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Table 4: Available Medications for Treatment of HBV Infection in Adults With HIV	
Medication	Clinical Comment
Tenofovir disoproxil fumarate (TDF)	<ul style="list-style-type: none"> A prodrug of the NRTI tenofovir active against HIV and HBV, including 3TC-resistant HBV A preferred agent for chronic HBV treatment because of its high virologic efficacy and low risk of HBV resistance [Terrault, et al. 2018] Potential association with renal impairment and loss of bone density [McComsey, et al. 2011; Gupta 2008] Initiate only in patients with CrCl \geq50 mL/min.
Tenofovir alafenamide (TAF)	<ul style="list-style-type: none"> A prodrug of the NRTI tenofovir active against HIV and HBV that achieves higher intracellular concentrations in peripheral blood mononuclear cells and hepatocytes than TDF [Agarwal, et al. 2018] Improved biomarkers for renal and bone safety compared with TDF while maintaining high rates of HIV and HBV viral suppression [Lampertico, et al. 2020; Gallant, et al. 2016; Callebaut, et al. 2015] In HIV/HBV coinfection, switching from a TDF- to a TAF-containing regimen demonstrated similarly high levels of HBV virologic control [Gallant, et al. 2016]. Initiate only in patients with CrCl \geq30 mL/min.
Lamivudine (3TC)	<ul style="list-style-type: none"> An HBV reverse transcriptase inhibitor and HIV NRTI active against HIV and HBV Has a low genetic barrier to HIV and HBV resistance and should not be used as the sole anti-HBV drug in an ART regimen. Studies found the rate of HBV resistance reached 90% after 4 years of 3TC monotherapy [Benhamou, et al. 1999]. Avoid 3TC monotherapy.
Emtricitabine (FTC)	<ul style="list-style-type: none"> An NRTI similar to 3TC and active against HIV and HBV 3TC-resistant isolates are also cross-resistant to FTC [Gallant 2006]. Do not use as the sole anti-HBV drug in an ART regimen.
Entecavir (ETV)	<ul style="list-style-type: none"> An NRTI active against HIV and HBV May select for 3TC- and FTC-resistant HIV ETV monotherapy for HBV is not recommended in patients with HIV unless combined with a fully active ART regimen to treat HIV.
Interferon (IFN)	<ul style="list-style-type: none"> IFN alfa-2a or -2b or PEG-IFN alfa-2a is used as HBV treatment in patients with HBV mono-infection. Contraindicated in patients with decompensated liver disease (Child-Turcotte-Pugh class B or C) PEG-IFN alfa-2a monotherapy for up to 48 weeks may be considered for HBV treatment in patients with HIV/HBV coinfection if concurrent ART active against HIV and HBV is not possible. PEG-IFN alfa-2a is not associated with HBV drug resistance [DHHS 2024].
<p>Abbreviations: ART, antiretroviral therapy; CrCl, creatinine clearance; HBV, hepatitis B virus; NRTI, nucleoside/nucleotide reverse transcriptase inhibitor; PEG-IFN, pegylated interferon.</p>	

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