

# CDC Purge of Health Information and Data

Today the CDC has removed several pages related to health and disease prevention. I have the PDFs of what was removed, here they are.



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JAN 31, 2025

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MedPage Today [just broke the story](#) today (January 31st, 2025) that the CDC is removing webpages with data and health information.

The webpages removed so far contain information about:

- which food is healthy to eat while pregnant
- MPOX vaccines
- HIV/AIDS prevention and safe sex
- Health Disparities Among LGBTQ Youth

... among others.

Considering we have another Clade 1b (more deadly and more contagious MPOX) outbreak in Africa right now, a case was just found in Europe, and the MPOX vaccine was recently shown to have loose efficacy, we now have an unprotected population now with less information.

The CDC's web resource library is absolutely massive and serves as a resource for nearly every scientist and physician in the United States and beyond. I have checked with pages I typically use for SARS-CoV-2 and respiratory virus infection information are still online but have not been updated since mid-January.

Here is a link to the MedPage Today [story](#), you can see that they have obtained snapshots of the old pages using the "Wayback" machine.

Below are images of each page that was removed and the information they contained

The Wayback Machine - <https://web.archive.org/web/20250115042648/https://www.cdc.gov/food-safety/foods/pregnant-people.html>



MAY 2, 2024

# Safer Food Choices for Pregnant People

## AT A GLANCE

Learn what foods and beverages to avoid consuming while pregnant and which foods and beverages are safer options.



## Why it's important

If you are pregnant, you are more likely than other people to get sick from certain germs.

To prevent food poisoning, some foods are safer choices than others. That's because some foods—such as undercooked meat and eggs, unwashed fruits and vegetables, and unpasteurized milk—are more often associated with foodborne illnesses.

## Safer food choices for pregnant people

Use the table below as a guide to making safer food choices.

Poultry and Meat	
Riskier Choice	Safer Choice
<ul style="list-style-type: none"> <li>Raw or undercooked poultry or meat                             <ul style="list-style-type: none"> <li>Poultry includes chicken and turkey</li> <li>Meat includes beef, pork, lamb, and veal</li> </ul> </li> <li>Unheated deli meat, cold cuts, hot dogs, and fermented or dry sausages</li> <li>Refrigerated pâté or meat spreads</li> </ul>	<ul style="list-style-type: none"> <li>Poultry and meat <a href="#">cooked to a safe internal temperature</a>. Use a food thermometer to check.                             <ul style="list-style-type: none"> <li>All poultry, including ground chicken and turkey, cooked to 165°F</li> <li>Whole cuts of beef, veal, lamb, and pork cooked to 145°F (then allow the meat to rest for 3 minutes before carving or eating)</li> <li>Ground meats, such as beef and pork, cooked to 160°F</li> </ul> </li> <li>Deli meat, cold cuts, hot dogs, and fermented or dry sausages heated to 165°F or until steaming hot</li> <li>Pâté or meat spreads in sealed, airtight containers that don't need to be kept refrigerated before opening</li> </ul>
Deli salads	
Riskier Choice	Safer Choice
<ul style="list-style-type: none"> <li>Premade deli salads, such as:                             <ul style="list-style-type: none"> <li>Coleslaw</li> <li>Potato salad</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Homemade deli salads</li> </ul>



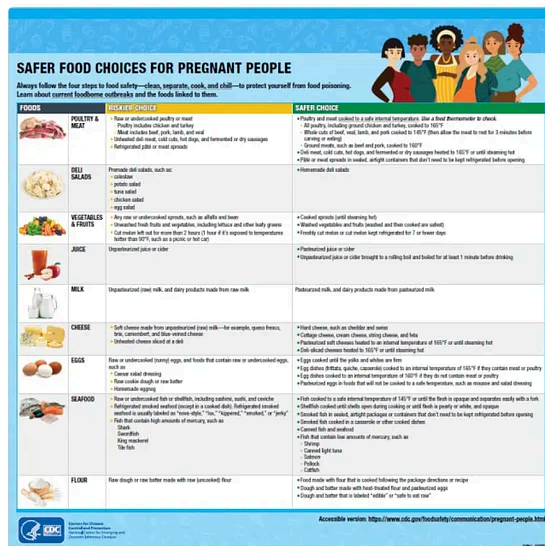
<ul style="list-style-type: none"> <li>◦ Tuna salad</li> <li>◦ Chicken salad</li> <li>◦ Egg salad</li> </ul>	
<b>Vegetables and Fruits</b>	
<b>Riskier Choice</b>	<b>Safer Choice</b>
<ul style="list-style-type: none"> <li>• Any raw or undercooked sprouts, such as alfalfa and bean</li> <li>• Unwashed fresh fruits and vegetables, including lettuce and other leafy greens</li> <li>• Cut melon left out for more than 2 hours (1 hour if it's exposed to temperatures hotter than 90°F, such as a picnic or hot car)</li> </ul>	<ul style="list-style-type: none"> <li>• Cooked sprouts (until steaming hot)</li> <li>• Washed vegetables and fruits (washed and then cooked are safest)</li> <li>• Freshly cut melon or cut melon kept refrigerated for 7 or fewer days</li> </ul>
<b>Juice</b>	
<b>Riskier Choice</b>	<b>Safer Choice</b>
Unpasteurized juice or cider	<ul style="list-style-type: none"> <li>• Pasteurized juice or cider</li> <li>• Unpasteurized juice or cider brought to a rolling boil for at least 1 minute before drinking</li> </ul>
<b>Milk</b>	
<b>Riskier Choice</b>	<b>Safer Choice</b>
Unpasteurized (raw) milk and dairy products made from raw milk	Pasteurized milk and dairy products made from pasteurized milk
<b>Cheese</b>	
<b>Riskier Choice</b>	<b>Safer Choice</b>
<ul style="list-style-type: none"> <li>• Soft cheese made from unpasteurized (raw) milk—for example, queso fresco, brie, camembert, and blue-veined cheese</li> <li>• Unheated cheese sliced at a deli</li> </ul>	<ul style="list-style-type: none"> <li>• Hard cheese, such as cheddar and swiss</li> <li>• Cottage cheese, cream cheese, string cheese, and feta</li> <li>• Pasteurized soft cheeses heated to an internal temperature of 165°F or until steaming hot</li> <li>• Deli-sliced cheeses heated to 165°F or until steaming hot</li> </ul>
<b>Eggs</b>	
<b>Riskier Choice</b>	<b>Safer Choice</b>
Raw or undercooked (runny) eggs, and foods that contain raw or undercooked eggs, such as <ul style="list-style-type: none"> <li>• Caesar salad dressing</li> <li>• Raw cookie dough or raw batter</li> <li>• Homemade eggnog</li> </ul>	<ul style="list-style-type: none"> <li>• Eggs cooked until the yolks and whites are firm</li> <li>• Egg dishes (frittata, quiche, casserole) cooked to an internal temperature of 165°F if they contain meat or poultry</li> <li>• Egg dishes cooked to an internal temperature of 160°F if they do not contain meat or poultry</li> <li>• Pasteurized eggs in foods that will not be cooked to a safe temperature, such as mousse and salad dressing</li> </ul>
<b>Seafood</b>	
<b>Riskier Choice</b>	<b>Safer Choice</b>
<ul style="list-style-type: none"> <li>• Raw or undercooked fish or shellfish, including sashimi, sushi, and ceviche</li> <li>• Refrigerated smoked seafood (except in a cooked dish). Refrigerated smoked seafood is usually labeled as "nova-style," "lox," "kippered," "smoked," or "jerky"</li> <li>• Fish that contain high amounts of mercury, such as               <ul style="list-style-type: none"> <li>◦ Shark</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Fish cooked to a safe internal temperature of 145°F or until the flesh is opaque and separates easily with a fork</li> <li>• Shellfish cooked until shells open during cooking or until flesh is pearly or white, and opaque</li> <li>• Smoked fish in sealed, airtight packages or containers that don't need to be kept refrigerated before opening</li> <li>• Smoked fish cooked in a casserole or other cooked dishes</li> </ul>



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Safer Food Choices for Pregnant People | Food Safety | CDC

<ul style="list-style-type: none"> <li>◦ Swordfish</li> <li>◦ King mackerel</li> <li>◦ Tilefish</li> </ul>	<ul style="list-style-type: none"> <li>• Canned fish and seafood</li> <li>• Fish that contain low amounts of mercury, such as             <ul style="list-style-type: none"> <li>◦ Shrimp</li> <li>◦ Canned light tuna</li> <li>◦ Salmon</li> <li>◦ Pollock</li> <li>◦ Catfish</li> </ul> </li> </ul>
Flour	
Riskier Choice	Safer Choice
Raw dough or raw batter made with raw (uncooked) flour	<ul style="list-style-type: none"> <li>• Food made with flour that is cooked following the package directions or recipe</li> <li>• Dough and batter made with heat-treated flour and pasteurized eggs</li> <li>• Dough and batter that is labeled "edible" or "safe to eat raw"</li> </ul>



Safer Food Choices for Pregnant People [PDF](#)

Information on which foods are safer to consume and which are more likely to cause food poisoning fo...

MAY 2, 2024

## Prevent food poisoning

Always follow the four steps to food safety—clean, separate, cook, and chill—to protect yourself from food poisoning.

Learn about current [foodborne outbreaks](#) and the foods linked to them.

## Resources

[FoodSafety.gov: Safe Minimum Internal Temperature](#)

[Food Poisoning Symptoms](#)

[Listeria and Pregnancy](#)

[Healthy Pregnancy](#)

[FoodSafety.gov: Pregnant Women](#)

[FDA: Advice About Eating Fish](#)





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Environmental Justice | Tracking Program | CDC

Get machine-readable data from the [Application Program Interface \(API\)](#).

## EJ Efforts Across the Country

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CDC funds [state and local health departments](#) to develop their own tracking networks, which feed into the national Tracking Network. Several of these tracking programs are working closely with their environmental justice communities and have created tools and resources specifically for their jurisdictions.

[California](#) | [Colorado](#) | [Maryland](#) | [Massachusetts](#) | [Oregon](#) | [Washington](#)

## Resources

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[Environmental Justice Dashboard](#)

### SOURCES

**CONTENT SOURCE:**

[National Center for Environmental Health](#)

### FOOTNOTES

A. Living in an older home is one risk factor that can contribute to higher blood lead levels in children.



The Wayback Machine - <https://web.archive.org/web/20250115212241/https://www.cdc.gov/environmental-health-tracking/php/data-research/environmental-justice.html>

# CDC Environmental Public Health Tracking

FEBRUARY 23, 2024

## Environmental Justice

### AT A GLANCE

Data on environmental exposures, health burden, and community characteristics are important to identify, understand, and address environmental justice issues. These data help everyone learn more about connections between environment and health.



## We Track That

The Tracking Network brings together data and information needed to make decisions about our environment and our health. These include personal, community, regulatory, and public health decisions. Tracking Network data allow users to identify demographic factors, environmental burdens, socioeconomic conditions, and public health concerns directly related to environmental justice.

Using Tracking Network data:

- **Scientists** are better able to assess the connections between the environment and its effect on health.
- **Public health professionals** can easily assess unusual trends and events to identify communities that may be at risk.
- **Elected officials** can make more informed policy decisions.
- **Everyone** can learn more about how the environment may affect their health.

### Defining Environmental Justice

All people—regardless of race, color, national origin, or income—are entitled to equal protection from environmental and health hazards and equal access to the development, implementation, and enforcement of environmental laws, regulations, and policies.

## Types of Data

EXPAND ALL +

The Tracking Network presents the following environmental health data in customizable maps, charts, and tables.

Air Quality (Outdoor) +

- Ozone Days Above Regulatory Standard ([Monitor + Modeled](#)) ([Monitor only](#))
- PM<sub>2.5</sub>-Days Above Regulatory Standard ([Monitor + Modeled](#)) ([Monitor only](#))
- Annual PM<sub>2.5</sub>-Level ([Monitor + Modeled](#)) ([Monitor only](#))
- [Air Toxics](#)

[View air quality data](#)

Asthma +



- [Asthma Prevalence among Children](#)
  - [Emergency Department Visits for Asthma](#)
  - [Hospitalizations for Asthma](#)
- [View asthma data](#)

- Birth Outcomes +
- [Prematurity among Singleton Births](#)
  - [Low Birthweight among Singleton Births](#)
  - [Infant Mortality](#)
- [View reproductive and birth outcomes data](#)

- Cancer +
- [Cancer Incidence](#)
- [View cancer data](#)

- Childhood Lead Poisoning +
- [Age of Housing <sup>\(A\)</sup>](#)
- [View childhood lead poisoning data](#)

- Climate Change +
- [Climate change datasets](#)

- Community Characteristics +
- [Households](#)
  - [Internet Access](#)
  - [Medical Infrastructure](#)
- [View community characteristics data](#)

- Community Design +
- [Access to Parks and Schools](#)
  - [Proximity of Populations to Schools and Highways](#)
- [View community design data](#)

- Drinking Water +
- [Regulated Drinking Water Contaminants](#)



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Environmental Justice | Tracking Program | CDC

- [Unregulated Drinking Water Contaminants](#)

[View drinking water data](#)

Environmental Quality

+

- [Environmental Quality Index \(EQI\)](#)

Flood Vulnerability

+

- [Flood Vulnerability](#)

[View precipitation and flooding data](#)

Heart Attacks

+

- [Heart Attack Hospitalizations](#)
- [Heart Disease Mortality](#)

[View heart disease and stroke data](#)

Heat-Related Illness

+

- [Heat Stress Emergency Department Visits](#)
- [Heat Stress Hospitalizations](#)
- [Heat-Related Mortality](#)
- [Heat Vulnerability](#)

[View heat and heat-related illness data](#)

Populations & Vulnerabilities

+

- [Demographics](#)
- [Life Expectancy at Birth](#)
- [Social Vulnerability Index](#)
- [Socioeconomic Status](#)

[View populations and vulnerabilities data](#)

## Access the Data

### Environmental Justice (EJ) Dashboard

Use this dashboard to explore the environmental exposure, community characteristics, and health burden data outlined on this webpage. These are all factors important to understanding and addressing environmental justice issues.

[EJ Dashboard](#)

Use the [Data Explorer](#) to create custom maps, tables, and charts.

View data in simple [Quick Reports](#).

<https://web.archive.org/web/20250115212241/https://www.cdc.gov/environmental-health-tracking/php/data-research/environmental-justice.html>





The Wayback Machine - <https://web.archive.org/web/20250119132046/https://www.cdc.gov/hiv/data-research/facts-stats/transgender-people.html>



MARCH 28, 2024

# Fast Facts: HIV and Transgender People

## AT A GLANCE

Nearly 1 million people (.3%) identify as transgender in the United States (US), and transgender people made up 2% (671) of new HIV diagnoses in the US and dependent areas in 2019. Get the latest data on HIV among transgender people.



## Fast facts

HIV affects some groups more than others. Social and structural issues—such as HIV stigma, homophobia, discrimination, poverty, and limited access to high-quality health care—influence health outcomes and continue to drive inequities.

### HIV Diagnoses

HIV diagnoses refers to the number of people who received an HIV diagnosis during a given year.

### HIV diagnoses among transgender people in the US and dependent areas, 2019



Of the **36,801 new HIV diagnoses** in the US and dependent areas in 2019, 2% (671) were among transgender people.



**Overall Goal: Decrease the number of new HIV diagnoses to 9,588 by 2025 and 3,000 by 2030.**



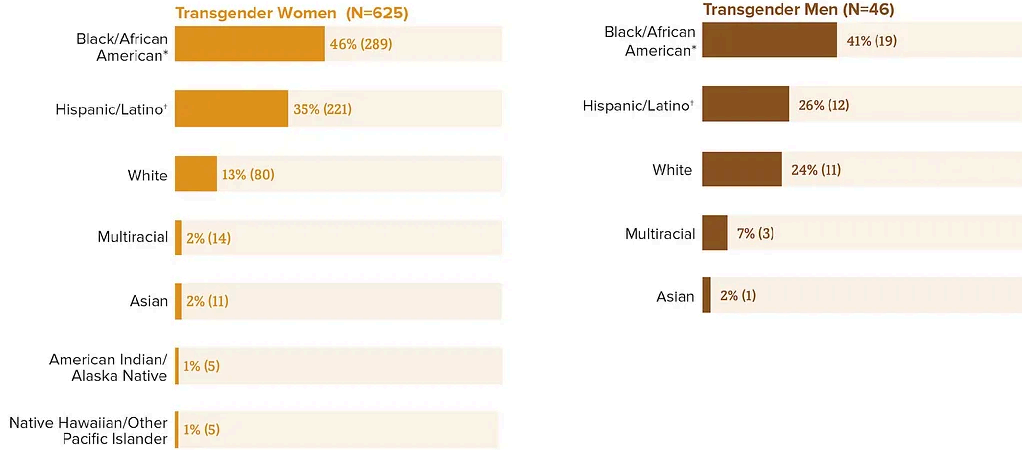
Learn more about HIV diagnoses among transgender people.

Source: CDC, [Diagnoses of HIV infection in the United States and dependent areas, 2019, HIV Surveillance Report 2021:32](#).

### HIV diagnoses among transgender people by race/ethnicity in the US and dependent areas, 2019



**Most new HIV diagnoses among transgender people were among Black/African American people.**



Learn more about HIV diagnoses among transgender people by race and ethnicity.

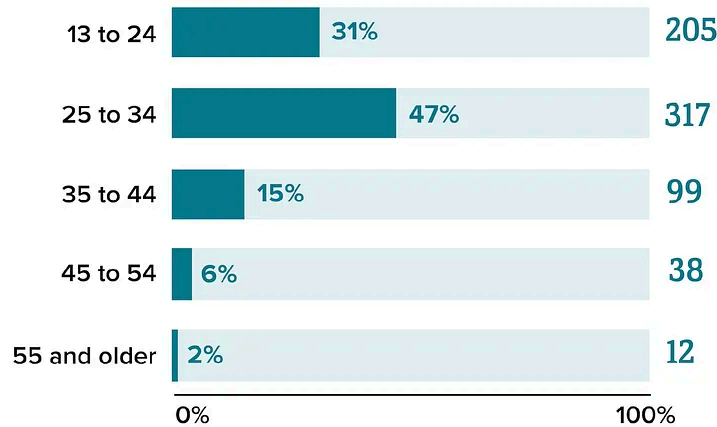
\*Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.

†Hispanic/Latino people can be of any race.

Source: CDC, [Diagnoses of HIV infection in the United States and dependent areas, 2019](#), *HIV Surveillance Report* 2021:32.

**HIV diagnoses among transgender people by age in the US and dependent areas, 2019**

**Among transgender people, most new HIV diagnoses were among people age 25 to 34.**



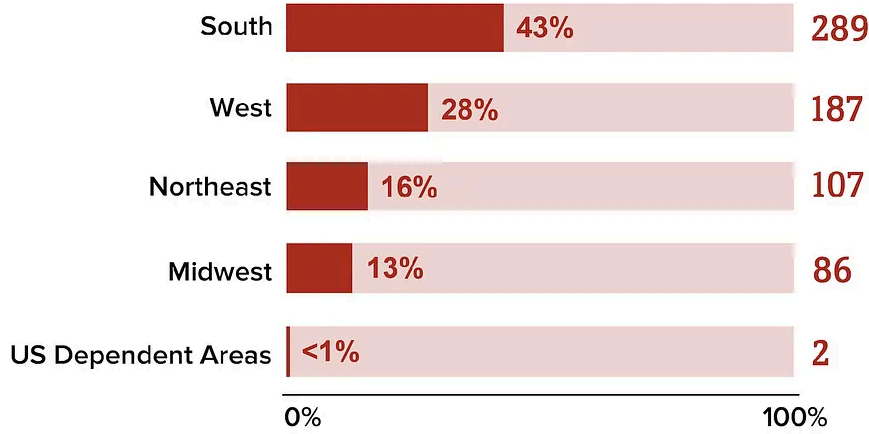
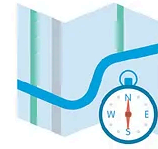
Learn more about HIV diagnoses among transgender people by age.

Source: CDC, [Diagnoses of HIV infection in the United States and dependent areas, 2019](#), *HIV Surveillance Report* 2021:32.

**HIV diagnoses among transgender people by region in the US and dependent areas, 2019\***



**The highest number of new HIV diagnoses among transgender people were in the South.**

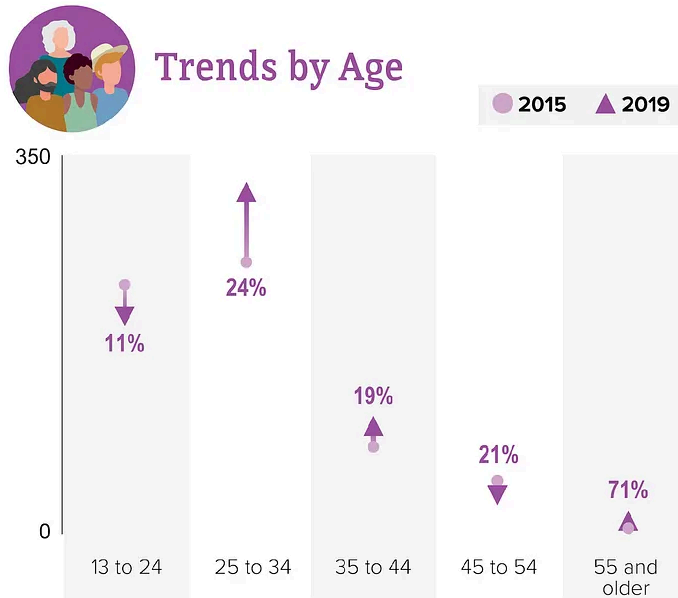


Learn more about HIV diagnoses among transgender people by region.

\*Regions used in CDC's National HIV Surveillance System: Northeast: CT, ME, MA, NH, NJ, NY, PA, RI, VT Midwest: IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI South: AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV West: AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY

Source: CDC, [Diagnoses of HIV infection in the United States and dependent areas, 2019](#), *HIV Surveillance Report* 2021:32.

**HIV diagnoses among transgender people in the US and dependent areas, 2015–2019\***



Learn more about trends in HIV diagnoses among transgender people.

\*Changes in subpopulations with fewer HIV diagnoses can lead to a large percentage increase or decrease.

Source: CDC, [Diagnoses of HIV infection in the United States and dependent areas, 2019](#), *HIV Surveillance Report* 2021:32.

**HIV testing**



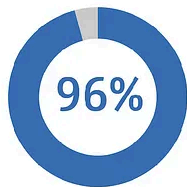
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Fast Facts: HIV and Transgender People | HIV | CDC

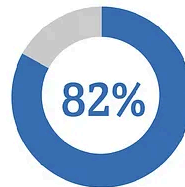
HIV testing is the gateway to care for people who have HIV and to prevention services for people who don't have HIV. CDC recommends that everyone between the ages of 13 and 64 get tested for HIV at least once as part of routine health care. People with certain risk factors should get tested at least once a year. A recent study found that transgender women have high rates of recent and lifetime HIV testing.

HIV testing among transgender women in 7 US cities, 2019–2020\*

## Getting tested for HIV is the only way for people to learn their status.



of transgender women had ever tested for HIV



of transgender women were tested for HIV in the past 12 months

Learn more about HIV testing among transgender women.

\*Among people aged 18 and older.

Source: CDC. [HIV infection, risk, prevention, and testing behaviors among transgender women—National HIV Behavioral Surveillance—7 U.S. Cities, 2019–2020](#). *HIV Surveillance Special Report 2021*.

### HIV prevention

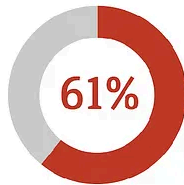
There are many HIV prevention strategies available, including [condoms](#); [pre-exposure prophylaxis \(PrEP\)](#); [post-exposure prophylaxis \(PEP\)](#); as well as interventions focused on risk reduction; adherence to HIV medicine; linkage to, retention in, and re-engagement in care; structural approaches; and engagement in PrEP care. Additionally, for people with HIV, [treatment](#) provides substantial benefits for personal health and reduces HIV transmission to others. This is sometimes called HIV treatment as prevention.

### HIV prevention interventions among transgender women in 7 US cities, 2019–2020\*





## HIV prevention interventions can reduce risk behaviors.



of transgender women who do not have HIV participated in an individual or group level HIV prevention intervention

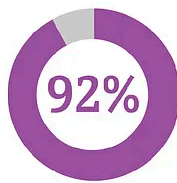
Learn more about HIV prevention interventions among transgender women.

\*Among people aged 18 and older.

Source: CDC, [HIV infection, risk, prevention, and testing behaviors among transgender women—National HIV Behavioral Surveillance—7 U.S. Cities, 2019–2020](#). *HIV Surveillance Special Report 2021*.

### PrEP awareness and use among transgender women in 7 US cities, 2019–2020\*

## PrEP is highly effective for preventing HIV from sex or injection drug use.



of transgender women without HIV were aware of PrEP



of transgender women without HIV used PrEP

Learn more about PrEP awareness and use among transgender women.

\*Among people aged 18 and older.

Source: CDC, [HIV infection, risk, prevention, and testing behaviors among transgender women—National HIV Behavioral Surveillance—7 U.S. Cities, 2019–2020](#). *HIV Surveillance Special Report 2021*.

### HIV prevalence

HIV prevalence is the number of people with HIV at a given time regardless of the time of infection.



HIV prevalence among transgender women in 7 US cities, 2019–2020\*

# Racial and ethnic disparities exist among transgender women with HIV.



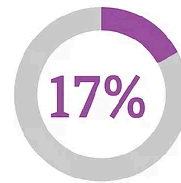
Among transgender women interviewed, 42% had HIV.



62%  
of Black/African American transgender women had HIV



35%  
of Hispanic/Latina transgender women had HIV



17%  
of White transgender women had HIV

Learn more about HIV prevalence among transgender women.

\*Among people aged 18 and older.

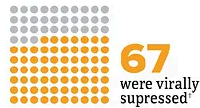
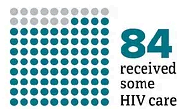
Source: CDC. [HIV infection, risk, prevention, and testing behaviors among transgender women—National HIV Behavioral Surveillance—7 U.S. Cities, 2019–2020](#). *HIV Surveillance Special Report 2021*.

## Viral suppression and barriers to care

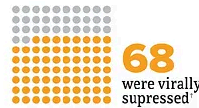
Viral suppression refers to the percentage of people with diagnosed HIV who have less than 200 copies of HIV per milliliter of blood.

## Transgender people with diagnosed HIV in 44 states and the District of Columbia, 2019

For every 100 transgender women with *diagnosed* HIV in 2019:



For every 100 transgender men with *diagnosed* HIV in 2019:



For comparison, for every **100 people overall** with diagnosed HIV, **76 received some care**, **58 were retained in care**, and **66 were virally suppressed**.



**Overall Goal: Increase the percentage of people with diagnosed HIV who are virally suppressed to at least 95% by 2025 and remain at 95% by 2030.**



Learn more about HIV care and viral suppression among transgender people with diagnosed HIV.

\*Had 2 viral load or CD4 tests at least 3 months apart in a year.



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Fast Facts: HIV and Transgender People | HIV | CDC

<sup>†</sup> Had less than 200 copies of HIV per milliliter of blood on most recent viral load test.

Source: CDC. [Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 Dependent Areas, 2019](#). *HIV Surveillance Special Report* 2021; 26(2).

Many people with HIV experience challenges with achieving and maintaining viral suppression over time. Some of these challenges include missing HIV medical appointments, needing but not receiving other important health care services, or missing doses of HIV treatment.

### Missed HIV medical care appointments among transgender people with diagnosed HIV in the US, 2020\*

Staying in HIV care is important to achieving and maintaining viral suppression.



missed at least 1 medical appointment in the past 12 months

Learn more about missed HIV medical care appointments among transgender people with diagnosed HIV.

\*Among people aged 18 and older.

Source: CDC. [Medical Monitoring Project](#).

### HIV treatment among transgender people with diagnosed HIV in the US, 2020\*

Taking HIV medicine consistently and as prescribed is the best way to achieve and maintain viral suppression.



reported taking all of their doses of HIV medicine over the last 30 days

<https://web.archive.org/web/20250119132046/https://www.cdc.gov/hiv/data-research/facts-stats/transgender-people.html>



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Fast Facts: HIV and Transgender People | HIV | CDC

Learn more about HIV treatment among transgender people with diagnosed HIV.

\*Among people aged 18 and older.

Source: CDC, [Medical Monitoring Project](#).

### Needed HIV ancillary services among transgender people with diagnosed HIV in the US, 2020†

**HIV ancillary care services are essential for supporting people in staying in HIV care and maintaining viral suppression.**



**THE TOP SERVICE TRANSGENDER PEOPLE WITH HIV REPORTED NEEDING IN 2020 WAS DENTAL CARE, WITH 17% SAYING THEY NEEDED BUT DID NOT RECEIVE IT.**



Forty-one percent (41%) of all people with HIV needed, but did not receive, at least 1 HIV ancillary service in the past 12 months.

Learn more about needed HIV ancillary services among transgender people with diagnosed HIV.

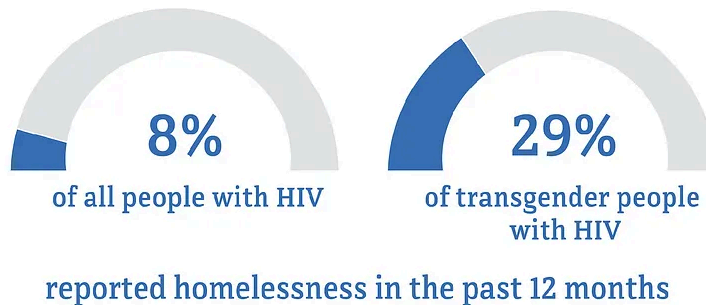
\*Among people aged 18 and older.

† HIV ancillary services, such as case management and mental health services, are services that support retention in HIV care and viral suppression.

Source: CDC, [Medical Monitoring Project](#).

### Homelessness among transgender people with diagnosed HIV in the US, 2020\*

**People who experience homelessness may find it difficult to get HIV care and treatment.**



<https://web.archive.org/web/20250119132046/https://www.cdc.gov/hiv/data-research/facts-stats/transgender-people.html>





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Fast Facts: HIV and Transgender People | HIV | CDC

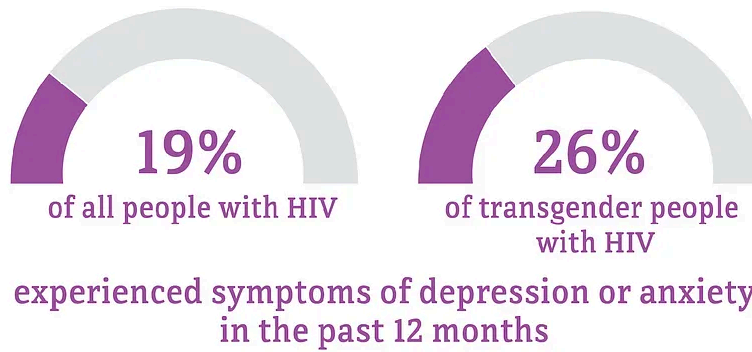
Learn more about homelessness among transgender people with diagnosed HIV.

\*Among people aged 18 and older.

Source: CDC, [Medical Monitoring Project](#).

### Depression and anxiety among transgender people with diagnosed HIV in the US, 2020\*

Some transgender people with diagnosed HIV may have difficulty getting treatment.



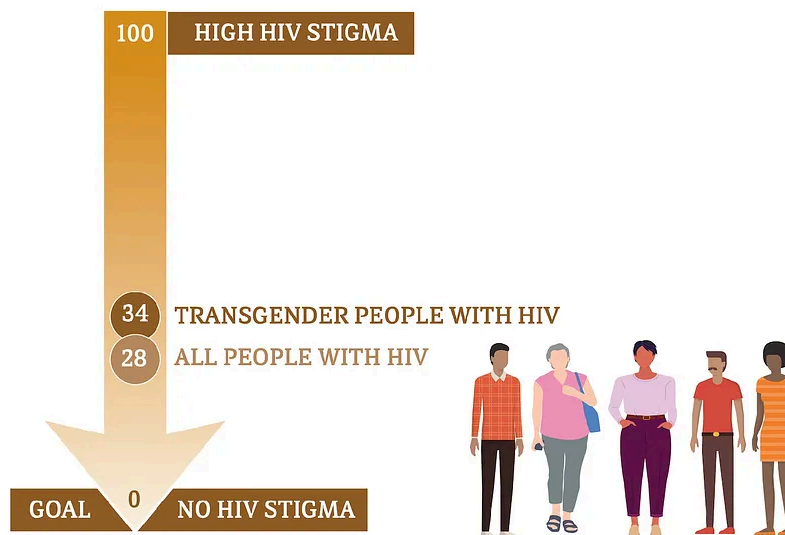
Learn more about depression and anxiety among transgender people with diagnosed HIV.

\*Among people aged 18 and older.

Source: CDC, [Medical Monitoring Project](#).

### Median HIV stigma score among transgender people with diagnosed HIV in the US, 2020\*

Transgender people with HIV experienced HIV stigma.



Learn more about HIV stigma experienced by transgender people with diagnosed HIV.

<https://web.archive.org/web/20250119132046/https://www.cdc.gov/hiv/data-research/facts-stats/transgender-people.html>



The Wayback Machine - <https://web.archive.org/web/20250105200202/https://www.cdc.gov/hiv/data-research/facts-stats/race-ethnicity.html>



MAY 21, 2024

# Fast Facts: HIV in the US by Race and Ethnicity

## AT A GLANCE

While HIV affects all races and ethnicities in the United States, some groups are disproportionately affected compared to their population size. Black/African American people and Hispanic/Latino people are particularly affected by HIV, making up more than half (70%) of estimated new HIV infections in 2022. Get the latest data on HIV by race and ethnicity.



## Fast facts

HIV affects some groups more than others. Social and structural issues—such as HIV stigma, homophobia, discrimination, poverty, and limited access to high-quality health care—influence health outcomes and continue to drive inequities.

## HIV incidence

HIV incidence refers to the estimated number of new HIV infections in a given year.

There were **31,800** estimated new HIV infections in the US in 2022.

Source: CDC. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024; 29(1).



**Overall Goal: Decrease the estimated number of new HIV infections to 9,300 by 2025 and 3,000 by 2030.**

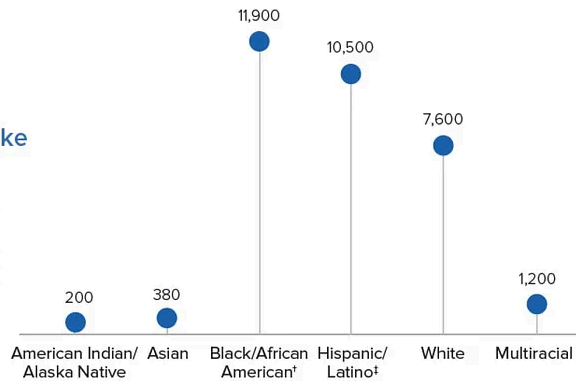


Estimated new HIV infections in the US.



### Estimated new HIV infections in the US by race and ethnicity, 2022\*

Black/African American people account for 37% of estimated new HIV infections, even though they make up 12% of the US population.



\* Data not available for Native Hawaiian and other Pacific Islander people.

† Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.

‡ Hispanic/Latino people can be of any race.

Source: CDC. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024; 29(1).

Estimated HIV infections in the US by race and ethnicity.

### HIV diagnoses

HIV diagnoses refers to the number of people who received an HIV diagnosis during a given year.

## In 2022, 37,981 people received an HIV diagnosis in the US and 6 territories and freely associated states.\*

\* Among people aged 13 and older.

Source: CDC. Diagnoses, deaths, and prevalence of HIV in the United States and 6 territories and freely associated states, 2022. *HIV Surveillance Report*, 2022;35.



Overall Goal: Decrease the number of new HIV diagnoses to 9,588 by 2025 and 3,000 by 2030.

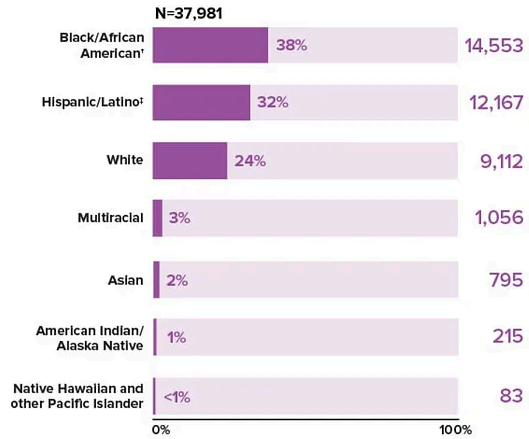


HIV diagnoses in the US and 6 territories and freely associated states.



## HIV diagnoses in the US and 6 territories and freely associated states by race and ethnicity, 2022\*

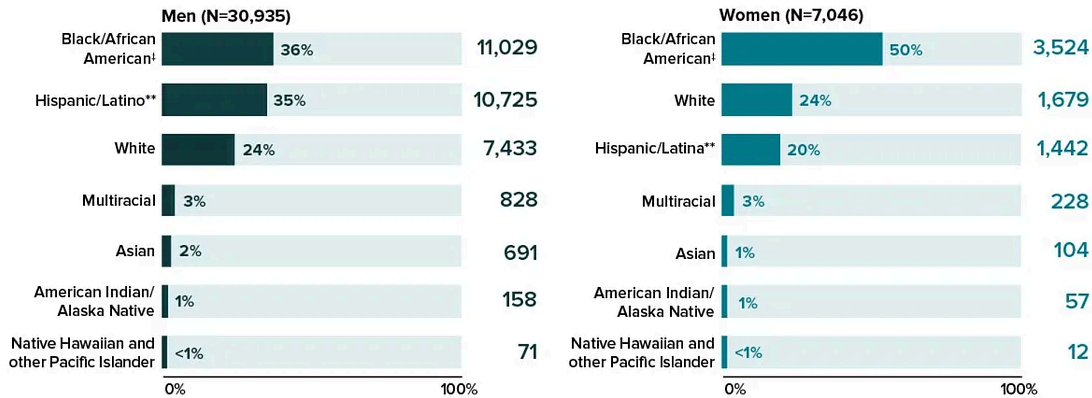
Racism, HIV stigma, discrimination, homophobia, poverty, and other barriers to health care continue to drive disparities in HIV diagnoses.



\* Among people aged 13 and older.  
 † Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.  
 ‡ Hispanic/Latino people can be of any race.  
 Source: CDC. Diagnoses, deaths, and prevalence of HIV in the United States and 6 territories and freely associated states, 2022. *HIV Surveillance Report*, 2022;35.

HIV diagnoses by race and ethnicity.

## HIV diagnoses in the US and 6 territories and freely associated states by race and ethnicity and sex, 2022\*†



\* Among people aged 13 and older.  
 † Based on sex assigned at birth and includes transgender people.  
 ‡ Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.  
 \*\* Hispanic/Latino people can be of any race.  
 Source: CDC. Diagnoses, deaths, and prevalence of HIV in the United States and 6 territories and freely associated states, 2022. *HIV Surveillance Report*, 2022;35.

HIV diagnoses among men and women by race and ethnicity.

From 2018 to 2022, HIV diagnoses remained stable overall in the US and 6 territories and freely associated states. But trends varied for different racial and ethnic groups.





### Trends in HIV diagnoses in the US and 6 territories and freely associated states by race and ethnicity, 2018-2022\*



\*Among people aged 13 and older.  
 † Changes in subpopulations with fewer HIV diagnoses can lead to a large percentage increase or decrease.  
 ‡ Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.  
 \*\* Hispanic/Latino people can be of any race.  
 Source: CDC. Diagnoses, deaths, and prevalence of HIV in the United States and 6 territories and freely associated states, 2022. *HIV Surveillance Report*, 2022;35.

Trends in HIV diagnoses from 2018 to 2022 by race and ethnicity.

### Knowledge of status

Knowledge of status refers to the estimated percentage of people with HIV who have received an HIV diagnosis.

### Knowledge of HIV status in the US, 2022\*



In 2022, an estimated 1.2 million people had HIV.

For every 100 people with HIV

87 knew their HIV status.

\* Among people aged 13 and older.  
 Source: CDC. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024;29(1).

Ending the HIV Epidemic

Overall Goal: Increase the estimated percentage of people with HIV who have received an HIV diagnosis to at least 95% by 2025 and remain at 95% by 2030.

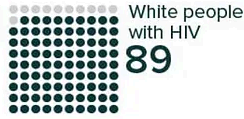
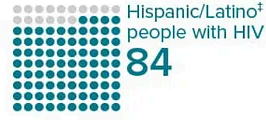
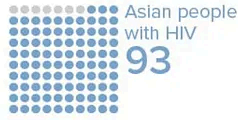


Learn more about knowledge of HIV status among people with HIV in the US.



### Knowledge of HIV status in the US by race and ethnicity, 2022\*

For every 100...



...knew their HIV status.

\* Among people aged 13 and older.  
 † Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.  
 ‡ Hispanic/Latino people can be of any race.  
 Source: CDC. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024;29(1).

Learn more about racial and ethnic differences in knowledge of HIV status.

### Behaviors associated with HIV transmission

The chances of getting or transmitting HIV varies widely depending on the type of exposure or behavior. Most commonly, people get or transmit HIV through anal or vaginal sex, or sharing needles, syringes, or other drug injection equipment—for example, cookers.

### Sexual behaviors among people with diagnosed HIV in the US by race and ethnicity, 2020\*†

Getting and keeping an undetectable viral load is the best way for people with HIV to stay healthy and protect others.



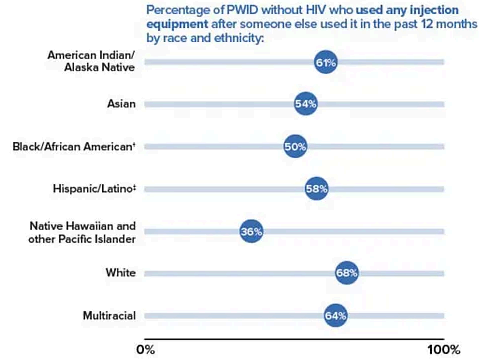
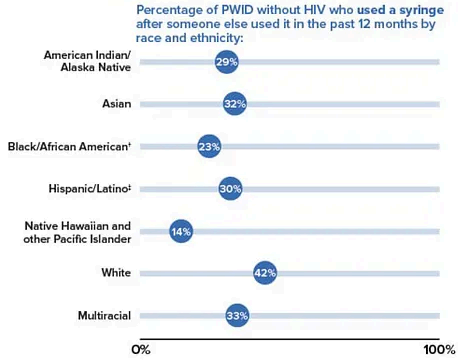
\* Among people with HIV aged 18 and older.  
 † Data not available for Asian, Multiracial, American Indian/Alaska Native, and Native Hawaiian and other Pacific Islander people.  
 ‡ Had sex while not virally suppressed with a partner whose HIV status was negative or unknown, a condom was not used, and the partner was not taking PrEP.  
 \*\* Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.  
 †† Hispanic/Latino people can be of any race.  
 Source: CDC. Behavioral and clinical characteristics of persons with diagnosed HIV infection—Medical Monitoring Project, United States 2020 cycle (June 2020–May 2021). *HIV Surveillance Special Report* 2022;29.

Sexual behaviors among people with diagnosed HIV by race and ethnicity.



# Injection behaviors among people who inject drugs (PWID) in 23 US cities by race and ethnicity, 2018\*

One-third (33%) of PWID without HIV used a syringe after someone else used it and more than half (60%) of PWID without HIV used any injection equipment after someone else used it in the past 12 months.



\* Among PWID without HIV aged 18 and older.  
<sup>†</sup> Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.  
<sup>‡</sup> Hispanic/Latino people can be of any race.

Source: CDC. HIV infection risk, prevention, and testing behaviors among persons who inject drugs—National HIV Behavioral Surveillance: injection drug use, 23 U.S. Cities, 2018. *HIV Surveillance Special Report* 2020;24.

Injection behaviors among PWID without HIV by race and ethnicity.

## PrEP coverage

CDC has paused PrEP (pre-exposure prophylaxis) coverage reporting to determine the best methodology for calculating PrEP coverage, and to update PrEP coverage estimates using updated methods and sources. Due to a formula error that affects a subset of race and ethnicity data, all race and ethnicity data have been removed from this site. CDC plans to resume PrEP coverage reporting in the next HIV Monitoring Report for all demographic groups, currently scheduled for publication in June 2025. Until updated PrEP coverage estimates are published, CDC advises against citing specific PrEP coverage data points, as historical estimates will be updated.

### Keep Reading:

[Monitoring Selected National HIV Prevention and Care Objectives by Using HIV Surveillance Data United States and 6 Territories and Freely Associated States, 2022](#)

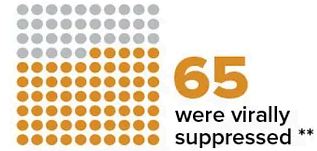
## Viral suppression and barriers to care

Viral suppression refers to the percentage of people with diagnosed HIV who have less than 200 copies of HIV per milliliter of blood.



## HIV care continuum among people with diagnosed HIV in 48 states and the District of Columbia, 2022\*

More than half of people with diagnosed HIV are virally suppressed. For every **100 people overall with diagnosed HIV:**



\* Among people aged 13 and older.

† At least 1 viral load or CD4 test.

‡ Had 2 viral load or CD4 tests at least 3 months apart in a year.

\*\* Based on most recent viral load test.

Source: CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 territories and freely associated states, 2022. *HIV Surveillance Supplemental Report 2024;29(2)*.

Ending  
the  
HIV  
Epidemic

**Overall Goal: Increase the percentage of people with diagnosed HIV who are virally suppressed to at least 95% by 2025 and remain at 95% by 2030.**



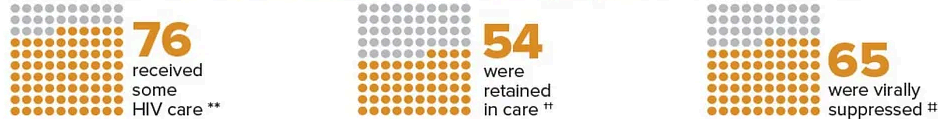
Learn more about HIV care among people with diagnosed HIV.



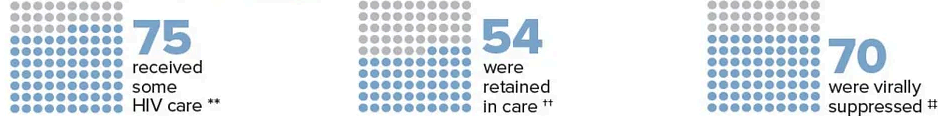


# HIV care continuum among people with diagnosed HIV in 48 states and the District of Columbia by race and ethnicity, 2022\*

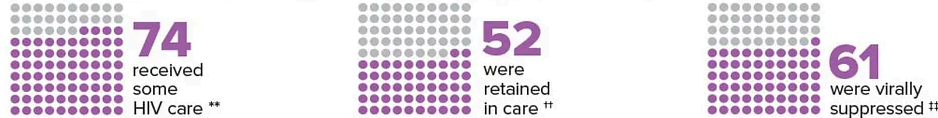
## For every 100 American Indian/Alaska Native people with diagnosed HIV:



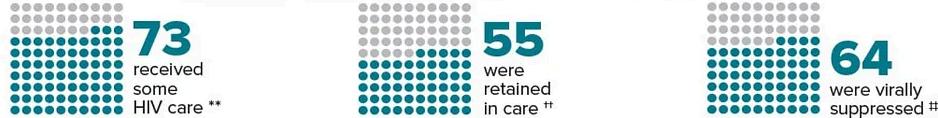
## For every 100 Asian people with diagnosed HIV:



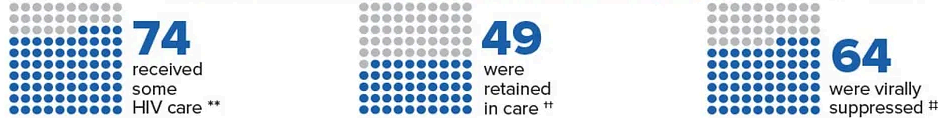
## For every 100 Black/African American† people with diagnosed HIV:



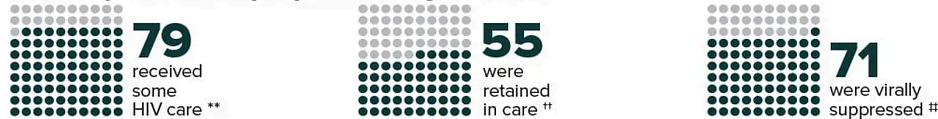
## For every 100 Hispanic/Latino‡ people with diagnosed HIV:



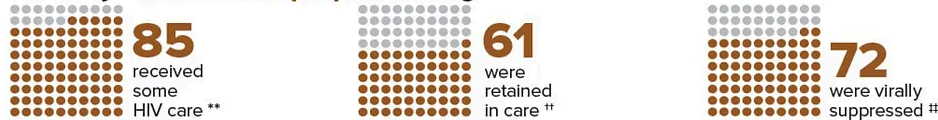
## For every 100 Native Hawaiian and other Pacific Islander people with diagnosed HIV:



## For every 100 White people with diagnosed HIV:



## For every 100 Multiracial people with diagnosed HIV:



\* Among people aged 13 and older.  
 † Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.  
 ‡ Hispanic/Latino people can be of any race.  
 \*\* At least 1 viral load or CD4 test.  
 †† Had 2 viral load or CD4 tests at least 3 months apart in a year.  
 ††† Based on most recent viral load test.

Source: CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 territories and freely associated states, 2022. *HIV Surveillance Supplemental Report 2024;29(2)*.

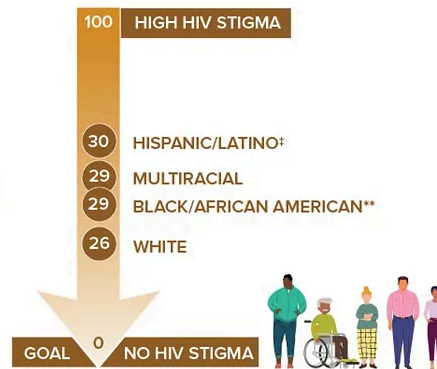
Learn more about HIV care among people with diagnosed HIV by race and ethnicity.

Many people with HIV experience challenges with achieving and maintaining viral suppression over time. Some of these challenges include missing HIV medical appointments, needing but not receiving other important health care services, or missing doses of HIV treatment.



# Median HIV stigma score among people with diagnosed HIV in the US by race and ethnicity, 2020\*†

People with HIV experience stigma. The median HIV stigma score among all people with HIV was 28.



Median HIV stigma scores are presented based on a ten-item scale ranging from 0 (no stigma) to 100 (high stigma) that measures personalized stigma during the past 12 months, current disclosure concerns, current negative self-image, and current perceived public attitudes about people with HIV.

\* Among people with HIV aged 18 and older.

† Data not available for Asian, American Indian/Alaska Native, and Native Hawaiian and other Pacific Islander people.

‡ Hispanic/Latino people can be of any race.

\*\* Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.

Source: CDC. Behavioral and clinical characteristics of persons with diagnosed HIV infection—Medical Monitoring Project, United States 2020 cycle (June 2020–May 2021). HIV Surveillance Special Report 2022;29.

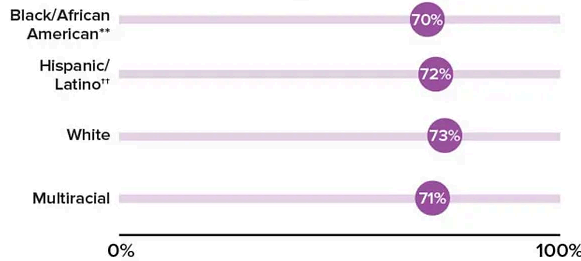
Median HIV stigma score among people with diagnosed HIV by race and ethnicity.

# Self-rated health among people with diagnosed HIV in the US by race and ethnicity, 2020\*†

Overall, 72% of people with HIV rated their health as good or better.



People with HIV who rated their overall health as good or better by race/ethnicity:



\* Among people aged 18 and older.

† Data not available for Asian, American Indian/Alaska Native, and Native Hawaiian and other Pacific Islander people.

‡ Good or better self-rated health is defined as rating one's health as good, very good, or excellent (as opposed to poor or fair) at the time of interview.

\*\* Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.

†† Hispanic/Latino people can be of any race.

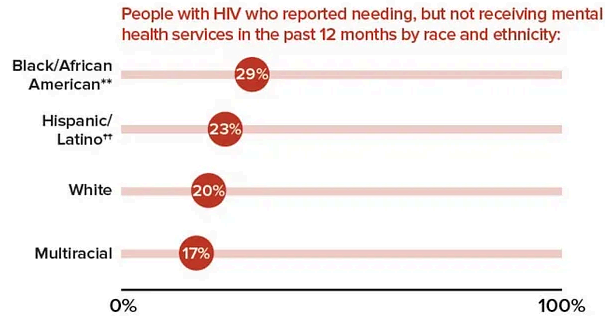
Source: CDC. Quality of life and HIV stigma—Indicators for the National HIV/AIDS Strategy, 2022–2025, CDC Medical Monitoring Project, 2017–2020 cycles. HIV Surveillance Special Report 2022;30.

Self-rated health among people with diagnosed HIV by race and ethnicity.



## Unmet need for services from a mental health professional among people with diagnosed HIV in the US by race and ethnicity, 2020<sup>\*†‡</sup>

Overall, 21% of people with HIV reported needing, but not receiving mental health services in the past 12 months.



\* Among people aged 18 and older.

† Data not available for Asian, American Indian/Alaska Native, and Native Hawaiian and other Pacific Islander people.

‡ Among people with diagnosed HIV who reported an **unmet need for mental health services** in the past 12 months.

\*\* Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America.

†† Hispanic/Latino people can be of any race.

Source: CDC. Quality of life and HIV stigma—Indicators for the National HIV/AIDS Strategy, 2022–2025, CDC Medical Monitoring Project, 2017–2020 cycles. *HIV Surveillance Special Report 2022*;30.

Unmet need for mental health services by race and ethnicity.

Food insecurity, unemployment, and unstable housing or homelessness can make it difficult for people with HIV to access HIV-related care and maintain viral suppression. 20, 19, and 17 percent of Black/African American people reported homelessness, unemployment, and food insecurity in the past 12 months, respectively. 20, 20, and 17 percent of Hispanic/Latino people reported unemployment, food insecurity, and homelessness or unstable housing in the past 12 months, respectively. 15, 13, and 12 percent of White people reported unemployment, homelessness or unstable housing, and food insecurity in the past 12 months, respectively. 24, 21, and 17 percent of multiracial people reported homelessness or unstable housing, food insecurity, and unemployment in the past 12 months, respectively.

Food insecurity, unemployment, and unstable housing by race and ethnicity.

SOURCES

CONTENT SOURCE:

National Center for HIV, Viral Hepatitis, STD, and Tuberculosis Prevention; Division of HIV Prevention

SOURCES

- CDC. [Estimated HIV incidence and prevalence in the United States, 2018–2022, HIV Surveillance Supplemental Report, 2024](#); 29(1).
- CDC. [Diagnoses, deaths, and prevalence of HIV in the United States and 6 territories and freely associated states, 2022, HIV Surveillance Report, 2024](#);35.
- CDC. [Behavioral and clinical characteristics of persons with diagnosed HIV infection—Medical Monitoring Project, United States 2020 cycle \(June 2020–May 2021\), HIV Surveillance Special Report 2022](#);29.
- CDC. [HIV infection risk, prevention, and testing behaviors among persons who inject drugs—National HIV Behavioral Surveillance: injection drug use, 23 U.S. Cities, 2018, HIV Surveillance Special Report 2020](#);24.
- CDC. [Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 territories and freely associated states, 2022, HIV Surveillance Supplemental Report 2024](#);29(2).
- CDC. [Quality of life and HIV stigma—Indicators for the National HIV/AIDS Strategy, 2022–2025, CDC Medical Monitoring Project, 2017–2020 cycles, HIV Surveillance Special Report 2022](#);30.



The Wayback Machine - <https://web.archive.org/web/20250117215525/https://www.cdc.gov/healthy-youth/lgbtq-youth/health-disparities-among-lgbtq-youth.html>



NOVEMBER 29, 2024

# Health Disparities Among LGBTQ Youth

## AT A GLANCE

- CDC's 2023 Youth Risk Behavior Survey (YRBS) data show substantial health disparities among LGBTQ+ students. These are students who identify as lesbian, gay, bisexual, transgender, queer, and questioning.
- LGBTQ+ youth are at risk for negative health outcomes. These outcomes include poor mental health, suicidal thoughts and behaviors, experiences of violence, and sexually transmitted infections (STIs).



## Overview

Many LGBTQ+ youth thrive during adolescence. But stigma, discrimination, and other factors put them at increased risk for negative health and life outcomes.

Stigma comes in many forms, such as discrimination, harassment, family disapproval, social rejection, and violence. This puts LGBTQ+ youth at increased risk for certain negative health outcomes.

CDC works with education and public health partners to address health risks and disparities among LGBTQ+ youth.

## Terminology

There are many terms used to describe sexual and gender identity.

On this site CDC's Division of Adolescent and School Health (DASH) uses LGBTQ+ to refer to youth who identify with a sexual or gender identity other than cisgender or heterosexual. When specific studies or surveillance data are discussed, a narrower acronym may be used to reflect the populations in the data.



### Terminology

The current CDC DASH terminology and definitions associated with sexual and gender identities.

## Why it is important

Compared to their cisgender and heterosexual peers, LGBTQ+ students are more likely to have:

### Been bullied at school

- 29% LGBTQ+ students





<b>Used illicit drugs</b>	<ul style="list-style-type: none"> <li>• 16% cisgender and heterosexual students</li> <li>• 15% LGBTQ+ students</li> <li>• 8% cisgender and heterosexual students</li> </ul>
<b>Seriously considered suicide</b>	<ul style="list-style-type: none"> <li>• 41% LGBTQ+ students</li> <li>• 13% cisgender and heterosexual students</li> </ul>
<b>Felt sad or hopeless</b>	<ul style="list-style-type: none"> <li>• 65% LGBTQ+ students</li> <li>• 31% cisgender and heterosexual students</li> </ul>
<b>Been forced to have sex</b>	<ul style="list-style-type: none"> <li>• 17% LGBTQ+ students</li> <li>• 6% cisgender and heterosexual students</li> </ul>
<b>Misused prescription opioids</b>	<ul style="list-style-type: none"> <li>• 18% LGBTQ+ students</li> <li>• 8% cisgender and heterosexual students</li> </ul>

## YRBS transgender report

In 2023, the national YRBS asked students about transgender identity for the first time. These YRBS data show that an average of 3% of high school students identify as transgender. Another 2% report being unsure if they are transgender.

Compared with cisgender students, transgender students and students unsure if they are transgender are:

- More likely to report violence victimization, unstable housing, and suicidal thoughts and behaviors.
- Less likely to report feeling close to others at school.

## More information

- [CDC's Youth Risk Behavior Surveillance System](#)
- [Youth Risk Behavior Survey Data Summary & Trends Report 2013–2023](#)
- *MMWR*: [Sexual Risk Behavior Differences Among Sexual Minority High School Students — United States, 2015 and 2017](#)
- *MMWR*: [Violence Victimization, Substance Use, and Suicide Risk Among Sexual Minority High School Students — United States, 2015–2017](#)
- *MMWR*: [Disparities in School Connectedness, Unstable Housing, Experiences of Violence, Mental Health, and Suicidal Thoughts and Behaviors Among Transgender and Cisgender High School Students — Youth Risk Behavior Survey, United States, 2023](#)

### SOURCES

**CONTENT SOURCE:**

Adolescent and School Health; National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)



# HIV Risk Behaviors

December 2015

The risk of getting HIV varies widely depending on the type of exposure or behavior (such as sharing needles or having sex without a condom). Some exposures to HIV carry a much higher risk of transmission than other exposures. For some exposures, while transmission is biologically possible, the risk is so low that it is not possible to put a precise number on it. But risks do add up over time. Even relatively small risks can add up over time and lead to a high lifetime risk of getting HIV. In other words, there may be a relatively small chance of acquiring HIV when engaging in a risk behavior with an infected partner only once; but, if repeated many times, the overall likelihood of becoming infected after repeated exposures is actually much higher.

The table below lists the risk of transmission per 10,000 exposures for various types of exposures.

## Estimated Per-Act Probability of Acquiring HIV from an Infected Source, by Exposure Act\*

Type of Exposure	Risk per 10,000 Exposures
<b>Parenteral</b>	
Blood Transfusion	9,250
Needle-Sharing During Injection Drug Use	63
Percutaneous (Needle-Stick)	23
<b>Sexual</b>	
Receptive Anal Intercourse	138
Insertive Anal Intercourse	11
Receptive Penile-Vaginal Intercourse	8
Insertive Penile-Vaginal Intercourse	4
Receptive Oral Intercourse	Low
Insertive Oral Intercourse	Low
<b>Other<sup>^</sup></b>	
Biting	Negligible
Spitting	Negligible
Throwing Body Fluids (Including Semen or Saliva)	Negligible
Sharing Sex Toys	Negligible

\* Factors that may increase the risk of HIV transmission include sexually transmitted diseases, acute and late-stage HIV infection, and high viral load. Factors that may decrease the risk include condom use, male circumcision, antiretroviral treatment, and pre-exposure prophylaxis. None of these factors are accounted for in the estimates presented in the table.

<sup>^</sup> HIV transmission through these exposure routes is technically possible but unlikely and not well documented.

Source:

- Patel P, Borkowf CB, Brooks JT, et al. Estimating per-act HIV transmission risk: a systematic review. *AIDS*. 2014. doi: 10.1097/QAD.0000000000000298.
- Pretty LA, Anderson GS, Sweet DJ. Human bites and the risk of human immunodeficiency virus transmission. *Am J Forensic Med Pathol* 1999;20(3):232-239.

## Principles for Selecting Estimates

Given different states of the science for the different prevention strategies reviewed, with a range of study designs (e.g., RCT, observational) and measurement methods used (e.g., self-report, blood levels of drug) in the literature, decision rules were made to be applied across strategies in an effort to select effectiveness estimates that were most closely aligned with each other and that most accurately represented effectiveness if the prevention strategy was actually used. More detailed principles are listed below, and the rationale for each specific estimate that was chosen is provided within the tables.

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention  
Division of HIV/AIDS Prevention





The choice of estimate was prioritized based on the following criteria:

- Only evidence based on peer-reviewed published reports was considered. Unpublished data, including conference abstracts, were not considered to be reliable because results may change as more data become available and data are re-analyzed or methods adjusted based on peer-review feedback. Additionally, the amount of information available for unpublished studies does not allow us to adequately assess methods and quality of data and analysis.
- Only evidence regarding HIV transmission (e.g., HIV outcomes) was considered. Data for non-HIV outcomes (e.g., pregnancy prevention, STD prevention) were considered not to be good proxies for HIV transmission because modeling or other methods that require complex assumptions would be required to equate proxies with HIV transmission rates and introduce additional uncertainty.
- For the consensus estimates, a hierarchy was established for prioritizing the type of estimate to select.
- The greatest priority was given to estimates based on “verified use” of the strategy or interventions that were based on the most objective measure available for determining “verified use” (not selecting highest or optimal use but instead selecting based on any evidence of actual use).
- If an objective measure for “verified use” was not available, then we chose the best subjective measure available (e.g., self-report) and prioritized the highest level of use reported based on subjective measure (e.g., consistent use or always using) recognizing that self-report may overestimate actual use.
- If no analysis based on actual or level of use was available, then the mITT/ITT comparison of “assigned” versus “not assigned” was selected.
- An estimate from a published meta-analysis was used if available and relevant for the strategy/risk factor in question; otherwise the most appropriate estimate from an RCT or observational study was used.

<b>Acronyms</b>			
<b>ART</b>	Anti-Retroviral Therapy	<b>MSM</b>	Men Who Have Sex with Men
<b>BTS</b>	Bangkok Tenofovir Study	<b>OLE</b>	Open-Label Extension
<b>DOT</b>	Directly Observed Therapy	<b>PrEP</b>	Pre-Exposure Prophylaxis
<b>TDF/FTC</b>	Drug combination of Tenofovir Disoproxil Fumarate and Emtricitabine	<b>PBMC</b>	Peripheral Blood Mononuclear Cells
<b>FTC</b>	Emtricitabine	<b>PWID</b>	Persons Who Inject Drugs
<b>HPTN</b>	HIV Prevention Trials Network	<b>RCT</b>	Randomized Controlled Trial
<b>FTC-TP</b>	Emtricitabine Triphosphate (active intracellular metabolite of FTC)	<b>STD</b>	Sexually Transmitted Disease
<b>iPREX</b>	Derived from the Spanish “Iniciativa Profilaxis Pre-Exposicion” meaning “PrEP initiative”	<b>TDF</b>	Tenofovir Disoproxil Fumarate
<b>ITT</b>	Intention To Treat	<b>TFV</b>	Tenofovir
<b>mITT</b>	Modified Intention-to-Treat	<b>TFV-DP</b>	Tenofovir Diphosphate (active intracellular metabolite of TFV)



The Wayback Machine - <https://web.archive.org/web/20250116061449/https://www.cdc.gov/mpox/hcp/vaccine-considerations/vaccination-overview.html>



NOVEMBER 25, 2024

# Interim Clinical Considerations for Use of Vaccine for Mpox Prevention in the United States

## KEY POINTS

- Two vaccines can be used to prevent mpox: JYNNEOS® and ACAM2000®, but only JYNNEOS has been used in the ongoing clade II outbreak.
- Healthcare providers should evaluate and counsel patients who could benefit from mpox vaccination by performing a social and sexual history.
- Boosters are not currently recommended, except for certain people who work with orthopoxviruses in research or mpox diagnostic laboratories.
- Mpox vaccine can be given as post-exposure prophylaxis.

## Vaccines

Two vaccines may be used to prevent mpox:

- JYNNEOS® vaccine is licensed to prevent smallpox and mpox and recommended by the Advisory Committee on Immunization Practices (ACIP) for certain people at risk for exposure to orthopoxvirus infections, including mpox. During the ongoing clade II mpox outbreak, JYNNEOS has been the dominant vaccine used in the U.S.
- ACAM2000® vaccine is licensed to prevent smallpox and recommended by the ACIP for certain people at risk for exposure to orthopoxvirus infections. It has not been used in the ongoing clade II mpox outbreak that started in 2022.

[JYNNEOS](#) is a third-generation vaccine based on a live, attenuated orthopoxvirus, Modified Vaccinia Ankara (MVA). MVA is a live virus that does not replicate efficiently in humans. JYNNEOS is known internationally as Imvamune® or Imvanex®, it is manufactured by Bavarian Nordic. It is fully licensed in the U.S. for subcutaneous administration in individuals 18 years of age and older. As of April 1, 2024, JYNNEOS is commercially available in the U.S.

In addition, the U.S. Food and Drug Administration (FDA) issued an [Emergency Use Authorization \(EUA\)](#) in August 2022 to allow JYNNEOS vaccine to be used:

- By intradermal injection for prevention of mpox disease in individuals 18 years of age and older determined to be at high risk for mpox, and
- By subcutaneous injection for prevention of mpox disease in individuals younger than 18 years of age determined to be at high risk for mpox.

[ACAM2000](#) is a second-generation vaccine that contains a live vaccinia virus that replicates efficiently in humans. It is manufactured by Emergent Bio Solutions and is indicated for the prevention of smallpox. It has been made available for use against mpox in the clade II outbreak under an [Expanded Access Investigational New Drug \(EA-IND\) protocol](#), which requires informed consent along with completing additional forms. Available evidence supporting the use of smallpox vaccine for mpox prevention is derived from experience with [Dryvax](#), the vaccine used during smallpox eradication. Dryvax was a first-generation smallpox vaccine manufactured by Wyeth Laboratories. Routine use of this vaccine ended in the United States in 1972, and smallpox was declared eradicated globally in 1980 by the World Health Assembly. The license for Dryvax was withdrawn in 2008 and no supplies of this vaccine remain. Although the United States has a large supply of ACAM2000, this vaccine has more side effects and contraindications than JYNNEOS.

## Recommendations for use of JYNNEOS vaccine

JYNNEOS vaccine is licensed as a series of two doses administered 28 days (4 weeks) apart. It was first made available through the U.S. Strategic National Stockpile during the start of the 2022 global mpox outbreak.

- Data collected since the 2022 outbreak have found that [JYNNEOS is effective for the prevention of mpox](#).





- Two doses are more effective than one dose.
- Even when infections have occurred after 2 vaccine doses, they have typically been milder than the infections among people who are not vaccinated.

The Advisory Committee on Immunization Practices (ACIP) recommends the 2-dose JYNNEOS series to several populations and for different indications.

- For [pre-exposure vaccination](#) of people at risk for occupational exposure to orthopoxviruses (as an alternative to ACAM2000)
- For people aged 18 years and older at risk of mpox during an mpox outbreak:
  - CDC has determined that ongoing human-to-human transmission of clade I MPXV in Central and East Africa meets the criteria to be considered an outbreak and is issuing recommendations for vaccine use among travelers at increased risk of mpox exposure who are planning to travel to [those specific countries](#).
  - Travelers to affected countries who anticipate the following activities should be offered vaccination with the 2-dose JYNNEOS series: sex with a new partner; sex at a commercial sex venue (e.g., sex club or bathhouse); sex in exchange for money, good, drugs, or other trade; or sex in association with a large public event (e.g., rave, party, or festival).
- For people aged 18 years and older with the following risks:
  - Gay, bisexual, and other men who have sex with men, transgender or nonbinary people who in the past 6 months have had **one** of the following: a new diagnosis of  $\geq 1$  sexually transmitted disease; more than one sex partner; sex at a commercial sex venue; or sex in association with a large public event in a geographic area where mpox transmission is occurring
  - Sexual partners of people with the risks described above
  - People who anticipate experiencing any of the above

Currently, CDC does not recommend routine immunization against mpox for the general public. JYNNEOS is not recommended as a routine vaccination for healthcare personnel unless sexual risk factors are present. [Recommendations by the Advisory Committee on Immunization Practices \(ACIP\)](#) are available for laboratory personnel and health care worker response teams who may be at risk for exposure to orthopoxviruses.

## Why people who recovered from mpox do not need JYNNEOS vaccine

Recovery from MPXV infection (regardless of clade) likely confers protection from either clade of mpox. It is possible for individuals who have recovered from mpox to experience a reinfection, but reinfections are very rare. Unpublished data suggest that reinfection has occurred in less than 0.001% of people in the United States who previously had mpox. In these rare instances, the second infection was generally milder than the initial infection. Because of this, people who have recovered from mpox are not recommended to receive JYNNEOS vaccine doses at this time.

## Why boosters aren't currently recommended

Two doses of JYNNEOS vaccine can prevent MPXV infection and reduce the severity of mpox symptoms in people who have been vaccinated. [Data from a multijurisdictional study](#) in the U.S. demonstrated significant JYNNEOS vaccine effectiveness against mpox:

- 75% for one dose
- 86% after two doses

In addition, [a recent study from the United Kingdom Health Security Agency](#) estimated the effectiveness of the two-dose primary series of JYNNEOS at 80% for cases diagnosed in 2023.

No vaccine is 100% effective, but there are very few reports to CDC of mpox after vaccination with two doses of JYNNEOS vaccine. [Data collected from May 2022-May 2024](#) during the clade IIb mpox outbreak in the United States show that infections after the two dose JYNNEOS vaccine series were rare. These infections:

- Were observed in <1% of people vaccinated with two doses of JYNNEOS vaccine (271 cases), which is consistent with the expected high degree of effectiveness after two doses
- Occurred at disparate time intervals after vaccination with no pattern that can be attributed to waning immunity
- Were associated with less severe infections when they occurred.

**Why CDC does not recommend booster doses for the general population vaccinated during the ongoing clade IIb mpox outbreak.**

Unpublished data from a [CDC study in the Democratic Republic of the Congo](#) that began in 2017 with 1,600 healthcare personnel receiving two doses of JYNNEOS demonstrated only one reported laboratory-confirmed infection in this region of high clade I mpox transmission. This study indicated that a booster dose five years after receiving the JYNNEOS primary series leads to a rapid and robust antibody response



irrespective of circulating antibody levels at the time of booster dose. These results suggest that immunity does not wane for at least five years; a seven-year time point is currently being evaluated.

[Serologic studies](#) have shown antibody titers decrease a few months after vaccination. However, it is not known if a specific antibody titer is required to provide protection. Further, the levels of circulating titers are not the only marker of protection. Cell-mediated immunity and innate immunity are important components of the immune response and do not correlate with level of antibody titer. Thus, the clinical significance of decreasing titers is unknown.

Additionally, the [recent United Kingdom study](#), that estimated JYNNEOS effectiveness at 80% following the 2-dose primary series of JYNNEOS looked at cases that occurred from January 1 to December 31, 2023. As most people in this study received JYNNEOS from July 2022-March 2023, these findings further support the durability of JYNNEOS protection.

Based on currently available data from the unpublished CDC study, protection after the two doses JYNNEOS vaccine series does not wane for at least five years. Thus, booster doses are not recommended for anyone in the general population who was vaccinated during the ongoing clade II mpox outbreak in the United States that began in 2022.

#### **Why does CDC recommend booster doses for certain healthcare providers and laboratorians with potential exposure to high levels of monkeypox virus?**

Booster doses have always been recommended for certain laboratory workers at risk for *orthopoxvirus* infection due to their increased occupational risk. MPXV research laboratorians and certain clinical laboratorians (i.e., those performing *orthopoxvirus* and MPXV diagnostic testing) may work with high concentrations of virus (i.e., 100-1000 times higher than concentrations encountered from an mpox lesion) and occasionally experience needlestick accidents and other unusual virus exposures. For these reasons, booster doses are recommended every two years to maintain high levels of protection.

#### **CDC recommendations on boosters may differ from those of some other countries.**

[Another country recently](#) recommended a booster dose for people vaccinated two or more years ago, given studies showing a reduction in neutralizing antibodies in the two years following a two-dose primary vaccination. Although neutralizing antibody titers are known to decrease 6 months following the two-dose primary series, there is no established correlate of protection. This also does not consider that cell-mediated immunity and innate immunity are important components of the immune response and don't correlate with antibody titer levels. As noted above, CDC studies in DRC have shown a robust antibody response following booster doses up to five years following the primary vaccine series. This suggests that there would be a robust immune response from exposure to MPXV in a person vaccinated within the last five years. Therefore, at this time CDC does not recommend booster doses for those vaccinated during the ongoing clade IIb mpox outbreak, which began in 2022.

#### **CDC vaccination recommendations for immunocompromised individuals may differ from those recommended by other countries.**

[Another country has recommended two doses plus a third dose](#) at least 28 days after the second dose for immunocompromised individuals. There are data to support additional doses for immunocompromised individuals for some vaccine-preventable diseases. However, there are limited data to support this practice for JYNNEOS vaccine given the newness of its wide use. JYNNEOS has been [studied as a 2-dose, double dose, and 3-dose series](#) in patients with HIV, including those with low (<200 cells/mm<sup>3</sup>) CD4 counts. There was no significant difference in seroconversion rates with the addition of the third dose or by doubling the dose, with similar seroconversion rates across groups. Additional doses were discussed in the [June 2023 meeting of the U.S. Advisory Committee on Immunization Practices \(ACIP\)](#), and the ACIP did not believe the available data supported an additional dose in people who are immunocompromised. Therefore, CDC does not recommend additional doses of vaccine for that population.

CDC will continue to monitor JYNNEOS vaccination data from these and other studies.

## Evaluating patients

Evaluating and counseling patients who could benefit from mpox vaccination is critical. To do so, healthcare professionals should perform a comprehensive social and [sexual history](#).

Attention should be paid to sexual behaviors (e.g. frequency and types of sex) and partners (e.g. number and frequency), due to the populations that have been disproportionately affected by the ongoing clade II mpox outbreak.

Such evaluation should have health equity principles as a foundation and allow individuals to self-attest vaccine eligibility (i.e., providing mpox vaccination without requiring individuals to specify which criterion they meet).

## Post-exposure prophylaxis (PEP)

Mpox vaccine can be given as post-exposure prophylaxis (PEP) both to people with known or presumed exposure to *Monkeypox virus* (MPXV). Mpox vaccine can also be given to people with certain risk factors and recent experiences that might make them more likely to have been exposed to mpox. As PEP, vaccine should be given as soon as possible, ideally within four days of exposure; administration 4 through 14 days after exposure may still provide some protection against mpox.

After 14 days, clinicians should consider the benefits of receiving vaccine on a case-by-case basis; benefits might still outweigh risks when administering vaccine in some clinical situations (e.g., for a severely immunosuppressed person with a recent sex partner confirmed to have mpox).



Any person with ongoing risk of mpox exposure should be offered vaccination, even if previously exposed, and regardless of time since exposure, as long as they have not yet developed signs or symptoms of mpox.

Vaccination given after the onset of signs or symptoms of mpox, after a diagnosis of mpox, or after recovery from mpox is not expected to provide benefit. At this time, naturally acquired mpox is believed to confer immune protection, although duration of immunity is unknown.

## Vaccination schedule

JYNNEOS vaccine is licensed as a series of two doses administered 28 days (4 weeks) apart.

The standard regimen involves a subcutaneous (Subcut) route of administration with an injection volume of 0.5mL. The standard regimen is the FDA-approved dosing regimen. Since August 9, 2022, the standard regimen has also been authorized for people aged <18 years under an Emergency Use Authorization.

An alternative regimen may be used for people age  $\geq 18$  years under an Emergency Use Authorization which was issued on August 9, 2022, to make more doses available at a time when vaccine supply was limited. The authorized alternative regimen involves an intradermal (ID) route of administration with an injection volume of 0.1mL. Results from a clinical study showed that the lower intradermal dose was immunologically non-inferior to the standard subcutaneous dose [Frey SE et al., *Vaccine*, 2015; 33(39):5225-5234]. Recently published studies [show similar vaccine effectiveness](#) for vaccines administered subcutaneously or intradermally.

Either the standard (0.5mL subcutaneous) or the alternative (0.1mL ID) regimen may be used. There is currently adequate supply of JYNNEOS vaccine. Therefore, clinicians can preferentially administer JYNNEOS via the subcutaneous route.

## Vaccination schedule and dosing regimens for JYNNEOS vaccine

### Vaccination Schedule and Dosing Regimens for JYNNEOS Vaccine

JYNNEOS vaccine regimen	Route of administration	Injection volume	Recommended number of doses	Recommended interval between 1st and 2nd dose
<b>Standard regimen</b>				
People ages 18 years and older	Subcut	0.5 mL	2	28 days (4 weeks)
People age less than 18 years <sup>1</sup>	Subcut	0.5 mL	2	28 days (4 weeks)
<b>Alternative regimen</b>				
People ages 18 years and older	ID	0.1 mL	2	28 days (4 weeks)

<sup>1</sup>For patients less than 6 months of age, Vaccinia Immune Globulin Intravenous (VIGIV) should be considered in lieu of JYNNEOS vaccine. Clinicians should first contact their jurisdictional health department ([Jurisdictional Contacts](#)). Jurisdictional health departments can facilitate consultation with CDC and access to VIGIV.

## Duration of immunity

Peak immunity is expected to be reached 14 days after the second dose of JYNNEOS vaccine. Administration of additional vaccine doses (more than 2 doses) is currently not recommended for most people. For people at risk for occupational exposure to orthopoxviruses (e.g., certain research laboratorians [AI](#)), booster doses are recommended at 2-10 years depending on the type of work being performed. See [ACIP Recommendations: Orthopoxviruses \(Smallpox and Mpox\) Vaccines](#).

## Dosing intervals

**Recommended interval:** The second dose of JYNNEOS vaccine should be given 28 days (4 weeks) after the first dose. Based on available [clinical study data \[13 MB, 93 pages\]](#) [PDF](#), the second dose may be given up to 7 days later than the minimum interval of 28 days (i.e., up to 35 days after the first dose).

**Maximum interval:** If the second dose is not administered during the recommended interval, it should be administered as soon as possible based on ACIP's [general best practices](#). There is no need to restart or add doses to the series if there is an extended interval between doses.

**Minimum interval:** The vaccine manufacturer advises against giving the second dose before the minimum interval of 28 days. However, based on ACIP's [general best practices](#), a dose may be administered up to 4 days before the minimum interval of 28 days (known as the "grace period," which would be a minimum of 24 days after the first dose). Vaccine doses should not be administered before the minimum interval (i.e., 28 days). Nevertheless, if the second dose is inadvertently administered before the minimum interval, the dose may not need to be repeated. Please refer to "[Table 7. Vaccine Administration Errors and Deviations](#)."



## Administration

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### Subcutaneous (Subcut) administration

Subcutaneous administration involves injecting the vaccine into the fatty tissue, typically over the triceps in people aged 12 months and older, or in the anterolateral thigh for people younger than age 12 months. CDC offers a short training [video about subcutaneous vaccine administration](#) and [job aid \[PDF – 1 page, 200KB\]](#) [\[PDF\]](#).

### Intradermal (ID) administration

[Learn about intradermal administration of JYNNEOS](#)

## Interchangeability of dosing regimens

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In eligible individuals, the dosing regimens are interchangeable. For example, a person aged 18 years or older who received one JYNNEOS vaccine dose intradermally may receive a second dose subcutaneously at the recommended interval (i.e., 28 days) to complete the vaccination series. There is currently adequate supply of JYNNEOS vaccine. Therefore, clinicians can preferentially administer JYNNEOS via the subcutaneous route. Doses that were previously administered intradermally are equally effective as doses administered subcutaneously and do not need to be repeated.

## Coadministration of JYNNEOS vaccine with other vaccines

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Currently, there are no data on administering JYNNEOS vaccine at the same time as other vaccines. Because JYNNEOS is based on a live, attenuated non-replicating orthopoxvirus, JYNNEOS typically may be administered [without regard to timing](#) of most other vaccines. This includes simultaneous administration of JYNNEOS and other vaccines, including influenza vaccine, on the same day, but at different anatomic sites if possible.

There is no required minimum interval between receiving any COVID-19 vaccine (i.e., Moderna, Novavax, or Pfizer-BioNTech) and JYNNEOS vaccine, regardless of which vaccine is administered first. People, particularly adolescent or young adult males, who are recommended to receive both vaccines might consider waiting 4 weeks between vaccines. This is because of the observed risk for myocarditis and pericarditis after receipt of ACAM2000 orthopoxvirus vaccine and COVID-19 vaccines, and the hypothetical risk for myocarditis and pericarditis after JYNNEOS vaccine. However, if a patient is at increased risk for mpox or severe disease due to COVID-19 disease, administration of JYNNEOS and COVID-19 vaccines should not be delayed.

## JYNNEOS vaccine administration considerations for specific populations

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### Most adults age ≥18 years who are eligible for vaccination

There is currently adequate supply of JYNNEOS vaccine. Therefore, clinicians can preferentially administer JYNNEOS via the subcutaneous route.

### For patients <18 years of age

Adolescents at risk for mpox may receive the JYNNEOS vaccine before an exposure. JYNNEOS is available for use as post exposure prophylaxis (PEP) for children and adolescents under 18 years determined to be at high risk for mpox under the [Emergency Use Authorization \(EUA\)](#) [\[EUA\]](#) issued by the US Food and Drug Administration. Vaccination with JYNNEOS for children and adolescents aged <18 years should be administered via subcutaneous injection.

For patients <6 months of age, Vaccinia Immune Globulin Intravenous (VIGIV) should be considered in lieu of JYNNEOS vaccine. Clinicians should first contact their jurisdictional health department ([Jurisdictional Contacts](#) [\[C\]](#)). Jurisdictional health departments can facilitate consultation with CDC and access to VIGIV.

### People who are pregnant or breastfeeding

Available human data on JYNNEOS administered to people who are pregnant are insufficient to determine if there are any vaccine-associated risks in pregnancy. Studies of JYNNEOS vaccine in animals have shown no evidence of harm to a developing fetus.

While there are no data for people who are breastfeeding, animal data do not show evidence of reproductive harm; breastfeeding is not a contraindication to receiving JYNNEOS. It is not known whether JYNNEOS is excreted in human milk. Data are not available to assess the impact of JYNNEOS on milk production or the safety of JYNNEOS in breastfed infants. However, because JYNNEOS vaccine is replication-deficient, it likely does not present a risk of transmission to breastfed infants.

JYNNEOS can be offered to people who are pregnant or breastfeeding who are otherwise eligible. The risks and benefits of JYNNEOS should be discussed with the patient using shared clinical decision-making.

### People with atopic dermatitis, eczema, or other exfoliative skin conditions





Studies evaluating JYNNEOS in people with atopic dermatitis have demonstrated immunogenicity in eliciting a neutralizing antibody response. No concerning safety signals were revealed.

### People of any age who have a history of developing keloid scars

Administer 0.5mL subcutaneously.

People with congenital or acquired immune deficiency disorders, including those taking immunosuppressive medications and people living with HIV (regardless of immune status)

Administer as indicated based on age and history of keloids.

### People with prior history of smallpox vaccination

Previous smallpox vaccination probably does provide some protection, but it may not necessarily be lifelong. During the 2003 mpox outbreak and during the ongoing clade II outbreak, several people who were infected with mpox had previously been vaccinated against smallpox decades prior. In response to the ongoing clade II outbreak, vaccines and other medical measures should be given to eligible people who were previously vaccinated against smallpox.

### People with prior history of mpox

In the context of the ongoing clade II mpox outbreak the following are exceptions to the recommended two-dose series:

- A person who is diagnosed with mpox after their first dose of JYNNEOS is not recommended to receive the second dose at this time, because mpox likely confers additional immune protection.
- A person who would be eligible for vaccination but has been diagnosed with mpox is not recommended to be vaccinated at this time, because mpox infection likely confers immune protection.

### For healthcare personnel or laboratorians

Vaccination is not routinely recommended specifically for healthcare personnel due to occupational risk in the workplace. Except in rare circumstances, healthcare personnel who do not have any of the sexual risk factors described above should not receive JYNNEOS. Clinical laboratory personnel in hospitals (e.g., who handle blood, urine, and other bodily fluids from patients) are not recommended to receive vaccination at this time. As more data become available, recommendations may change.

Certain research and diagnostic laboratorians who work with orthopoxviruses in a laboratory setting are recommended to receive [vaccination and booster doses](#). It is not unusual for vaccine recommendations to differ for these laboratorians compared to others at risk for exposure to infections. Mpox research laboratorians work with research grade (i.e. high concentration) virus and occasionally experience needlestick accidents and other unusual exposures.

Clinical laboratorians who test for mpox may similarly be at an increased risk. For these reasons, they are recommended to maintain high antibody levels via frequent booster doses.

## Patient counseling

### Pre-vaccination counseling

Recipients should be informed of the risks and benefits of JYNNEOS prior to vaccination. Healthcare providers should determine the medical history of recipients to appropriately decide whether intradermal administration would be appropriate if it is being considered. Recipients should be counseled about possible side effects from vaccination and be provided with a [JYNNEOS vaccine information statement \(VIS\)](#) [PDF](#) or [FDA JYNNEOS EUA Fact Sheet](#) [PDF](#), as applicable.

Side effects after vaccination can vary from person to person. Before vaccination, each recipient should be counselled on the possibility of experiencing the following side effects:

#### Local Side Effects

- Erythema
- Pain
- Edema
- Pruritis
- Hyperpigmentation
- Induration



## Systemic Side Effects

- Fatigue
- Headache
- Myalgias
- Nausea
- Chills
- Fever

Local side effects may be more severe with intradermal administration compared with subcutaneous administration. Side effects may appear soon after vaccination, and some local reactions, such as hyperpigmentation, may persist for several weeks or months. One [study](#) noted mild injection site skin discoloration lasting greater than six months for some individuals receiving intradermal administration. Recipients should be counseled that such long-lasting local reactions are expected and may be part of the normal immune response to vaccination. Patients should also be counseled that these side effects are usually self-limiting and will generally resolve over time. While the presence of local or systemic side effects may indicate the development of a robust immune response, the absence of such reactions should *not* be construed as not mounting adequate immune protection, as the severity and duration of side effects can vary from person to person.

## Post-vaccination counseling

Local and systemic reactions experienced after vaccination may be managed conservatively. Evidence does not support the use of antipyretics before or at the time of vaccination. However, they can be used for the treatment of fever and local discomfort that might occur following vaccination. Topical emollients, cold compresses, and oral antihistamines may be used to treat local side effects as needed. Do NOT apply topical corticosteroids or antihistamines to local reactions. Weeping or open wounds should be covered by a sterile gauze or bandage.

People who are vaccinated should continue to take steps to [protect themselves from infection](#) by avoiding close, skin-to-skin contact, including intimate contact, with someone who has mpox.

## Contraindications and precautions

JYNNEOS is contraindicated in patients with severe allergic reaction (e.g., anaphylaxis) after a previous dose, or to a vaccine component.

JYNNEOS vaccine contains small amounts of gentamicin and ciprofloxacin and is produced using chicken embryo fibroblast cells. See [package insert \[PDF – 11 pages, 301 KB\]](#) for a full list of vaccine ingredients.

Vaccine providers should be familiar with identifying immediate-type allergic reactions, including anaphylaxis, and be competent in treating these events at the time of vaccine administration. Providers should also have a plan in place to contact emergency medical services immediately in the event of a severe acute vaccine reaction. ([ACIP Adverse Reactions Guidelines for Immunization](#)).

People presenting with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill with or without fever should usually wait until they have recovered to their baseline state of health before routine vaccination; waiting might not be appropriate if vaccination is used for post exposure prophylaxis.

CDC's Clinical Immunization Safety Assessment (CISA) Project is available to provide consultation to U.S. healthcare providers and health departments about complex mpox vaccine safety questions for their patients. See [Clinical Immunization Safety Assessment \(CISA\) Project](#).

## Reporting of adverse events

The [Vaccine Adverse Event Reporting System \(VAERS\)](#) is the nation's early warning system that monitors the safety of vaccines after they are authorized or licensed for use by the U.S. Food and Drug Administration. VAERS accepts and analyzes reports of adverse events following vaccination. The following requirements are stipulated as part of the HHS mpox vaccine provider agreement:

- The vaccination provider must report all serious adverse events following administration of JYNNEOS or ACAM2000 vaccine and vaccine administration errors to VAERS.
- Per the [Emergency Use Authorization](#) (JYNNEOS), the [Expanded Access Investigational New Drug protocol](#) (ACAM2000), and the [HHS Mpox Vaccination Program Provider Agreement](#), the vaccination provider is responsible for mandatory reporting of the following listed events after JYNNEOS or ACAM2000 vaccination to VAERS:
  - Vaccine administration errors, whether or not associated with an adverse event
  - Serious [adverse events](#) (irrespective of attribution to vaccination)
  - Cases of cardiac events, including myocarditis and pericarditis
  - Cases of thromboembolic events and neurovascular events



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- Providers are encouraged to also report to VAERS any additional clinically significant adverse events following vaccination, even if they are not sure if vaccination caused the event.

On August 9, 2022, FDA issued an EUA for JYNNEOS mpox vaccine. It authorizes the vaccine to be administered in one of two ways:

1. Intradermally, between the layers of the skin, preferably on the inner aspect of the forearm, or
2. Subcutaneously, under the skin, in the upper arm above the elbow.

These are considered routes of vaccination. When submitting a VAERS report, ensure that you document the **Route in Section 17** of the VAERS form, by choosing "intradermal" or "subcutaneous" from the selection menu.

For information on how to submit a report to VAERS, visit [VAERS—Report an Adverse Event \(hhs.gov\)](https://www.vaers.hhs.gov/) or call 1-800-822-7967.

## Resources

- [JYNNEOS Package Insert](#)
- [JYNNEOS Vaccine Information Statement \(VIS\)](#) PDF
- [JYNNEOS Vaccine Information Statement \(VIS\) in Spanish](#) PDF
- [Vaccine Storage and Handling Toolkit](#)
- [JYNNEOS Standing Orders \(Standard Regimen\)](#) PDF
- [FDA EUA Fact Sheet for Providers](#)
- [FDA EUA Fact Sheet for Patients and Caregivers](#)
- [FDA EUA Fact Sheet for Patients and Caregivers in Other Languages](#)

### SOURCES

#### CONTENT SOURCE:

National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)

### FOOTNOTES

- A. Research laboratory personnel are those who directly handle cultures or animals contaminated or infected with monkeypox virus (MPXV). Vaccination is not routinely recommended for clinical laboratory personnel who perform routine chemistry, hematology, and urinalysis testing, including for patients with suspected or confirmed MPXV infection, healthcare personnel who care for patients with mpox or administer ACAM2000. Recommended infection prevention and control practices are effective in minimizing transmission. Vaccination can be offered based on site- and activity- specific biosafety risk assessments (e.g., identification of laboratory procedures with a high likelihood of generating aerosols or inadequate PPE availability).
- B. Serious adverse events are defined as: death; a life-threatening adverse event; inpatient hospitalization or prolongation of existing hospitalization; a persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions; a congenital anomaly/birth defect; an important medical event that based on appropriate medical judgment may jeopardize the individual and may require medical or surgical intervention to prevent one of the outcomes listed above.

### SOURCES

- Public health authorities determine whether there is an mpox outbreak; a single case may be considered an mpox outbreak at the discretion of public health authorities. Other circumstances in which a public health response may be indicated include ongoing risk of introduction of mpox into a community due to disease activity in another geographic area. The mpox outbreak that started in 2022 is still ongoing.
- This recommendation is on the CDC's [Adult Immunization Schedule](#) (for people 19 years of age and older) and [Child & Adolescent Immunization Schedule](#) (for people 18 years of age).

<https://web.archive.org/web/20250116061449/https://www.cdc.gov/mpox/hcp/vaccine-considerations/vaccination-overview.html>



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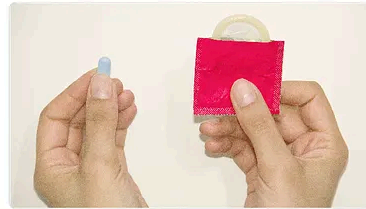


SEPTEMBER 26, 2024

## Preventing HIV

### KEY POINTS

- Many tools are available to help prevent HIV.
- You can choose not having sex, activities with lower chances of HIV transmission, never sharing needles, and using condoms.
- You can also use HIV prevention medicines such as PrEP or PEP.
- If you have HIV, you can prevent transmitting HIV to others.



## Overview

Most people who get HIV get it through anal or vaginal sex, or sharing needles, syringes, or other drug injection equipment (for example, cookers). However, there are powerful tools that can help prevent getting or transmitting HIV.

## Prevention steps and strategies

### Choose sexual activities with little to no chance of transmitting HIV

- There is little to no chance of getting HIV through oral sex.
- You can't get HIV from sexual activities that don't involve contact with semen, vaginal fluid, or blood.

**Keep Reading:**  
[How HIV Spreads](#)

### Use condoms the right way every time you have sex

- Most condoms are highly effective in preventing HIV and other STIs, like gonorrhea and chlamydia.
- Condoms are less effective at preventing STIs that can be transmitted through sores or cuts, like genital herpes and syphilis.
- You can buy condoms online, in-store, or get them for free at your local clinic.

**Keep Reading:**  
[Preventing HIV with Condoms](#)

<https://web.archive.org/web/20250117004834/https://www.cdc.gov/hiv/prevention/index.html>





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## Take PrEP

- PrEP (pre-exposure prophylaxis) is medicine people take to prevent getting HIV.
- PrEP is highly effective for preventing HIV from sex and injection drug use when taken as prescribed.

**Keep Reading:**[Preventing HIV with PrEP](#)

## Don't have sex

- Not having sex (being abstinent) is a 100% effective way to make sure you won't get HIV through sex.
- You can be abstinent at different times in your life for different reasons.
- Not having sex also prevents other STIs and pregnancy.

## Get tested and treated for other STIs

- If you have another STI, you are more likely to get HIV.
- Many people with an STI may not know they have one because they don't have symptoms.

**Keep Reading:**[About Sexually Transmitted Infections \(STIs\)](#)

## If you inject drugs, never share needles, syringes, or other drug injection equipment

- Use new, clean syringes and injection equipment every time you inject.
- You can get new needles and syringes and safely dispose of used at syringe services programs (SSPs). [Find an SSP](#) near you.
- Some pharmacies sell needles without a prescription.
- If you do share syringes, use bleach to clean them. A disinfected syringe is not as good as a new, sterile syringe, but it can greatly reduce your chances for HIV and viral hepatitis.

## Don't inject drugs

- Not injecting drugs is a 100% effective way to make sure you won't get HIV through injection drug use.
- Talk with a counselor, doctor, or other health care provider about treatment for substance use disorder, including medication-assisted treatment.
- Find a treatment center near you at [FindTreatment.gov](#) or [SAMHSA.gov](#).

## Ask about PEP if you think you may have recently been exposed to HIV

- PEP (post-exposure prophylaxis) is medicine people take to prevent HIV after a possible exposure.
- If you think you may have been exposed to HIV in the last 72 hours, talk to your health care provider, an emergency room doctor, or an urgent care provider right away about PEP.

**Keep Reading:**[Preventing HIV with PEP](#)

## If you or your partner has HIV, get and stay in treatment

- This is the most important thing people with HIV can do to stay healthy.
- People with HIV who take HIV medicine and get and keep an undetectable viral load will not transmit HIV to their sex partners.

**Keep Reading:**[Treating HIV](#)

<https://web.archive.org/web/20250117004834/https://www.cdc.gov/hiv/prevention/index.html>



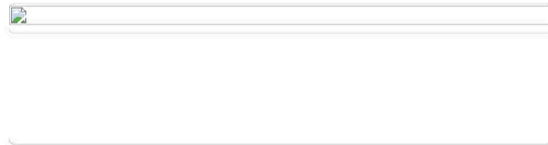
If you are pregnant, get tested for HIV as soon as possible to prevent transmitting HIV to your baby

- If your test result is negative and you or your partner engage in behaviors that increase your chances of getting or transmitting HIV, get tested again in your third trimester.
- If your test result is positive, you can reduce the chances of transmitting HIV to your baby by taking HIV medicine as prescribed throughout pregnancy, labor, and delivery, getting and keeping a suppressed viral load, and giving HIV preventive medicine to your baby after giving birth.
- If you have a partner with HIV and are considering getting pregnant, talk to your health care provider about [PrEP](#).

Talk to your health care provider about male circumcision

Male circumcision may decrease the chance of HIV transmission in some situations, but less than some other prevention options. Talk to your health care provider about the benefits and drawbacks of male circumcision.

### Resources



Fact Sheet: Safer Sex [PDF](#)

The fact sheet will help you talk openly about HIV, and decide which HIV prevention strategy is right...

APR. 24, 2024

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### Paying for PrEP

Covering the Cost of PrEP Care

**Insured**

Medication - Lab Test - Clinic Visits

- Bill Insurance - Bill Insurance - Bill Insurance

Apply for copay assistance from Gilead or PAF

Family Size	100% Federal Poverty Level Household Annual Income must be less than:
1	\$58,850
2	\$79,050
3	\$100,450
4	\$121,250
5	\$142,250
6	\$162,850

**Not Insured But may be eligible for Medicaid or ACA Plans**

Apply

Household Income 500% FPL or less

**Not eligible for Medicaid or ACA plans OR Insurance denies claim**

Household Income more than 500% FPL

**ABBREVIATIONS:**  
 ACA - Affordable Care Act  
 FPL - Federal Poverty Level  
 CHC - Community Health Center  
 PAF - Patient Advocate Foundation

**DEFINITIONS:**  
 PrEP Daily pill to prevent HIV infection (pre-exposure prophylaxis)  
 Co-pay: Fixed amount to be paid by insured person per prescription  
 Co-insurance: Fixed percentage of prescription cost to be paid by insured person  
 Deductible: Amount of health care cost (including prescription) that must be paid by the insured person before insurance begins to cover costs

**PREP MEDICATION ASSISTANCE PROGRAM:**  
 (Gilead Sciences)  
 People eligible for this program must:  
 • Be 18 years of age or older  
 • Be without insurance or have payment declined by their insurance carrier  
 • Be resident in the US (social security number not required)  
 • Have family income ≤ 500% of the federal poverty level

Once enrolled in this program:  
 • Medication will be sent to the provider, a pharmacy, or the patient's home  
 • Patients can get their medication at no charge from their provider or pharmacy for as long as they are eligible  
 • Eligibility must be confirmed every 6 months by the provider

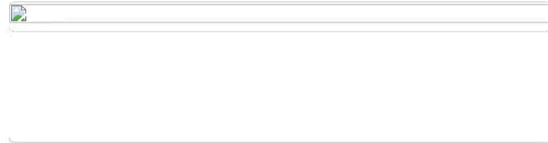
**REOURCES:**  
 To apply for health insurance on the federal exchange: [www.healthcare.gov](http://www.healthcare.gov)  
 Community Health Center Locator: [findahealthcenter.hhs.gov](http://findahealthcenter.hhs.gov)  
 NASTAD on-line tool to assist with paying for PrEP or PrEP/testing  
 Gilead Sciences: Medication Assistance Program and Co-Pay Assistance - [www.truvada.com/how-to-get-truvada-for-prep/truvada-cost](http://www.truvada.com/how-to-get-truvada-for-prep/truvada-cost)  
 Patient Advocate (PAF) Foundation: Co-Pay Relief Program - [www.copays.org/diseases/hiv-aids-and-prevention](http://www.copays.org/diseases/hiv-aids-and-prevention)

Flyer: Paying for PrEP [PDF](#)

This flyer provides information about resources available to help pay for PrEP.

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Brochure: PrEP 101 [PDF](#)

This brochure provides information on how to start PrEP and pay for it.

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## SAFER SEX 101 FOR HIV

Some types of sex are riskier than others for getting or transmitting HIV. Here's how to reduce your chance of getting or transmitting HIV through sex.

### UNDERSTAND THE RISKS

- **Anal sex** is when the penis is put inside the anus, and it is the **riskiest type of sex** for getting or transmitting HIV. Being the **bottom** or having your partner's penis inside you is **much riskier** than being the **top** or putting your penis inside your partner.
- **Vaginal sex** is when the penis is put inside the vagina. **Either partner can get HIV during vaginal sex**, though it isn't as risky as anal sex.
- **Oral sex** is when the mouth touches the penis, vagina, or anus. There is **little to no risk** of getting or transmitting HIV from oral sex.
- You can't get or transmit HIV from sexual activities that don't involve contact with body fluids (e.g., touching).



### Safer Sex 101 for HIV [PDF](#)

This info sheet provides information on how to reduce the risk of getting HIV from sex.

MAR. 17, 2024

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## HIV TREATMENT IS HIV PREVENTION

IF YOU HAVE HIV, YOU SHOULD START HIV TREATMENT AS SOON AS POSSIBLE TO


- Improve your health, and
- Prevent transmitting HIV to other people.

HIV treatment can reduce the amount of HIV in the blood (**viral load**), HIV treatment can make the viral load so low that a test can't detect it (**undetectable viral load**).

Having an undetectable viral load (or staying virally suppressed\*) is the best thing you can do to stay healthy. If your viral load stays undetectable, you will not transmit HIV to your sex partner. This is also known as **Undetectable = Untransmittable**.

IF YOU WANT TO GET AND KEEP AN UNDETECTABLE VIRAL LOAD, YOU SHOULD

- **Take your HIV treatment as prescribed.** Most people can get the virus under control within 6 months of starting treatment. Missing doses of your treatment can increase your viral load and the risk of transmitting HIV. Talk to your health care provider



### HIV Treatment is HIV Prevention [PDF](#)

This info sheet shows how HIV treatment can prevent HIV transmission.

MAR. 17, 2024

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## HIV AND INJECTING DRUGS 101

Sharing needles, syringes, or other drug injection equipment—for example, cookers—increases your chances of getting HIV.

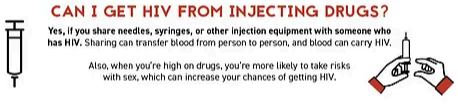
### CAN I GET HIV FROM INJECTING DRUGS?

Yes, if you share needles, syringes, or other injection equipment with someone who has HIV. Sharing can transfer blood from person to person, and blood can carry HIV.

Also, when you're high on drugs, you're more likely to take risks with sex, which can increase your chances of getting HIV.

### HOW CAN I PREVENT GETTING HIV?

The best way is to stop injecting drugs. To find a treatment program to help you quit, visit [findtreatment.samhsa.gov](http://findtreatment.samhsa.gov) or call 1-800-662-HELP (4357).



### HIV and Injecting Drugs 101 [PDF](#)

This info sheet provides information on how to lower the risk of getting HIV from injection drug use...

MAR. 17, 2024

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## HOW TO CLEAN YOUR SYRINGES

- If possible, always use a **new, never used syringe\*** and **never share** drug injection equipment—for example, cookers.
- A disinfected syringe is not as good as a new, clean syringe, but it can **greatly reduce your risk** for HIV and viral hepatitis.
- Wash your hands before cleaning your syringes.
- You will need three clean containers (cup, bowl, jar, etc.), clean water, and bleach.

To clean a syringe correctly, you must do **all nine steps** below:

### A. RINSE WITH CLEAN WATER

1. In first container, fill up syringe (rig) with clean water.
2. Tap or shake syringe for 30 seconds.
3. Discard water from syringe.



### How to Clean Your Syringes [PDF](#)

This info sheet provides steps on how to clean your syringes.

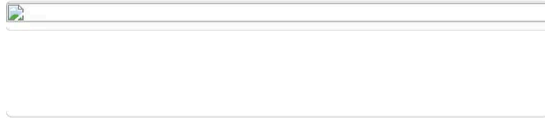
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## HOW TO CLEAN YOUR SYRINGES POCKET GUIDE

This pocket guide shows how to clean a syringe correctly.



### How to Clean Your Syringes Pocket Guide [PDF](#)

This pocket guide shows how to clean a syringe correctly.

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## CONDOMS POCKET GUIDE

This pocket guide shows you how to use a condom correctly.



### Condoms Pocket Guide [PDF](#)

This pocket guide shows you how to use a condom correctly.

MAR. 17, 2024

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# PrEP 101

PrEP can help you stay free from HIV.

### WHAT IS PREP?

- PrEP (pre-exposure prophylaxis) can be pills or shots that reduce your chances of getting HIV.
- PrEP can stop HIV from taking hold and spreading throughout your body.
- Only condoms protect against other STDs like syphilis and gonorrhea.

### IS PREP RIGHT FOR YOU?

PrEP can help protect you if you DON'T have HIV and ANY of the following apply to you.

<p><b>You have had anal or vaginal sex in the past 6 months and</b></p> <ul style="list-style-type: none"> <li>have a sexual partner with HIV (especially if the partner has HIV)</li> </ul>	<p><b>You inject drugs and</b></p> <ul style="list-style-type: none"> <li>have an injection partner with HIV, or</li> <li>share needles, syringes, or</li> </ul>	<p><b>You have been prescribed PEP (post-exposure prophylaxis) and</b></p> <ul style="list-style-type: none"> <li>report continued risk behavior, or</li> </ul>
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PrEP 101 [PDF](#)

This info sheet provides information about taking PrEP to prevent HIV.

APR. 23, 2024

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PrEP

If you don't have HIV but are at risk, PrEP can help you stay free from HIV.

For basic information on HIV, including PrEP, visit [www.cdc.gov/hiv](http://www.cdc.gov/hiv).

Scan to learn more!

PrEP Pocket Guide [PDF](#)

This pocket guide provides information about pre-exposure prophylaxis (PrEP).

MAR. 17, 2024

[Download PDF](#)

Your Journey to HIV PrEP Info Sheet

Your Journey to HIV PrEP Info Sheet [PDF](#)

This info sheet discusses the benefits of PrEP and how to access the Ready, Set, PrEP program.

AUG. 1, 2024

[Download PDF](#)

LET'S STOP HIV TOGETHER

Now's the Time to Find Out About PrEP and PEP

Pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) can help you stay HIV negative, even if your partner might have HIV. This brochure includes useful tips on what to ask your health care provider about PrEP and PEP.

Learn more at: [cdc.gov/StopHIVTogether](http://cdc.gov/StopHIVTogether).

Now's the Time to Find Out About PrEP and PEP (Brochure) [PDF](#)

This brochure for patients describes how PrEP and PEP can help protect them against HIV, even if the...

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# PEP 101

If you may have been exposed to HIV\* in the last 72 hours, talk to your health care provider, an emergency room doctor, or an urgent care provider about PEP right away.  
 PEP can reduce your chance of getting HIV after a possible exposure.

### WHAT IS PEP?

- PEP, or post-exposure prophylaxis, means taking medicine to prevent HIV after a possible exposure.
- PEP must be started within 72 hours (3 days) after you may have been exposed to HIV. The sooner you start PEP, the better. Every hour counts!
- If your health care provider prescribes PEP, you'll need to take it daily for 28 days.
- PEP is effective in preventing HIV, but not 100%. Always use condoms with sex partners and use safe injection practices.



PEP 101 [PDF](#)

This info sheet provides basic information about taking PEP to prevent HIV after a possible exposure...

MAR. 17, 2024

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SOURCES

CONTENT SOURCE:

National Center for HIV, Viral Hepatitis, STD, and Tuberculosis Prevention; Division of HIV Prevention



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Janette Tobin 18m

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Amy Cutting 16m

WTF?!?! They should not be purging data and resources. Those were researched and websites created with US Citizens tax dollars and should be publicly accessible to us as that's valuable information for women. Ugh. I hate the timeline we're on watching the country go backwards fascism take over.

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