### Details

**Generic Name**  
Stavudine (d4T)

**Trade Name**  
Zerit®

**Class**  
Nucleoside Reverse Transcriptase Inhibitor

**Molecular Weight**  
224.2

**Structure**

![Structure of Stavudine](image)

### Summary of Key Pharmacokinetic Parameters

*Stavudine is phosphorylated by cellular kinases to the active stavudine triphosphate.*

**Linearity/non-linearity**  
Cmax and AUC increased dose-proportionally in the dose ranges, 0.033-4.0 mg/kg (oral) and 0.0625-0.75 mg/kg (IV).

**Plasma half life**  
1.3-2.3 h

**Cmax**  
536 ± 146 ng/ml (40 mg twice daily)

**Cmin**  
9 ± 8 ng/ml (40 mg twice daily)

**AUC**  
1284 ± 227 ng/ml.hr (40 mg twice daily)

**Bioavailability**  
86 ± 18%

**Absorption**  
For optimal absorption, stavudine should be taken on an empty stomach (i.e. at least 1 hour prior to meals) but, if this is not possible, it may be taken with a light meal.

**Protein Binding**  
Negligible

**Volume of Distribution**  
46 ± 21 L

**CSF:Plasma ratio**  
0.39 ± 0.06

**Semen:Plasma ratio**  
0.46-5.9 [1]

**Renal Clearance**  
35-40%

**Renal Impairment**  
Clearance of stavudine decreases as creatinine clearance decreases; the manufacturers recommend that dosage is adjusted in patients with reduced renal function.

**Hepatic Impairment**  
Stavudine pharmacokinetics in patients with hepatic impairment were similar to those in patients with normal hepatic function.
Stavudine PK Fact Sheet

Metabolism and Distribution

Metabolised by

Not elucidated in humans

Inducer of

N/A

Inhibitor of

Does NOT inhibit the major cytochrome P450 isoforms CYP1A2, CYP2C9, CYP2C19, CYP2D6, and CYP3A4.

Transported by

Unknown

References

Unless otherwise stated (see below), information is from:
Zerit® Summary of Product Characteristics, Bristol-Myers Squibb Pharmaceuticals Ltd.
Zerit® US Prescribing Information, Bristol-Myers Squibb.