Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection

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### Table 15k. Antiretroviral-Therapy-Associated Adverse Effects and Management Recommendations—Peripheral Nervous System Toxicity  
(Last updated May 22, 2018; last reviewed May 22, 2018)

<table>
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<th>Adverse Effects</th>
<th>Associated ARVs</th>
<th>Onset/Clinical Manifestations</th>
<th>Estimated Frequency*</th>
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</table>
| ARV Toxic Neuropathy[^a] | d4T, ddl | Onset:  
- Weeks to months  
Presentation:  
- Decreased sensation  
- Aching, burning, painful numbness  
- Hyperalgesia  
- Allodynia  
- Decreased or absent ankle reflexes  
Distribution:  
- Bilateral soles of feet, ascending to legs and fingertips | Children:  
- Around 1% overall  
- 10% to 25% in children taking d4T  
Adults:  
- Up to 50% in adults taking d4T | Pre-existing neuropathy  
- Elevated triglyceride levels  
- Poor nutrition  
- More advanced HIV disease  
- Concomitant use of other neurotoxic agents (e.g., INH)  
- Some mitochondrial DNA haplogroups may have increased risk. | Do not use d4T, ddl, or IDV. Co-administration of ddl and d4T is contraindicated (no exceptions).  
Monitor for symptoms and signs of peripheral neuropathy. | Investigate potential causes, including non-ARV medications and nutritional deficiencies.  
Discontinue offending agent.  
Topical capsaicin 8% may be helpful.  
Consider referral to a neurologist.  
Data are insufficient to allow the Panel to recommend use of any of the following modalities: tricyclic antidepressants, gabapentin, gregabalin, mexiletine, lamotrigine, and acupuncture or other complementary approaches. |

[^a]: Peripheral neuropathy may be underreported in children because symptoms are difficult to evaluate in young children.

[^b]: HIV infection itself may cause a distal sensory neuropathy that is phenotypically identical to ARV toxic neuropathy.

**Key to Acronyms:**  
ARV = antiretroviral; d4T = stavudine; ddl = didanosine; IDV = indinavir; INH = isoniazid; PI = protease inhibitor; the Panel = The Panel on Antiretroviral Therapy and Medical Management of Children Living with HIV

### References


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