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# Amantadine

National Cancer Institute

## Source

National Cancer Institute. *Amantadine*. NCI Thesaurus. Code C61632.

A synthetic tricyclic amine with antiviral, antiparkinsonian, and antihyperalgesic activities. Amantadine appears to exert its antiviral effect against the influenza A virus by interfering with the function of the transmembrane domain of the viral M2 protein, thereby preventing the release of infectious viral nucleic acids into host cells. Furthermore, this agent prevents virus assembly during virus replication. Amantadine exerts its antiparkinsonian effects by stimulating the release of dopamine from striatal dopaminergic nerve terminals and inhibiting its pre-synaptic reuptake. This agent may also exert some anticholinergic effect through inhibition of N-methyl-D-aspartic acid (NMDA) receptor-mediated stimulation of acetylcholine, resulting in antihyperalgesia.