

Catalepsy



Catalepsy is a neuronal condition that can be observed in Parkinson's disease, epilepsy, catatonia but also as adverse reaction to prescribed medications e.g. against schizophrenia. It is characterized by seizures with a loss of sensation and consciousness accompanied by rigidity of the body. By treating rats with the dopamine D2 receptor antagonist haloperidol, catalepsy can be induced for several hours, mimicking the typical symptoms like loss of consciousness and rigidity.

Sprague Dawley rats were subcutaneously (s.c) injected with 1 mg/kg haloperidol. After 30 minutes, catalepsy was measured and additionally, animals showing a full catalepsy were treated orally with the positive compound or vehicle. Animals were retested for catalepsy at several time points after drug administration.

Catalepsy was evaluated by gently placing the front limbs of each rat over an 8 cm high horizontal bar; catalepsy was measured as time animals spent motionless. A cut-off time of 120 seconds was used.

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Figure 1:

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Catalepsy after treatment with a positive compound: Time animals spent rigid after s.c. treatment with 1 mg/kg haloperidol, followed by oral treatment with a positive compound. Animals were repeatedly tested for catalepsy. n = 10; mean ± SEM. Two-way ANOVA with Bonferroni's repeated measure post hoc test. ***p<0.001.

Campbell A, Baldessarini R.J. Effects of maturation and aging on behavioral responses to haloperidol in the rat. *Psychopharmacology (Berl)*. 1981;73(3):219-22.

