

Effects of lithium chloride injections on rank-related fighting, maternal aggression and locust-killing responses in naive and experienced ‘TO’ strain mice

Author links open overlay panel [Paul F. Brain](#) [Sami Al-Maliki](#)
Show more

[https://doi.org/10.1016/0091-3057\(79\)90318-6](https://doi.org/10.1016/0091-3057(79)90318-6) [Get rights and content](#)

Abstract

Three experiments investigated lithium chloride's (LiCl) effects on three forms of aggression in male ‘TO’ strain mice. Models of aggression investigated, included attack by preisolated males on male conspecifics (rank-related or intermale fighting), attack by lactating females on male intruders (maternal aggression) and the locust-killing response (a form of predatory aggression?) In the first study, injections of naive male mice with 0.2 and 0.4 mEq of LiCl resulted in marked declines in rank-related fighting. The effects of this treatment on locust killing could not be assessed, as this activity was already at a low incidence in controls. In a second experiment, LiCl injection had little influence on the locust-killing response in selected, experienced male killer mice. As in Experiment 1, rank-related fighting was suppressed by this treatment. The third experiment revealed that LiCl injections did not influence either maternal aggression or locust killing in naive females and predatory aggression in experienced-killer females. These results provide further support for the contention that these three behaviors have very different physiological bases. The data suggests that one should be cautious when extrapolating between different models of aggression even within the same species.