shuttle box, mating and pregnancy in stressed and control does are recorded in the Figure. An unexpected finding was the increase ($P<0.005$) in the weight of the adrenals during pregnancy of the stressed does ($75 \pm$S.E. 3·3 mg) over the adrenals of the controls ($58 \pm 3{\cdot}4$ mg) when the plasma corticosterone levels were closely comparable. These results are consistent with those reported by Ader & Belfer (1962), and support the conclusion that prenatal experiences are capable of influencing subsequent behaviour.

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Methamphetamine-protryptiline interaction in rotating rats.

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It has been suggested by Anden (1966) that the function of the dopamine-containing fibres which innervate the neostriatum of the rat can be studied by the production of unilateral lesions of the nigro-neostriatal dopamine pathway. After such a lesion the rat's behaviour is not grossly abnormal. Certain drug treatments will however induce a clear-cut turning behaviour in this preparation. The rat will walk round in a small circle in a direction determined by the side on which the lesion has been made. It has been proposed (Anden, Dahlström, Fuxe & Larsson, 1966) that this turning behaviour can be used as an index of drug-induced alterations of dopamine release from the pathway on the non-lesioned side.

Turning after the administration of amphetamine has been previously observed (Anden, Rubenson, Fuxe & Hökfelt, 1967; Ungerstedt, 1969). We have made a quantitative investigation of this phenomenon using N-methylamphetamine hydrochloride. The number of turns per minute has been plotted as a function of time after methylamphetamine administration in groups of rats with lesions in the region of the substantia nigra. Doses of methylamphetamine (1 and 5 mg/kg intraperitoneally) provoke turning behaviour with a time course of approximately 3 hr. This time course can, however, be extended by the prior administration of protryptiline hydrochloride (10 or 25 mg/kg intraperitoneally), a drug which by itself does not produce turning behaviour. A similar effect can be observed after desipramine administration.

Our results suggest that the time course of action of drugs acting on the systems involved in this behaviour can be relatively easily studied with this technique. Interactions between drugs can be quantitatively assessed.

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