Guideline Update: Statins for Primary Prevention of CVD for PWH

Brian R. Wood, MD
Associate Editor, National HIV Curriculum
Associate Professor of Medicine
Division of Allergy and Infectious Diseases
University of Washington

Last Updated: March 14, 2024
No conflicts of interest or relationships to disclose.
### Persons with HIV and Low-Intermediate (<20%) ASCVD* Risk Estimate

#### Age 40-75 Years
- ASCVD 10-Year Risk Score 5-20% *(AI)*
- ASCVD 10-Year Risk Score <5% *(CI)*

**Moderate-Intensity Statin**
- Pitavastatin: 4 mg once daily *(AI)*
- Atorvastatin: 20 mg once daily *(AI)*
- Rosuvastatin: 10 mg once daily *(AI)*

#### Age <40 Years

**Insufficient Data for Recommendation**

*Abbreviations: ASCVD = atherosclerotic cardiovascular disease*
## Number Needed to Treat Over 5 Years (NNT<sub>5</sub>) Based on REPRIEVE

<table>
<thead>
<tr>
<th>10-Year ASCVD* Risk Score</th>
<th>N</th>
<th>NNT&lt;sub&gt;5&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;10%</td>
<td>563</td>
<td>35</td>
</tr>
<tr>
<td>5 to 10%</td>
<td>2,995</td>
<td>53</td>
</tr>
<tr>
<td>2.5 to &lt;5.0%</td>
<td>2,065</td>
<td>149</td>
</tr>
<tr>
<td>0 to &lt;2.5%</td>
<td>2,156</td>
<td>199</td>
</tr>
<tr>
<td>Overall</td>
<td>7,769</td>
<td>106</td>
</tr>
</tbody>
</table>

*Abbreviations: ASCVD = atherosclerotic cardiovascular disease
Persons Age 40-75 with Estimated ASCVD 10-Year Risk Score <5%

Consider HIV-related factors that may increase ASCVD risk:

- Prolonged duration of HIV infection, delayed antiretroviral therapy initiation
- Long periods of HIV viremia and/or treatment nonadherence
- Low current or nadir CD4 T lymphocyte cell count (e.g., <350 cells/mm$^3$)
- Exposure to older antiretroviral drugs associated with cardiometabolic toxicity
- Coinfection with hepatitis C

Source: HHS Guidelines for Use of Antiretroviral Agents in Adults and Adolescents with HIV. February 27, 2024.
### Recommendations for General Population (Including People with HIV): Indications for High-Intensity Statin

<table>
<thead>
<tr>
<th>Indication</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 40 to 75 with: ≥20% 10-year ASCVD risk</td>
<td>• Initiate high-intensity statin</td>
</tr>
<tr>
<td>Age 20 to 75 with: LDL ≥190 mg/dL</td>
<td>• Initiate high-intensity statin at maximum dose tolerated</td>
</tr>
<tr>
<td>Age 40 to 75 with: diabetes mellitus</td>
<td>• Initiate at least moderate-intensity statin; perform further risk assessment to consider using high-intensity statin</td>
</tr>
</tbody>
</table>
## Statin Therapy for People with HIV

### High-, Moderate-, and Low-Intensity Statin Therapy

<table>
<thead>
<tr>
<th>High-Intensity</th>
<th>Moderate-Intensity</th>
<th>Low-Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowers LDL–C by ≥50%</td>
<td>Lowers LDL–C by 30-49%</td>
<td>Lowers LDL–C by &lt;30%</td>
</tr>
</tbody>
</table>

- **High-Intensity**
  - Atorvastatin 40-80 mg QD
  - Rosuvastatin 20-40 mg QD

- **Moderate-Intensity**
  - Pitavastatin 4 mg QD
  - Atorvastatin 20 mg QD
  - Rosuvastatin 10 mg QD
  - Simvastatin 20-40 mg QD
  - Pravastatin 40-80 mg QD
  - Lovastatin 40-80 mg QD
  - Fluvastatin XL 80 mg QD
  - Fluvastatin 40 mg BID

- **Low-Intensity**
  - Simvastatin 10 mg QD
  - Pravastatin 10-20 mg QD
  - Lovastatin 20 mg QD
  - Fluvastatin 20-40 mg QD

### Source
HHS Guidelines for Use of Antiretroviral Agents in Adults and Adolescents with HIV. February 27, 2024.
# HHS Antiretroviral Therapy Guidelines: February 27, 2024

## Statin Therapy for People with HIV

**Source:** HHS Guidelines for Use of Antiretroviral Agents in Adults and Adolescents with HIV. February 27, 2024.

## Statin-ARV Drug-Drug Interactions

<table>
<thead>
<tr>
<th>Recommended Statins</th>
<th>ARV Interaction Cautions &amp; Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitavastatin</td>
<td>• No data with EVG/c, ATV/c, DRV/c, or FTR; use standard dose and monitor</td>
</tr>
</tbody>
</table>
| Atorvastatin        | • Do not exceed 20 mg daily with EVG/c, DRV/c, or DRV/r  
                      • Avoid with ATV/c  
                      • Monitor for adverse effects with ATV, ATV/r, FTR  
                      • EFV and ETR may decrease concentrations |
| Rosuvastatin        | • Monitor for adverse effects with EVG/c, DRV/r, FTR  
                      • Do not exceed 20 mg per day with DRV/c  
                      • Do not exceed 10 mg per day with ATV, ATV/r, ATV/c |

**Abbreviations:** EVG/c = elvitegravir/cobicistat, ATV/c = atazanavir/cobicistat, DRV/c = darunavir/cobicistat, darunavir/r = darunavir with ritonavir, ATV/r = atazanavir with ritonavir, FTR = fostemsavir, EFV = efavirenz, ETR = etravirine, FTR = fostemsavir

---

Source: HHS Guidelines for Use of Antiretroviral Agents in Adults and Adolescents with HIV. February 27, 2024.
• Cardiovascular risk estimator tools:

  – ACC ASCVD Risk Estimator Plus:  

  – AHA PREVENT™:  
Summary

• Consider statins for primary CVD prevention! Conversation about statins and CVD risk should be routine

• Strong recommendation for at least moderate intensity statin for PWH age 40 to 75 with 10-year risk estimates 5 to 20%

• Age 40 to 75 and risk <5%: higher NNT, so consider HIV history and consider non-HIV-related factors, lifetime risk, personal preference
The production of this **National HIV Curriculum** Mini-Lecture was supported by Grant U1OHA32104 from the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS). Its contents are solely the responsibility of University of Washington IDEA Program and do not necessarily represent the official views of HRSA or HHS.