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P 'alkaloid' 'quinoline' apomorphine 'psychosedative' 'imidazole' pimozide 'chlorpromazine' 'haloperidol' 'phenothiazine' thioridazine trifluoperazine 'sedative' di'benzodiazepine' clozapine 'amphetamine' 'LSD' etc. influence on 'N-metab.' 'dopamine' 'acetylcholine' etc. conc. in 'brain' mid-limbic system corpus-striatum rat etc. review 89 ref. /XXII/ /XXVI/ /XXXII/
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Arushanyan E B /USSR/
The Mesolimbic System of the Brain and its Participation in the Action of Psychotropic Substances.(Literature Review).(Russ.).

The mid-limbic system (MLS) of the brain and its role in the action of psychotropic substances are reviewed.

The MLS is a dopaminergic system starting in the midbrain and ending in the limbic structures of the forebrain. It mediates the action of psychotropic substances. Excitation of dopamine receptors with apomorphine or piribedil (ET 495) markedly decreases the rate of synthesis of dopamine. Chlorpromazine promotes the release of acetylcholine from the corpus striatum. The effects of neuroleptics and psychostimulants are reviewed. Haloperidol causes an increase of homovanillic acid in the MLS. Thioridazine and clozapine augment the homovanillic acid content in the rat corpus striatum. Baclofen (Lioresal) decreases dopamine turnover in the MLS nuclei. Amphetamine stimulates the release of dopamine by terminals in the MLS nuclei. The locomotor activating effect of amphetamine is abolished if trifluoperazine is injected into the MLS nuclei. The psychostimulant caffeine increases the sensitivity of striatal dopamine receptors to this mediator. The MLS also plays a role in the effects of psychotomimetic agents. In rats with 6-hydroxydopamine-induced destruction of MLS nuclei, enhancing dopamine receptor sensitivity, lysergide increases spontaneous activity; this effect is abolished by pimozide (blocker of dopaminergic transmission). Bromolysergide is not a hallucinogen.

89 Ref.

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LSD /BOL

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