

stimulus were trained in 10 cats of both sexes, weighing from 2–4 kg, within 2–3 months (Medek et al. 1970). The number of recalled motor reactions and latency times were evaluated as well as the activity of the animal in the interval between the acceptance of a piece of meat and presentation of the following stimulus.

After the drug administration the animals were subjected to only one or two experiments in one day, each consisting of 27 reinforced reactions. The next drug application followed at its earliest after 48 hrs. Changes in the observed indicators in comparison with the control experiments were evaluated with the t-test with $P = 0.05$.

1) In the experiments performed 30 min., 1, 2, 4 and 24 hrs. after a single oral administration of chlorprothixene (in a dose of 2.5 mg/kg) a statistically significant decrease in the number of positive reactions prolongation of latency times (especially one hour after chlorprothixene) and an increase in the number of the intersignal reactions (particularly 30 min. and 1 hour after the drug application) was found. Conversely, only an insignificant improvement was observed one hour after chlorprothixene in doses 0.3 and 0.01 mg/kg s. c.

2) Amphetamine in a single dose of 1.0

mg/kg s.c. also impaired significantly motor reflexes and markedly prolonged their latency times. Simultaneously the number of intersignal reactions was significantly higher 1, 2, 4 and 24 hr after amphetamine.

Medium and lower doses of caffeine (0.6 and 0.02 mg/kg s.c.) slightly improved the results one hour after administration.

3) For a period of 18 weeks the animals were given s.c. various combinations of chlorprothixene and caffeine (0.05–0.3 mg/kg). During this time considerably less mutual aggression and a more moderate spontaneous activity, with no impairment of vigilance, was observed. The best results were achieved within the 16th and 18th week when small doses were applied (0.01 mg/kg Chlorprothixene, 0.02 mg/kg caffeine). In experiments performed 1, 2, and 24 hrs after application we recorded at a 100% recall of motor responses a moderate shortening of latency times and simultaneously a marked decline of undesired intersignal reactions, i.e. by 19% in the first hour, by 14% in the second hour and by 6% after 24 hours.

Our results show that when using small doses of chlorprothixene and caffeine in a weight ratio 1 : 2 general psychomotor performance in firmly fixed alimentary motor reflexes can be moderately improved in cats.

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LSD-accentuated individual type of social behaviour in mice

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Effects of LSD (10 micrograms/kg per os) on social interaction in 18 pairs of mice (males, strain Swiss, body weight 22–28 g) was studied. One member of each pair was kept singly while the other one was housed in a group. Social interaction was induced by introducing a group-housed mouse to a singly-housed partner during the test session lasting 200 sec. About 50 various social and individual acts and postures occurring during

the interaction were recorded by two observers on a stereotype-recorder according to Silverman's (1966) procedure. Under the control conditions 6 from 18 singly-housed mice exhibited predominantly aggressive and almost no defensive or escape activity towards their partners, 7 showed largely defensive and escape activity and no aggression and 5 did not display much aggression or flight. All three groups showed some investigation of

other partners. The individual type of social behaviour ("aggressive", "defensive" and "neutral") remained highly constant when repeating the social interaction ($p < 0.001$).

LSD given to "aggressive" mice increased further their aggressiveness towards the untreated partners ($p < 0.005$). On the other hand, LSD-treated "defensive" mice showed more defensive and escape acts ($p < 0.05$) when undrugged partners were introduced. Similar changes occurred even under a reversed treatment: in undrugged "defensive" mice LSD-treated partners evoked an increased flight reaction ($p < 0.025$), while untreated "aggressive" mice were more aggressive towards LSD-treated partners. The "neutral" mice did not show significant changes whether

LSD was given to themselves or to their partners.

LSD thus accentuated some features of individual profile of social behaviour in mice, making the LSD-treated aggressive subjects more aggressive and defensive ones more defensive. This appears to be in a good agreement with some clinical experience (e. g. Leuner, 1967) that LSD may exaggerate characteristic features of personality in man. When the test mice were untreated, they reacted to LSD intoxication in their partners. This reaction was again characterized by the enhancement of aggressive or defensive-escape activity in the untreated aggressive or defensive subjects respectively.

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Induction of dominant lethals and translocations in mice by LSD

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Genetic effects of LSD were studied in mice by means of the dominant lethal test and by the cytological analysis of changes induced in spermatogonia.

Three groups consisting each of 25 ICR male mice were treated with 0.01, 0.1 and

1.0 mg LSD/kg body weight i.p. in a single dose. Each male was then mated every week with two ICR females. These were repeatedly changed in the course of 8 following weeks. Females were killed in the 14th day of their pregnancy and the numbers of corpora lutea

Tab. 1. Induction of dominant lethals by LSD (1 mg LSD/kg)

Week	Dominant lethality					
	total		preimplantation		postimplantation	
	$\frac{CL - (I - R)}{CL}$		$\frac{CL - I}{CL}$		$\frac{R}{I}$	
	E	C	E	C	E	C
1	0.1397	0.0885	0.0707	0.0508	0.0742	0.0396
2	0.2056	0.1278	0.1705	0.0865	0.0424	0.0453
3	0.2270	0.0994	0.1720	0.0529	0.0664	0.0465
4	0.1308	0.1106	0.0785	0.0583	0.0567	0.0555
5	0.1809	0.1311	0.1175	0.0688	0.0718	0.0669
6	0.2041	0.1037	0.1368	0.0320	0.0779	0.0739
7	0.1288	0.0956	0.0936	0.0697	0.0387	0.0277
8	0.1977	0.0695	0.1333	0.0320	0.0743	0.0386

E = experimental group, C = control group.