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Reserpine

National Cancer Institute

Source

National Cancer Institute. *Reserpine*. NCI Thesaurus. Code C803.

An alkaloid, derived from the roots of Rauwolfia serpentine and vomitoria, and an adrenergic uptake inhibitor with antihypertensive effects. Reserpine is lipid soluble and can penetrate blood-brain barrier. This agent binds and inhibits catecholamine pump on the storage vesicles in central and peripheral adrenergic neurons, thereby inhibiting the uptake of norepinephrine, dopamine serotonin into presynaptic storage vesicles. This results in catecholamines and serotonin lingering in the cytoplasm where they are destroyed by intraneuronal monoamine oxidase, thereby causing the depletion of catecholamine and serotonin stores in central and peripheral nerve terminals. Depletion results in a lack of active transmitter discharge from nerve endings upon nerve depolarization, and consequently leads to a decreased heart rate and decreased arterial blood pressure as well as sedative effects.