safest ways for people with diabetes to protect their health

# Table 1: Recommended Adult Immunization by Age Group, United States, 2020

**Table 1** Recommended Adult Immunization Schedule by Age Group, United States, 2020

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
Influenza inactivated (IIV) or Influenza recombinant (RIV) <b>or</b> Influenza live, attenuated (LAIV)	1 dose annually			
Tetanus, diphtheria, pertussis (Tdap or Td)	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)			
Varicella (VAR)	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV) (preferred) <b>or</b> Zoster live (ZVL)			2 doses <b>or</b> 1 dose	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal conjugate (PCV13)	1 dose			65 years and older
Pneumococcal polysaccharide (PPSV23)	1 or 2 doses depending on indication			1 dose
Hepatitis A (HepA)	2 or 3 doses depending on vaccine			
Hepatitis B (HepB)	2 or 3 doses depending on vaccine			
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication, see notes for booster recommendations			
Meningococcal B (MenB)	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations			
<i>Haemophilus influenzae</i> 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

# Advisory Committee on Immunization Practices (ACIP) Routine Adult Immunization Recommendations

- Td
  - Booster every 10 years
- Tdap
  - 1 dose, regardless of interval with Td
- Human Papillomavirus Vaccine (HPV)
  - 19–26 years (Females and Males)
  - 27–45 (depending on shared clinician and patient decision-making)
- Zoster
  - 50 years+
- Influenza
  - Annually
- Meningococcal B (Men B)
  - 19-23 years (depending on shared clinician and patient decision-making)
- Pneumococcal
  - Polysaccharide, 23-valent (PPSV23, a.k.a. Pneumovax®) 65 years
  - PCV13 (65 years+, depending on shared clinician and patient decision-making)
  - May start earlier for certain high-risk populations – e.g., AI/AN in certain geographic regions)

Adult Vaccine Schedule:

<https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html>

# Immunizations for Those with Diabetes

- Pneumococcal
- Influenza
- Hepatitis B
- Zoster
- Tdap

# Table 2: Recommended Adult Immunization Schedule by Medical Condition and Other Indications, United States, 2020

**Table 2** Recommended Adult Immunization Schedule by Medical Condition and Other Indications, United States, 2020

Vaccine	Pregnancy	Immuno-compromised (excluding HIV infection)	HIV infection CD4 count		Asplenia, complement deficiencies	End-stage renal disease; or on hemodialysis	Heart or lung disease, alcoholism <sup>1</sup>	Chronic liver disease	Diabetes	Health care personnel <sup>2</sup>	Men who have sex with men			
			<200	≥200										
IIV or RIV or LAIV	1 dose annually								or	1 dose annually				
Tdap or Td	1 dose Tdap each pregnancy	1 dose Tdap, then Td or Tdap booster every 10 years												
MMR	NOT RECOMMENDED			1 or 2 doses depending on indication										
VAR	NOT RECOMMENDED			2 doses										
RZV (preferred) or ZVL	DELAY				2 doses at age ≥50 years							or	1 dose at age ≥60 years	
	NOT RECOMMENDED													
HPV	DELAY	3 doses through age 26 years			2 or 3 doses through age 26 years									
PCV13	1 dose													
PPSV23	1, 2, or 3 doses depending on age and indication													
HepA						2 or 3 doses depending on vaccine								
HepB						2 or 3 doses depending on vaccine								
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 <sup>3</sup> 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  
  Precaution—vaccination might be indicated if benefit of protection outweighs risk of adverse reaction  
  Delay vaccination until after pregnancy if vaccine is indicated  
  Not recommended/contraindicated—vaccine should not be administered  
  No recommendation/Not applicable



# Pneumonia and Influenza

- American Indian and Alaska Native people are almost two times more likely to die from pneumonia and influenza than non-Hispanic whites<sup>1,2</sup>
  - Significant variation by region and age group
- During the 2009 H1N1 influenza pandemic, AI/AN people were four times more likely to die from influenza-related complications than other racial groups<sup>2</sup>
- Reasons for this disparity include a higher rate of chronic medical conditions, including **DIABETES**
- Source 1. Pneumonia and Influenza Mortality Among American Indian and Alaska Native People, 1990–2009.
  - <https://pubmed.ncbi.nlm.nih.gov/24754620/>
- Source 2. Trends in Pneumonia and Influenza Morbidity and Mortality. American Lung Association.
  - <https://www.lung.org/getmedia/98f088b5-3fd7-4c43-a490-ba8f4747bd4d/pi-trend-report.pdf.pdf>
- Source 3. Deaths Related to 2009 Pandemic Influenza A (H1N1) Among American Indian/Alaska Natives – 12 States, 2009
  - <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5848a1.htm>

# Pneumococcal

- Two vaccines help protect against pneumococcal disease:
  - Pneumococcal conjugate vaccine (PCV13)
  - Pneumococcal polysaccharide vaccine (PPSV23)
- Diabetes is a risk factor for invasive pneumococcal disease

Source:

<https://www.cdc.gov/pneumococcal/vaccination.html>

**Pneumococcal** disease is an infection caused by pneumococcus bacteria.

Each year in the United States, pneumococcal bacteria causes thousands of infections, including:

- BACTEREMIA** (blood infection)
- MENINGITIS** (infection of the lining of the brain and spinal cord)
- PNEUMONIA** (lung infection)
- EAR INFECTIONS**

People with diabetes are at increased risk for death from pneumonia, bacteremia, and meningitis.

CDC recommends people with diabetes get pneumococcal vaccines once as an adult before 65 years of age and then two more doses at 65 years or older.

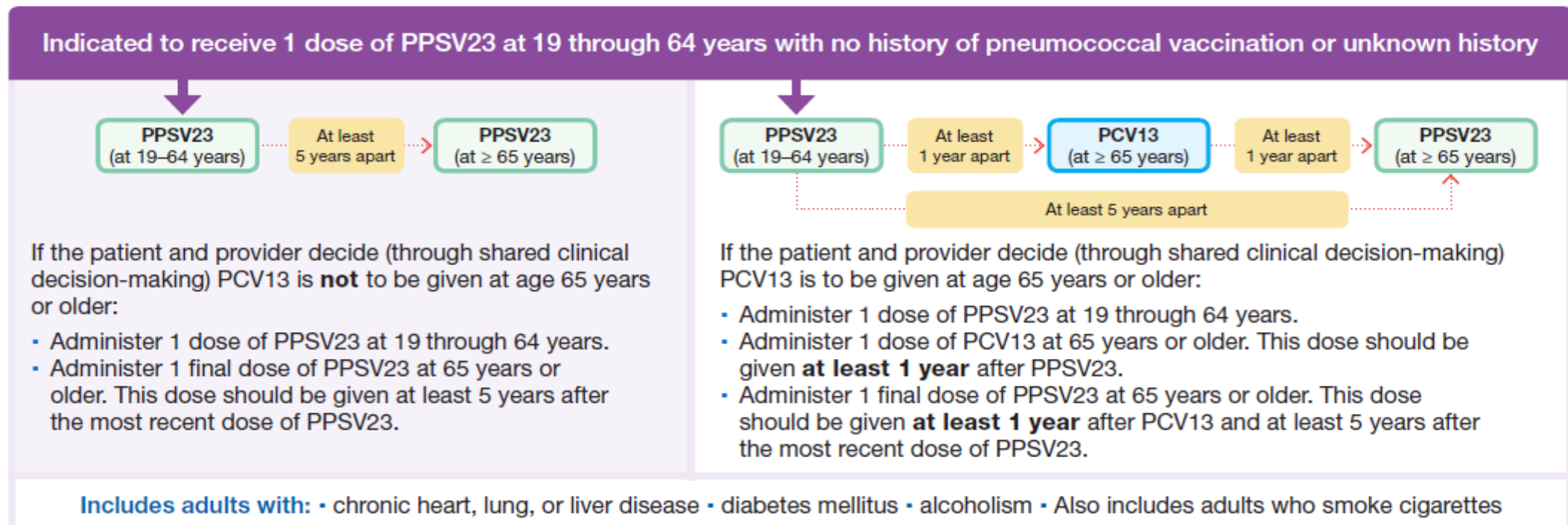
**BEFORE** **65** **AFTER**

The infographic features a central illustration of a human torso with icons for the lungs, brain, and ear. Surrounding this are four circular icons representing different types of infections: a blood test tube for bacteremia, a brain for meningitis, a lung for pneumonia, and an ear for ear infections. At the bottom, a birthday cake with the number 65 on top is flanked by checkmarks in boxes, indicating the vaccination schedule.

# Pneumococcal (PPSV23) Recommendations for Adults with Diabetes

Patients with diabetes should receive one dose of PPSV23 before age 65 and then a second dose after they turn 65 years old, at least 5 years after the last dose

## Pneumococcal vaccine timing for adults with certain medical conditions



# Pneumococcal Conjugate Vaccine (PCV13) for Adults

- PCV13 vaccination is no longer routinely recommended for all adults 65 years and older. Instead, shared clinical decision making for PCV13 use is recommended for adults age 65 years and older who do not have an immunocompromising condition, cerebrospinal fluid (CSF) leak, or cochlear implant.
- PCV13 continues to be recommended for all adults with immunocompromising conditions, cerebrospinal fluid (CSF) leak, or cochlear implant.
- Immunocompromising conditions include chronic renal failure, nephrotic syndrome, congenital or acquired 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.
- Diabetes is NOT considered an immunocompromising condition for this vaccine

ACIP Pneumococcal Recommendations: <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html>

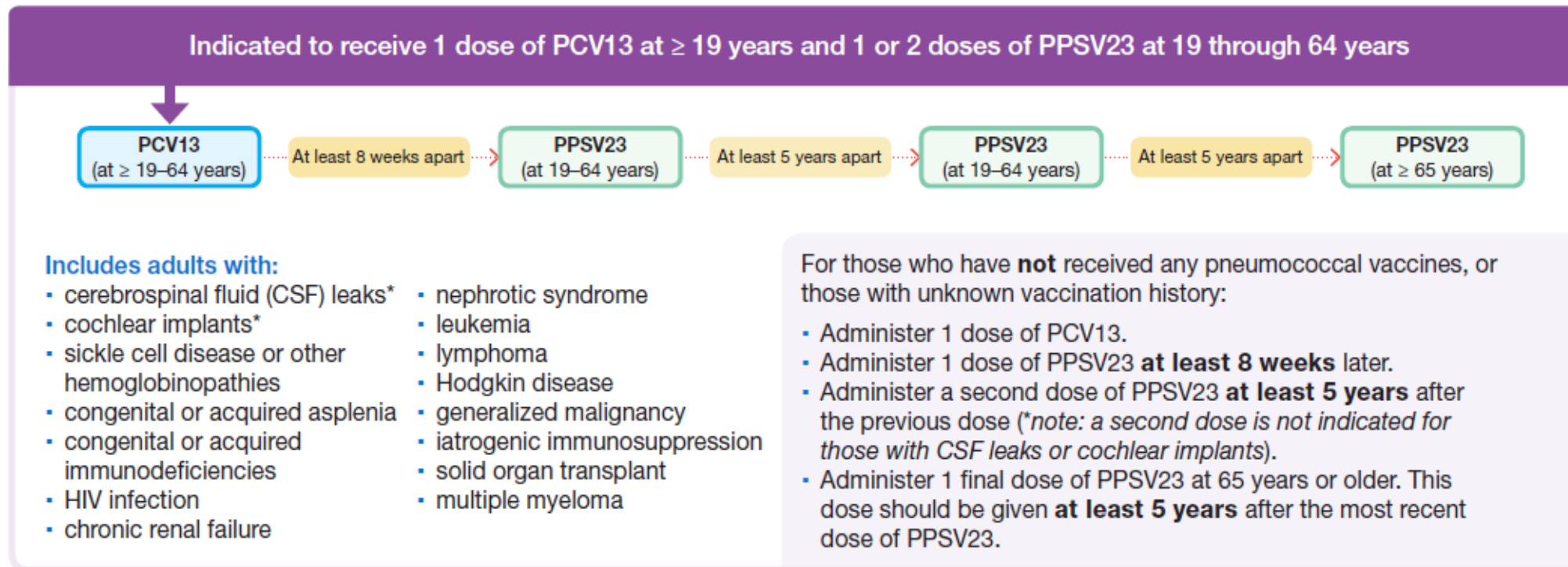
# PCV13 Vaccine for Immunocompromised Adults

- PCV 13 for immunocompromised ONLY

Source: ACIP PCV13 and PPSV23 Updated recommendations:

<https://www.cdc.gov/mmwr/volumes/68/wr/mm6846a5.htm>

<https://www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf>



# Influenza Vaccine

- Flu is a contagious respiratory illness caused by influenza viruses.
- People with diabetes, even when well managed, are at high risk of serious flu complications, often resulting in hospitalization and sometimes even death.



# Influenza 2020–2021 Vaccine Recommendation

- Annual influenza vaccination is recommended for all persons aged 6 months and older who do not have contraindications.

# Influenza Vaccines: Egg Based

Influenza Type	Presentation	Licensed Age	Contraindications
IIV4 (inactivated)	Standard dose	6 months and older	<ul style="list-style-type: none"> <li>History of severe allergic reaction to the vaccine or any of its components</li> <li>ACIP recommends that persons with <b>egg allergy of any severity receive</b> influenza vaccine</li> </ul>
HD-11V4 (inactivated)	High Dose	65 years+	
aIIV4 (inactivated)	Standard Dose (adjuvant)	65 years +	
aIIV3 (inactivated)	Standard Dose (adjuvant) Trivalent only	65 years +	
LAIV4 (FluMist®) (live-attenuated)	Intranasal spray	Healthy 2- to 49-year-olds	



# Influenza Vaccines: Non-Egg Based (Egg Free)

- Standard dose, cell culture based (ccIV4)
  - Quadrivalent
  - Licensed age 4 years and older
  - Egg-free
  - Contraindicated in people with severe allergic reaction to a vaccine component
- Recombinant, RIV4
  - Quadrivalent
  - Licensed 18 years and older
  - Egg-free
  - Contraindicated in people with severe allergic reaction to a vaccine component

# Recommendations for Person with Egg Allergy

- Persons who have experienced only hives after exposure to egg may receive any licensed, recommended, age-appropriate influenza vaccine (i.e., IIV, RIV4, or LAIV4).
- Persons reporting symptoms other than hives after exposure to egg (such as angioedema, respiratory distress, lightheadedness, or recurrent emesis; or who required epinephrine or another emergency medical intervention) may also receive any licensed and recommended influenza vaccine that is otherwise appropriate.
  - If a vaccine other than cclIV4 or RIV4 is selected for such a person, it should be administered in an inpatient or outpatient medical setting and supervised by a health care provider who is able to recognize and manage severe allergic reactions.
- A previous severe allergic reaction to influenza vaccine, regardless of the component suspected of causing the reaction, is a contraindication to future receipt of any influenza vaccine
- Source: <https://www.cdc.gov/flu/prevent/egg-allergies.htm>

# Hepatitis B in Patients with Diabetes

- Hepatitis B virus (HBV) causes acute and chronic infection of the liver
- Risk of acute HBV infection is 2.1 times higher among diabetics compared to those without diabetes
- Sharing blood glucose meters, fingerstick devices, or other diabetes-care related equipment such as syringes or insulin pens increases risk for hepatitis B
- Numerous Hepatitis B outbreaks in people with diabetes living in assisted living, long-term care facilities, and nursing homes related to sharing blood glucose monitoring supplies and equipment.
- Source: ACIP Hepatitis B Recommendations for people with diabetes:  
<https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6050a4.htm>

# Hepatitis B Vaccine Recommendations

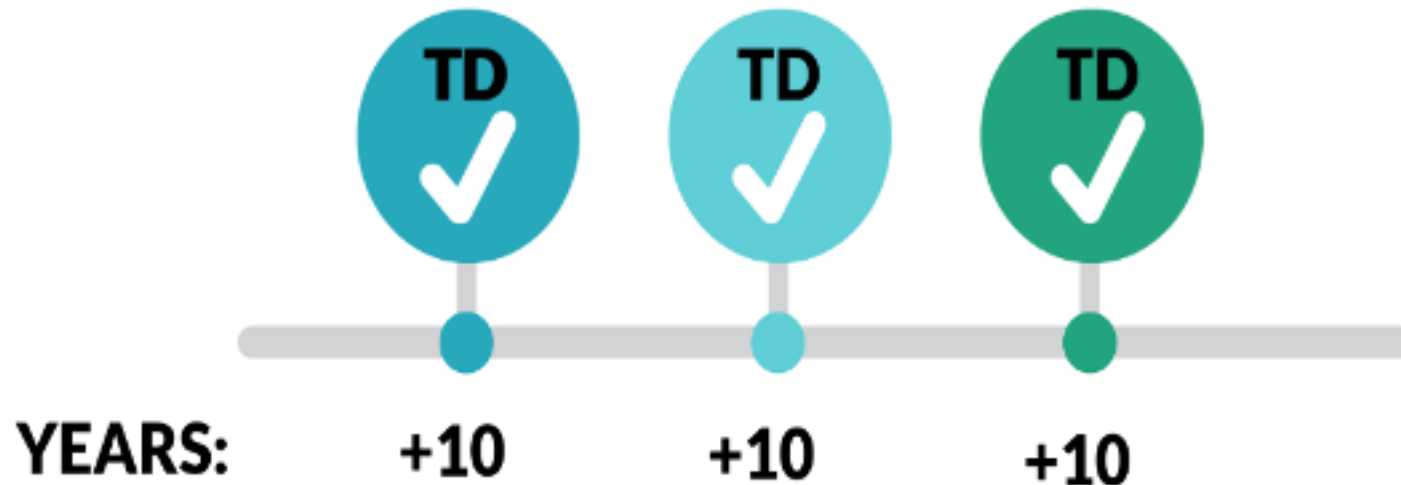
- Hepatitis B vaccination should be administered to unvaccinated adults with diabetes who are 19–59 years of age.
  - Vaccination should occur as soon as possible after diagnosis of diabetes;
  - Vaccination should also be given to adults diagnosed with diabetes in the past.
- Hepatitis B vaccination may occur at the discretion of the health care provider for unvaccinated adults with diabetes who are 60 years and older.
- Hepatitis B vaccines
  - 2-dose (Heplisav-B) or 3-dose (Engerix-B, Recombivax HB) series
- Source: ACIP Hepatitis B Recommendations for people with diabetes:  
<https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6050a4.htm>

# Zoster Vaccine

- Shingles is a painful skin rash with blisters and can occur anywhere on the body
- Also called herpes zoster or zoster
- Two shingles vaccines currently recommend
  - Zoster vaccine live (Zostavax)
    - Recommended at 60 years and older
    - One dose
    - No longer supplied in the US as of July 1, 2020. Patients can still receive until vaccine expires November 1, 2020
  - Recombinant zoster vaccine (Shingrix) \*Preferred
    - Recommended for 50 years and older
    - 2 dose series, 2-6 months apart

# Tdap Immunization Recommendations

- Booster vaccine can be either Td or Tdap
- The CDC recommends all adults get the Tdap vaccine one and a Td vaccine booster every 10 years to protect against tetanus, diphtheria, and pertussis



# Immunizations for Adolescents with Diabetes (1)

- Young adults or adolescents may present for care with diabetes
- Adolescents should get vaccines recommend for persons with diabetes (**PPSV23, Hep B**) *and* recommended adolescent vaccines (see table)
- Provider reminder/recall for all routinely recommended vaccines
  - IHS RPMS/EHR
  - State IIS

# Immunizations for Adolescents with Diabetes (2)

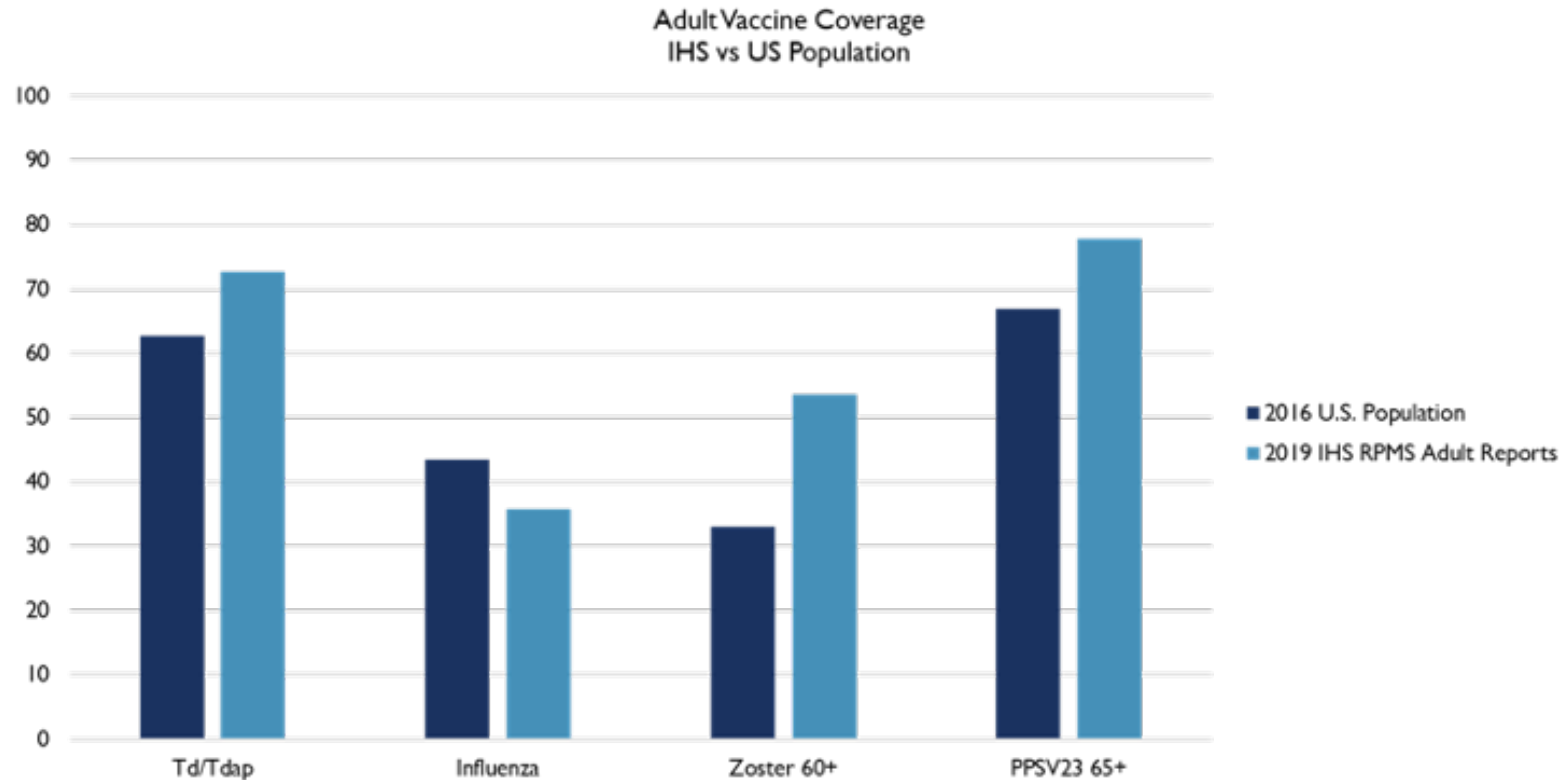
Vaccine	Recommended Age	Doses
Meningococcal		
Meningococcal Conjugate (MenACWY)	11–12 years old	1 dose, booster at 16 years old
Serogroup B meningococcal (MenB)	16–18 years old	2 doses
HPV	11–12 years	2 doses, 6–12 months apart
	15+ years	3 doses (if start after 15 years old)
Tdap	11–12 years	1 dose
Influenza	6 months+	1 dose, annually





# Immunization Coverage

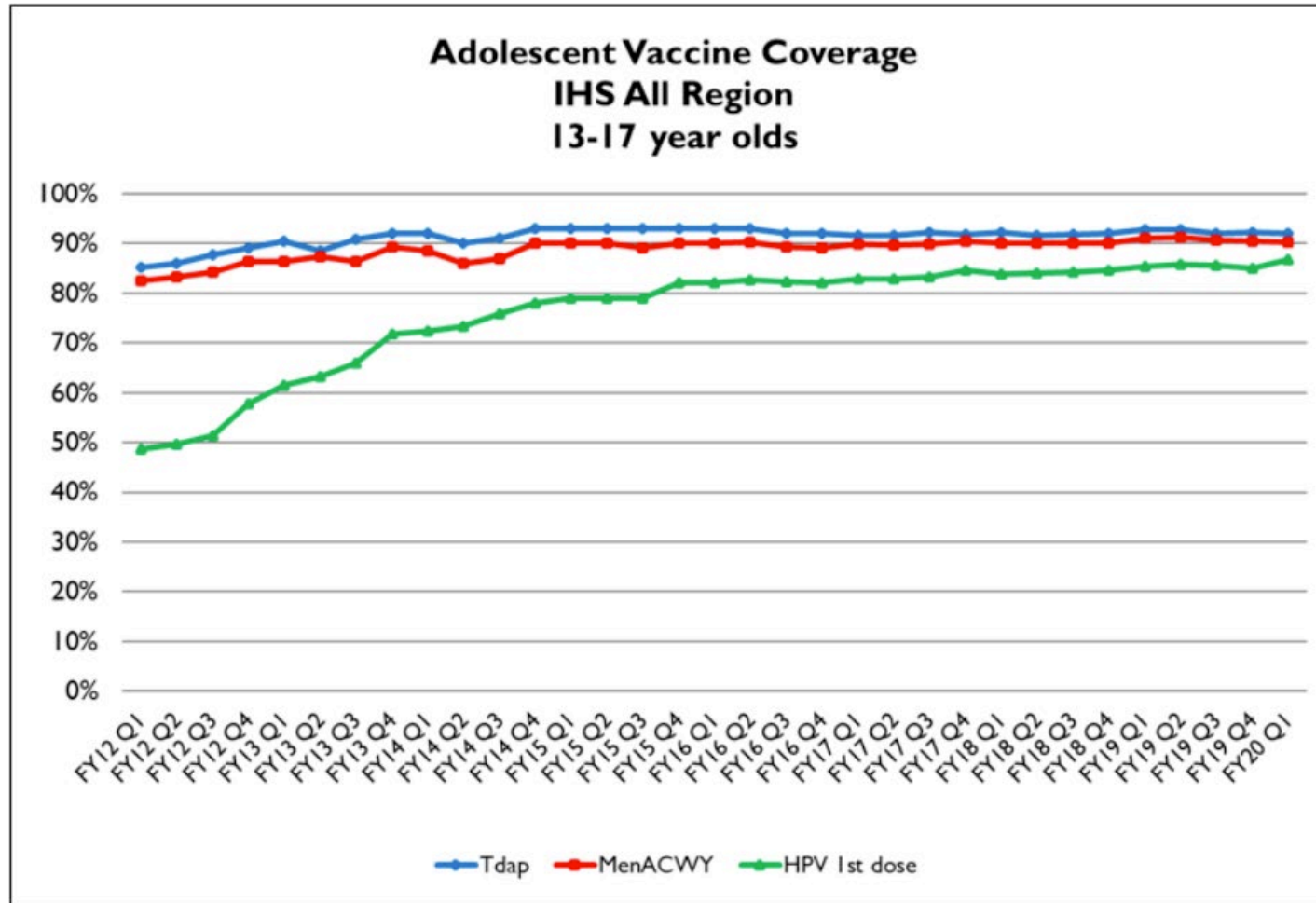
# Adult Vaccine Coverage IHS vs. U.S. Population



- Data source: National Health Interview Survey, 2016.  
<https://www.cdc.gov/vaccines/imz-managers/coverage/adultvaxview/pubs-resources/NHIS-2016.html>
- National Immunization Reporting System (NIRS):  
<https://www.ihs.gov/NonMedicalPrograms/ihpes/immunizations/index.cfm?module=immunizations&option=home>

# Adolescent Vaccine Coverage

## IHS All Region, 13–17 Year Olds



- Data source: National Immunization Reporting System (NIRS):  
<https://www.ihs.gov/NonMedicalPrograms/ihpes/immunizations/index.cfm?module=immunizations&option=home>



# Challenges for Vaccinating Adults

# Challenges

- Vaccine access
  - Transportation issues
  - Patients not coming to clinic for care
  - Address and phone numbers change frequently
- Vaccine Hesitancy
  - Refusals
- New adult vaccines, costs, and reimbursement
  - All ACIP recommended vaccines are included on the IHS Core Formulary

# Challenges (2)

- Provider
  - Providers not giving a strong recommendation for vaccines
  - Missed Opportunities
    - Not routinely assessing vaccination status
- Patient
  - Vaccine hesitancy
  - Lack of patient awareness about health benefits of vaccines.
  - Most adults are not aware they need vaccines.



# Strategies and Best Practices

# Assess, Recommend, Vaccinate, and Document

- **Assess**
  - Provider reminders in the EHR
  - Monitor immunization coverage
- **Recommend**
  - Make a STRONG recommendation
- **Vaccinate**
  - Standing orders
  - Expanding access – nurse only visits, pharmacy visits, walk-in visits, extended clinic hours
- **Document**
  - Reminder/Recall strategies
    - IHS/EHR reminders, reminder/ recall notices to patients who are due (letters, phone calls, postcards, etc)
  - Ensure patients return for additional vaccine doses if needed
  - Document vaccines given in other locations





# RPMS/EHR Tools

# RPMS/EHR

- Clinical Decision Support for Immunizations
  - Shows which vaccines patients are due for
    - Takes into account minimum intervals and ages
  - All routine, AGE-BASED recommendations
  - PPSV23 for high risk
  - Hepatitis B vaccine for adults only supported for patients who receive a dose
    - If an adult has received a previous dose of Hep B vaccine, the system will automatically generate reminders for additional doses (2 or 3)
  - Utilize RPMS immunization package to identify patients with diabetes to ensure they receive all recommended vaccines
    - RPMS/EHR reminders

# RPMS Immunization Package

- Lists and Letters in the RPMS Immunization package
  - Only available in the roll and scroll environment (NOT EHR)
  - Can be used to generate lists of patients who received or are due for specific vaccines for reminder/recall efforts
- IHS RPMS Immunization Package Resources

<https://www.ihs.gov/epi/immunization-and-vaccine-preventable-diseases/resources-for-providers/>

# Provider Reminders in the EHR

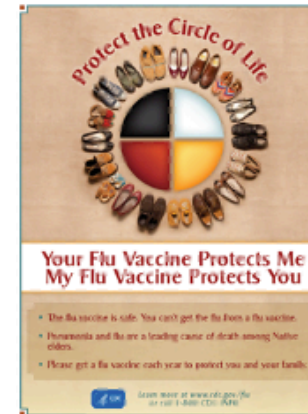
- Influenza
- PPSV23 for 65 years+
- PPSV23 for adults with high risk condition **(Optional)**
- PCV13 for adults 65 years+ (updating for shared clinical decision making)
- Tdap for everyone 19 years+
- HPV
  - 19–26 years
  - 27–45 (in development)
- Zoster for 50 years+
- Hepatitis A and B for all patients who receive first dose
- Hepatitis A and B for patients with Chronic Liver Disease or Hepatitis C **(Optional)**
- Hepatitis B for adults 19-59 years with diabetes **(Optional)**



# Resources

# Influenza Resources

- <https://www.ihs.gov/flu/>
- IHS Weekly Surveillance Reports
  - Health Care Personnel vaccination policy and FAQ



**American Indians and Alaska Natives (AI/ANs) are at high risk for flu complications**

A yearly flu vaccine protects yourself and others around you

Flu is a leading cause of pneumonia

Flu and pneumonia rank among the top 10 causes of death for AI/ANs!

AI/ANs are more likely to die from pneumonia and flu than other races!

From the U.S., the flu causes more than **200,000 HOSPITALIZATIONS EACH YEAR.**

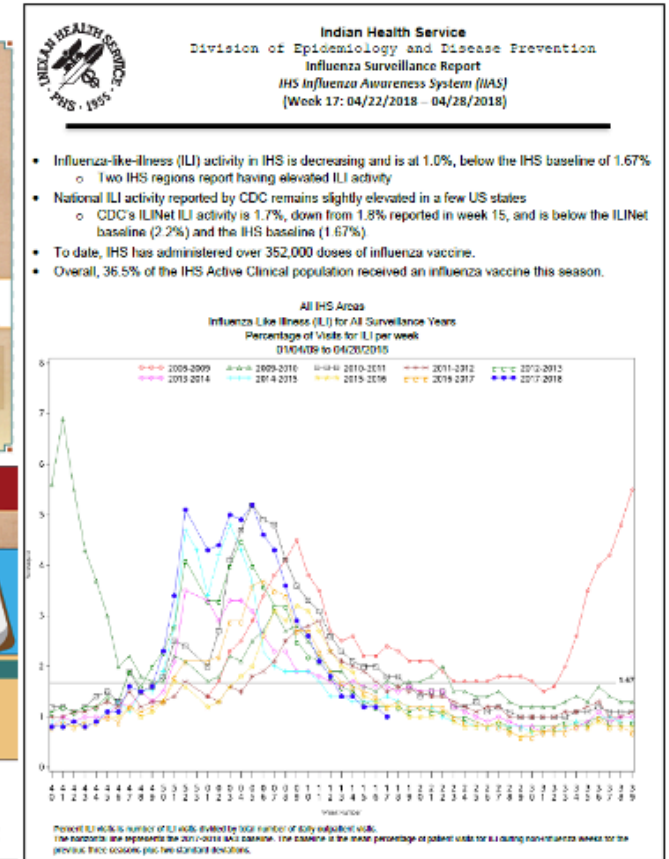
AI/ANs are at **higher risk** than others for:
 

- Pneumonia and meningitis
- Hospitalization
- Death

The flu poses a greater risk for young children and older people, women, pregnant women, people with chronic conditions, health care workers, and others.

Flu symptoms can include:

- FATIGUE
- BODY ACHES OR HEADACHES
- CHILLS
- COUGH
- SORE THROAT



# Influenza Resources (2)

- <https://www.cdc.gov/flu/>
- CDC Weekly Surveillance Reports, Flu Activity data
  - Influenza related information, education material, flu vaccine recommendations

# Influenza Resources (3)

- Immunization Action Coalition
  - <https://www.immunize.org/>
- National Foundation for Infectious Diseases
  - <https://www.nfid.org/infectious-diseases/influenza-flu/>





# Adult Immunization Resources

<https://gptec.gptchb.org/infectious-disease/national-vaccination-project/>

As Native American people, we need to keep our circle **PROTECTED AND STRONG.**

**WE ARE VACCINATED ... ARE YOU?**

Talk to your doctor or other provider about getting vaccinated today.  
Check out [cdc.gov/vaccines/adults/index.html](http://cdc.gov/vaccines/adults/index.html) for more information.

**MY VACCINES**

TO KEEP TRACK OF YOUR VACCINATIONS, WRITE DOWN THE DATE THAT YOU RECEIVED EACH.

"VACCINES ARE ONE OF THE SAFEST, MOST EFFECTIVE WAYS TO PREVENT DISEASE."  
(CDC)

NAME: \_\_\_\_\_ DATE OF BIRTH: \_\_\_\_\_

INFLUENZA (FLU) - DATES (1 PER YEAR): \_\_\_\_\_

TDAP - DATE: \_\_\_\_\_ TD - (1 EVERY 10 YEARS): \_\_\_\_\_

SHINGLES/ZOSTER - DATE: \_\_\_\_\_

PNEUMOCOCCAL

PCV13 (CONJUGATE) - DATE: \_\_\_\_\_  
PPSV23 (POLYSACCHARIDES) - DATE: \_\_\_\_\_

HPV - DOSE 1 DATE: \_\_\_\_\_ DOSE 2 DATE: \_\_\_\_\_ DOSE 3 DATE: \_\_\_\_\_

HEPATITIS A - DOSE 1 DATE: \_\_\_\_\_ DOSE 2 DATE: \_\_\_\_\_

HEPATITIS B - DOSE 1 DATE: \_\_\_\_\_ DOSE 2 DATE: \_\_\_\_\_ DOSE 3 DATE: \_\_\_\_\_



**ADULTS NEED VACCINES TOO.**

As Native American people, we need to **KEEP OUR CIRCLE PROTECTED AND STRONG.**

All adults need vaccines to help prevent getting serious diseases that could result in disability, require hospital care, and are costly to take care for your families.

**TALK TO YOUR HEALTHCARE PROVIDER AND GET THE VACCINES YOU NEED TODAY!**

Check out [cdc.gov/vaccines/adults/index.html](http://cdc.gov/vaccines/adults/index.html) for more information.

Provide the name of the adult receiving the vaccine here: \_\_\_\_\_

For more information, contact: \_\_\_\_\_

**GREAT PLAINS TRIBAL CHAIRMAN'S HEALTH BOARD**  
GREAT PLAINS TRIBAL INDIAN HEALTH CENTER

2700 East 12th Street, Suite 1000, Omaha, NE 68105 | 402.464.1234 | [www.gptchb.org](http://www.gptchb.org)

**EVERYONE CAN BENEFIT BY GETTING VACCINATED, EVEN HEALTHY ADULTS.**

As Native American people, we need to **KEEP OUR CIRCLE PROTECTED AND STRONG.**

All adults need vaccines to help prevent getting serious diseases that could result in disability, require hospital care, and are costly to take care for your families.

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**GREAT PLAINS TRIBAL CHAIRMAN'S HEALTH BOARD**  
GREAT PLAINS TRIBAL INDIAN HEALTH CENTER

2700 East 12th Street, Suite 1000, Omaha, NE 68105 | 402.464.1234 | [www.gptchb.org](http://www.gptchb.org)

# GPTEC Influenza Resources

- [gptec.gptchb.org/infectious-disease/national-vaccination-project/](http://gptec.gptchb.org/infectious-disease/national-vaccination-project/)
  - Adult and Flu Video Public Service Announcements (PSA)
  - Adult and Flu Posters
  - Radio PSA
  - Vaccine Cards



# CDC Resource: Infographic

<https://www.cdc.gov/vaccines/adults/rec-vac/health-conditions/diabetes/infographic/index.html>

## Healthy Living with Diabetes: The Simple Step You May Be Missing

While there is no cure yet for diabetes, there are steps you can take to stay healthy. You may know the basics:

The infographic is divided into three sections. The first section, 'Make time for regular physical activity.', shows a person running with a calendar icon indicating '5X+ PER WEEK' and a stopwatch icon indicating '30+ MIN PER DAY'. The second section, 'Eat right.', features a plate divided into four quadrants: 'WHOLE-GRAIN FOODS' (top-left), 'FOODS WITH HEART-HEALTHY FATS' (top-right), 'FRUITS' (bottom-left), and 'VEGETABLES' (bottom-right). The third section, 'Keep up with medical care.', shows a person's head and shoulders with icons for a tooth, a blood pressure cuff, a syringe, and a calendar with 'EHN PRS' on it.

**Make time for regular physical activity.**

**Eat right.**

**Keep up with medical care.**

WHOLE-GRAIN FOODS

FOODS WITH HEART-HEALTHY FATS

FRUITS

VEGETABLES

5X+ PER WEEK

30+ MIN PER DAY

EHN PRS

But there's an essential step you may be missing: staying up to date with vaccines.

# Immunization Action Coalition Resources

- Immunization Action Coalition:
- <https://www.immunize.org/>
- <https://www.immunize.org/catg.d/p4043.pdf>

## Vaccinations for Adults with Diabetes

The table below shows which vaccinations you should have to protect your health if you have diabetes. Make sure you and your healthcare provider keep your vaccinations up to date.

Vaccine	Do you need it?
Hepatitis A (HepA)	<b>Maybe.</b> You need this vaccine if you have a specific risk factor for hepatitis A <sup>a</sup> or simply want to be protected from this disease. The vaccine is usually given in 2 doses, 6–18 months apart.
Hepatitis B (HepB)	<b>Yes!</b> All adults with diabetes who are younger than 60 and have never received or completed a series of HepB vaccine, should get vaccinated now. If you are 60 or older and diabetic, discuss your need for HepB vaccine with your healthcare provider.
Hib (Haemophilus influenzae type b)	<b>Maybe.</b> Some adults with certain high-risk conditions, for example, lack of a functioning spleen, need vaccination with Hib. Talk to your healthcare provider to find out if you need this vaccine.
Human papillomavirus (HPV)	<b>Yes!</b> You should get this vaccine if you are age 26 years or younger. Adults age 27 through 45 may also be vaccinated against HPV after a discussion with their healthcare provider. The vaccine is usually given in 3 doses over a 6-month period.
Influenza	<b>Yes!</b> You need a dose every fall (or winter) for your protection and for the protection of others around you.
Mesela, mumps, rubella (MMR)	<b>Maybe.</b> You need at least 1 dose of MMR vaccine if you were born in 1957 or later. You may also need a second dose. <sup>b</sup>
Meningococcal ACWY (MenACWY)	<b>Maybe.</b> You may need MenACWY vaccine if you have one of several health conditions, <sup>c</sup> for example, if you do not have a functioning spleen, and also boosters if your risk is ongoing. You need MenACWY if you are age 21 or younger and a first-year college student living in a residence hall and you either have never been vaccinated or were vaccinated before age 16.
Meningococcal B (MenB)	<b>Maybe.</b> You may need MenB vaccine if you have one of several health conditions, <sup>c</sup> for example, if you do not have a functioning spleen, and also boosters if your risk is ongoing. You may also consider getting the MenB vaccine if you are age 23 or younger (even if you don't have a high-risk medical condition) after a discussion with your healthcare provider.
Pneumococcal (Pneumovax 23, PPSV23, Prevnar 13, PCV13)	<b>Yes!</b> If you're younger than 65 and have diabetes, you need to get vaccinated with Pneumovax. If you haven't been vaccinated, you should get 1 dose now. You may also need a 1-time dose of Prevnar, depending on whether you have a certain high-risk condition, <sup>c</sup> such as immunosuppression, or you lack a functioning spleen. At age 65 (or older), you will need a second dose of Pneumovax, given at least 5 years after your previous dose of Pneumovax. At that time, you and your healthcare provider may also decide if you would benefit from a dose of Prevnar. If you haven't received it already, Prevnar and Pneumovax are usually spaced 1 year apart.
Tetanus, diphtheria, whooping cough (pertussis) (Tdap, Td)	<b>Yes!</b> If you haven't received a dose of Tdap during your lifetime, you need to get a Tdap shot now (the adult whooping cough vaccine). And all women need to get a dose during each pregnancy. After that, you need a Tdap or Td booster dose every 10 years. Consult your healthcare provider if you haven't had at least 3 tetanus- and diphtheria-toxoid containing shots sometime in your life or if you have a deep or dirty wound.
Varicella (Chickenpox)	<b>Maybe.</b> If you've never had chickenpox, never were vaccinated, or were vaccinated but received only 1 dose, talk to your healthcare provider to find out if you need this vaccine. <sup>d</sup>
Zoster (shingles)	<b>Yes!</b> If you are age 50 or older, you should get the 2-dose series of the Shingrix brand of shingles vaccine, even if you already were vaccinated with Zostavax.



<sup>a</sup> Consult your healthcare provider to determine your level of risk for infection and your need for this vaccine. <sup>b</sup> Are you planning to travel outside the United States? Visit the Centers for Disease Control and Prevention's (CDC) website at [www.cdc.gov/travel/destinations/](http://www.cdc.gov/travel/destinations/) for travel information, or consult a travel clinic.   
 Saint Paul, Minnesota • 651-647-8000 • [www.immunize.org](http://www.immunize.org) • [www.vaccineinformation.org](http://www.vaccineinformation.org)   
 [www.immunize.org/catg.d/p4043.pdf](https://www.immunize.org/catg.d/p4043.pdf) • Item #10441 (4/20)

# CDC Resources

- <https://www.cdc.gov/vaccines>
- <https://www.cdc.gov/flu>
- <https://www.cdc.gov/vaccines/adults/rec-vac/health-conditions/diabetes.html>

**Information Series for Adults**  
**What You Need to Know About Diabetes and Adult Vaccines**

Each year thousands of adults in the United States get sick from diseases that could be prevented by vaccines — some people are hospitalized, and some even die. People with diabetes, both type 1 and type 2 are at higher risk for serious problems from certain vaccine-preventable diseases. Getting vaccinated is an important step to staying healthy.

**Why Vaccines Are Important for You**

Diabetes, even if well managed, can make it harder for your immune system to fight infections. If you have diabetes, you may be at risk for more serious complications from an illness compared to people without diabetes.

- Some illnesses, like influenza, can raise your blood glucose to dangerously high levels. When you are sick, you need to monitor your blood sugar more often.
- People with diabetes have higher rates of hepatitis B than the rest of the population. Outbreaks of hepatitis B associated with blood glucose monitoring procedures, blood sugar meters, finger stick devices, and other equipment such as insulin pens have happened among people with diabetes.
- People with diabetes are at increased risk for death from pneumonia (lung infection), bacteremia (blood infection), and meningitis (infection of the lining of the brain and spinal cord).

Immunization provides the best protection against vaccine-preventable diseases. Vaccines are one of the safest ways for you to protect your health, even if you are taking prescription medications to control your diabetes. Vaccine side effects are usually mild and go away on their own. Severe side effects are very rare.

**Getting Vaccinated**

You regularly see your provider for diabetes care, and that is a great place to start if your healthcare professional does not offer the vaccines you need, ask for a referral so you can get the vaccines elsewhere.

Adults can get vaccines at doctor's offices, pharmacies, workplaces, community health clinics, health departments, and other locations. To find a place near you to get a vaccine, go to <https://www.cdc.gov/healthcare>.

Most health insurance plans cover recommended vaccines. Check with your insurance provider for details and for a list of vaccine providers covered by your plan. If you do not have health insurance, visit [www.healthcare.gov](https://www.healthcare.gov) to learn more about health insurance options.

For more information about vaccines, visit [www.cdc.gov/nczod/diseases/infections/adults/vaccines/](https://www.cdc.gov/nczod/diseases/infections/adults/vaccines/) or use the Adult Vaccine Self-Assessment Tool at [www.cdc.gov/nczod/diseases/infections/adults/vaccines/](https://www.cdc.gov/nczod/diseases/infections/adults/vaccines/) to find out which vaccines you may need.

**What vaccines do you need?**

- **Flu vaccine** every year to protect against seasonal flu.
- **Pneumococcal vaccine** to protect against serious pneumococcal diseases.
- **Hepatitis B vaccine** series to protect against hepatitis B.
- **Tdap vaccine** to protect against tetanus, diphtheria, and pertussis (whooping cough).
- **Zoster vaccine** to protect against shingles if you are 50 years or older.

There may be other vaccines recommended for you so be sure to talk with your healthcare professional about what is right for you.

**DON'T WAIT. VACCINATE!**

## Influenza (Flu)

Seasonal Influenza (Flu) > Who is at High Risk for Flu Complications

Seasonal Influenza (Flu)

About Flu +

Who is at High Risk for Flu Complications -

- Adults 65 & Over
- Pregnant Women +
- Asthma
- Heart Disease & Stroke
- Diabetes
- HIV/AIDS
- Cancer
- What Parents Need to Know +
- This Flu Season +
- Prevent Flu +
- Flu Vaccines Work +

### Flu & People with Diabetes

Español | Other Languages

Getting a flu vaccine during 2020-2021 is more important than ever because of the ongoing COVID-19 pandemic. Flu vaccination is especially important for people with certain underlying medical conditions, like asthma, heart disease, and diabetes. People with these types of conditions are at higher risk of developing serious complications from flu. Many of these conditions also increase the risk for serious outcomes from COVID-19.

**Protect Your Health**

On This Page

People with diabetes (type 1, type 2, or gestational), even when well-managed, are at high risk of serious flu complications, which can result in hospitalization.

# Resources and Websites

- IHS Immunization Resources:
  - <https://www.ihs.gov/epi/vaccine/resources/>
  - <https://www.ihs.gov/flu>
- CDC Vaccine Resources
  - <https://www.cdc.gov/vaccines>
  - <https://www.cdc.gov/diabetes/vaccines>
- Immunization Action Coalition
  - <http://www.immunize.org/>
- Adult and Influenza Education Materials:
  - <https://gptec.gptchb.org/infectious-disease/national-vaccination-project/>
- Association of American Indian Physicians/ASTHO
  - Influenza media kit and PSA videos for AI/AN communities
    - <https://www.aaip.org/programs/capacity-building-assistance/influenza-vaccination/>
- National Foundation for Infectious Diseases
  - <https://www.nfid.org/infectious-diseases/influenza-flu/>



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