Amantadine Encyclopedia Article

Amantadine

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Amantadine is a medication (Symmetrel) that is believed to be an indirect DOPAMINE agonist; this means that it releases the neurotransmitter dopamine from nerve terminals in the brain. Since some of the symptoms of CO-CAINE withdrawal and cocaine dependence are thought to be related to abnormalities in the dopa-mine systems of the brain, and these are thought to contribute to relapse, amantadine has been examined as a treatment possibility.

Afterchronic cocaine use, many patients' dopa-mine systems eitherfail to release sufficient dopa-mine orare insensitive to the dopamine that is released. This relative dopamine deficit is believed to be responsible for the dysphoria of cocaine withdrawal. It was hoped that amantadine would relieve their dysphoria and reduce relapse back to cocaine abuse by increasing the release of dopa-mine in the brains of cocaine-dependent patients. Amantadine has been effective in reducing depressive symptoms in patients with neurological disorders such as Parkinson's disease, which is due to the death of dopamine-producing cells in the brain; however, no solid evidence exists that it is helpful in preventing continued cocaine use or relapse to cocaine use afterdetoxification.

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