

# FIRST TIME GENERIC APPROVAL

Brand Name	Truvada <sup>®</sup>
Generic Name	emtricitabine-tenofovir
Drug Manufacturer	Teva Pharmaceuticals USA

# **New Drug Approval**

### TYPE OF CLINICAL UPDATE

First Time Generic Approval

FDA APPROVAL DATE

June 8, 2017

LAUNCH DATE

October 2, 2020

**REVIEW DESIGNATION** 

Standard

TYPE OF REVIEW

Abbreviated New Drug Application (ANDA): 090894

**DISPENSING RESTRICTIONS** 

**Open Distribution** 

## **Overview**

### INDICATION FOR USE

It is a two-drug combination of emtricitabine (FTC) and tenofovir disoproxil fumarate (TDF), both HIV-1 nucleoside analog reverse transcriptase inhibitors, and is indicated:

• In combination with other antiretroviral agents for the treatment of HIV-1 infection in adults and pediatric patients weighing at least 17 kg.

### HIV-1 PrEP:

• Indicated in at-risk adults and adolescents weighing at least 35 kg for pre-exposure prophylaxis (PrEP) to reduce the risk of sexually acquired HIV-1 infection. Individuals must have a negative HIV-1 test immediately prior to initiating Truvada® for HIV-1 PrEP.

### MECHANISMS OF ACTION

**Emtricitabine:** A synthetic nucleoside analog of cytidine, is phosphorylated by cellular enzymes to form emtricitabine 5'-triphosphate (FTC-TP), which inhibits the activity of the HIV-1 reverse transcriptase (RT) by competing with the natural substrate deoxycytidine 5'-triphosphate and by being incorporated into nascent viral DNA which results in chain termination. FTC-TP is a weak inhibitor of mammalian DNA polymerases  $\alpha$ ,  $\beta$ ,  $\epsilon$  and mitochondrial DNA polymerase  $\gamma$ .

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**Tenofovir Disoproxil Fumarate:** An acyclic nucleoside phosphonate diester analog of adenosine monophosphate. TDF requires initial diester hydrolysis for conversion to tenofovir and subsequent phosphorylations by cellular enzymes to form tenofovir diphosphate (TFV-DP), which inhibits the activity of HIV-1 RT by competing with the natural substrate deoxyadenosine 5'- triphosphate and, after incorporation into DNA, by DNA chain termination. TFV-DP is a weak inhibitor of mammalian DNA polymerases  $\alpha$ ,  $\beta$ , and mitochondrial DNA polymerase  $\gamma$ .

#### DOSE FORM AND STRENGTH

Tablets: 200 mg/300 mg of emtricitabine and tenofovir disoproxil fumarate, respectively.

### **DOSE & ADMINISTRATION**

Testing: Prior to or when initiating emtricitabine and tenofovir disoproxil fumarate tablets test for hepatitis B virus infection. Prior to initiation and during use of emtricitabine and tenofovir disoproxil fumarate tablets, on a clinically appropriate schedule, assess serum creatinine, estimated creatinine clearance, urine glucose, and urine protein in all individuals. In individuals with chronic kidney disease, also assess serum phosphorus.

HIV-1 Screening: Screen all individuals for HIV-1 infection immediately prior to initiating emtricitabine and tenofovir disoproxil fumarate tablets for HIV-1 PrEP and at least once every 3 months while taking emtricitabine and tenofovir disoproxil fumarate tablets, and upon diagnosis of any other sexually transmitted infections (STIs).

#### Treatment of HIV-1 Infection:

- Recommended dosage in adults and pediatric patients weighing at least 35 kg: One emtricitabine and tenofovir disoproxil fumarate tablet (containing 200 mg of FTC and 300 mg of TDF) once daily taken orally with or without food.
- Recommended dosage in pediatric patients weighing at least 17 kg: One emtricitabine and tenofovir disoproxil fumarate low-strength tablet (100 mg/150 mg, 133 mg/ 200 mg, or 167 mg/250 mg based on body weight) once daily taken orally with or without food.
- Recommended dosage in renally impaired HIV-1 infected adult patients:
  - o Creatinine clearance (CrCl) 30–49 mL/min: 1 tablet every 48 hours.
  - CrCl below 30 mL/min or hemodialysis: emtricitabine and tenofovir disoproxil fumarate tablets are not recommended.

## HIV-1 Pre-Exposure Prophylaxis (PrEP):

- Recommended dosage in HIV-1 uninfected adults and adolescents weighing at least 35 kg: One
  emtricitabine and tenofovir disoproxil fumarate tablet (containing 200 mg of FTC and 300 mg of TDF) once
  daily taken orally with or without food.
- Recommended dosage in renally impaired HIV-uninfected individuals: emtricitabine and tenofovir disoproxil fumarate tablets are not recommended in HIV-uninfected individuals if CrCl is below 60 mL/min.

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