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Drugs and Their Actions

CATECHOLAMINE METABOLISM AND L-DOPA Free and conjugated epinephrine and norepinephrine were relatively unaffected after 3 months of oral administration of L-dopa to 14 patients with Parkinson's disease, although urinary excretion of their most abundant metabolite, vanillylmandelic acid, was moderately increased. Large oral doses of L-dopa are needed to saturate intestinal dopa-decarboxylase to enable small amounts to reach target areas in the brain. Low levels of the drug associated with high levels of acidic biogenic amine metabolites in plasma indicated extensive catabolism of dopa in the intestine and other organs. Clinical improvement was related to CSF levels of the metabolite homovanillic acid, which was not detectable in the CSF of two patients who failed to respond. (*Hinterberger, H., and Andrews, C. J.: Catecholamine Metabolism during Oral Administration of Levodopa, Arch. Neurol.* 26: 245-252, 1972.)