

Social isolation stresses rodents

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Isolated rats experience increased seizures compared to handled rats or rats in group housing. Credit: Manouze et al., *eNeuro* 2019

The traditional method of housing mice and rats alone increases stress and worsens epilepsy, according to a new study published in *eNeuro*. The added stress could complicate results of pre-clinical drug trials.

Rodents are typically housed alone to prevent aggressive behaviors and simplify data collection. However, rats and mice are <u>social animals</u>, and



isolation causes stress that could be a confounding factor in studies.

eNeuro Editor-in-Chief Christophe Bernard and colleagues examined how epileptic and healthy mice and rats fared in social or isolated housing conditions. They found that the isolated, healthy rodents displayed higher levels of stress and anxiety compared to the healthy rodents living in groups. Epileptic rodents also had more severe seizures when they were isolated, likely due to the increased stress of their environment.

These findings emphasize the need to recognize housing conditions as an important factor during <u>experimental design</u> and data analysis, since increased stress could interfere with results. Because of this, previously unsuccessful drugs might have failed pre-clinical trials due to the increased <u>stress</u> of the rodents and could still be viable treatments.

More information: Effects of Single Cage Housing on Stress, Cognitive and Seizure Parameters in the Rat and Mouse Pilocarpine Models of Epilepsy, *eNeuro* (2019). <u>DOI:</u> <u>10.1523/ENEURO.0179-18.2019</u>

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