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# Penciclovir

National Cancer Institute

## Source

National Cancer Institute. *Penciclovir*. NCI Thesaurus. Code C66337.

A synthetic acyclic guanine derivative with antiviral activity, mainly used to treat infections from herpes simplex virus (HSV) types 1 and 2. In HSV infected cells, penciclovir is phosphorylated by viral thymidine kinase and subsequently converted by cellular kinases into the active metabolite, penciclovir triphosphate, which competitively inhibits viral HSV polymerase by blocking deoxyguanosine triphosphate substrate binding. As a result, herpes viral DNA synthesis and replication are selectively inhibited.