Immunizations for Persons with HIV: Recent Updates

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Disclaimer

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Disclosures

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New Immunization Recommendations for Persons with HIV

Pneumococcal

Hepatitis B Virus (HBV)

Herpes zoster (shingles)
Pneumococcal Immunization
Pneumococcal Vaccines

Polysaccharide Vaccine

PPSV23 (Pneumovax 23)

Conjugate Vaccines

PCV13 (Prevnar-13)
PCV15 (Vaxneuvance)
PCV20 (Prevnar-20)
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<tr>
<th>PCV13 Serotypes</th>
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Pneumococcal Immunization Recommendations for Pneumococcal Vaccine-Naïve Adults with HIV
Pneumococcal Vaccine-Naïve Adults

PCV-15 (Vaxneuvance)  ≥ 8 weeks  PPSV23 (Pneumovax)

or

PCV20 (Prevnar 20)

Administer PCV (15 or 20) to PWH, on ART with CD4 count >50 cells/mm³.

What do you do if you have already started the pneumococcal vaccine series with PCV13?
Prior Receipt of PCV13 without Completing Vaccine Schedule*

PCV13 ≥ 8 weeks → PPSV23 ≥ 5 years → PPSV23 ≥ 5 years → PPSV23

≥ Age 65

Complete Schedule

Hepatitis B Immunization
Hepatitis B Virus Surface Proteins

Illustration: Peter E. Harrison, MPH and David H. Spach, MD
**Recombinant Hepatitis B Vaccines**

<table>
<thead>
<tr>
<th>Old (Single Antigen)</th>
<th>Newer (Single Antigen)</th>
<th>New (Triple Antigen)</th>
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<tr>
<td>Aluminum Adjuvant</td>
<td>CpG1018 Adjuvant</td>
<td>Aluminum Adjuvant</td>
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<tr>
<td>rHBsAg (<em>Recombivax-HB</em>)</td>
<td>HBsAg-CpG1018 (<em>Heplisav-B</em>)</td>
<td>S Antigen pre-S1 pre-S2</td>
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<tr>
<td>rHBsAg (<em>Engerix-B</em>)</td>
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<td>3-AgHB (<em>PreHevbro</em>)</td>
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Illustration: David H. Spach, MD
New Hepatitis B Vaccine Recommendations in Persons with HIV
Adult Opportunistic Infections Guidelines

Hepatitis B Immunization In Persons with HIV

### Engerix-B
- **Dose:** 40 μg HBsAg/dose
- **Regimen:**
  - Month 0: Double dose
  - Month 1: Double dose
  - Month 2: Double dose
  - Month 3: Standard dose
  - Month 4: Standard dose
  - Month 5: Standard dose
  - Month 6: Standard dose

### Recombivax-HB
- **Dose:** 20 μg HBsAg/dose
- **Regimen:**
  - Month 0: Double dose
  - Month 1: Double dose
  - Month 2: Double dose
  - Month 3: Standard dose

### Heplisav-B
- **Dose:** 20 μg HBsAg/dose
- **Regimen:**
  - Month 0: Standard dose
  - Month 1: Standard dose

**Legend:**
- **DD** = Double dose
- **SD** = Standard dose

**Note:**

SD = standard dose; DD = double dose

Hepatitis B Immunization In Persons with HIV

- **Twinrix**
  - Combined hepatitis A and B vaccine, with same components used in Havrix (HAV vaccine) and Engerix-B (Hepatitis B vaccine)

**Month**

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</table>
| **Engerix-B**
  (40 μg HBsAg/dose) | 1 | 2 |  | 3 | All |
| DD    |  |  |  |  |  |  |  |
| **Recombivax-HB**
  (20 μg HBsAg/dose) | 1 | 2 |  | 3 | All |
| SD    |  |  |  |  |  |  |  |
| **Heplisav-B**
  (20 μg HBsAg/dose) | 1 | 2 |  |  | CIII |
| SD    |  |  |  |  |  |  |  |
| **Twinrix**
  (720 ELISA units HAV/dose)
  (20 μg HBsAg/dose) | 1 | 2 |  | 3 | All |

**SD** = standard dose; **DD** = double dose

Should you defer starting the series in persons with HIV and a low CD4 cell count?
Although vaccine response is better in patients with CD4 >350 cells/mm$^3$, vaccination should not be deferred in patients with a lower CD4 count because some people with CD4 <350 cells/mm$^3$ do respond to vaccination (AII).
How to Manage HBV Vaccine Non-Responders?
Recommendations for Hepatitis B Vaccine Non-Responders In Persons with HIV

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Engerix-B (40 μg HBsAg/dose)
Recombivax-HB (20 μg HBsAg/dose)
Heplisav-B (20 μg HBsAg/dose)

DD = double dose; SD = standard dose

Consider
BIII

Varicella Zoster Immunization
Zoster Vaccines

Zoster Vaccine Live (ZVL): Zostavax

Attenuated VZV

Varicella-Zoster Virus

Glycoprotein E

AS01\textsubscript{B} Adjuvant

Recombinant Zoster Vaccine (RZV): Shingrex
Zoster Vaccines

OLD

Attenuated VZV

No longer available in US

Zoster Vaccine Live (ZVL)

NEW

VZV

Glycoprotein E

AS01 B Adjuvant

Recombinant Zoster Vaccine (RZV)

Illustration: David H. Spach, MD
Recombinant Zoster Vaccine (RZV) in Persons with HIV

Give 2 Doses to Persons with HIV Age ≥18 Years (AIII)

There are no CD4 restrictions for giving RZV but consider delaying vaccination until the patient is virologically suppressed on ART (CIII) or until the CD4 count >200 cells/mm$^3$ to ensure a robust vaccine response (CIII).
Should you give zoster vaccine if a person has shingles?
“Do not give RZV (Shingrix) during an acute episode of herpes zoster” (AIII).

Should you give the RZV vaccine if a person previously received ZVL?
“Those who previously received ZVL should be revaccinated with RZV.”

Immunizations for Persons with HIV: Key Updates

- New simplified pneumococcal vaccine schedule (1 and done or 1 +1)
- New HBV vaccine recommendation (double-dose, 3 doses)
- Administer zoster vaccine for all adults ≥18 years of age
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