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A study to assess the noise stress-induced changes on cognition in Wistar albino rats

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Background: In our modern lifestyle exposure to noise stress/pollution not only affects the auditory system but rather extend to the central nervous system.

Objective: The aim of the study is to investigate the effect of acute noise stress on cognitive functions in male Wistar albino rats.

Methods: Adult albino rats were randomly divided into two groups. Each group contains six animals. Rats exposed to acute noise stress (100 dB/4 hour) were compared with control animal and assessed for cognition by using T-maze, hole board test, open field test, marble burying test and social interaction behavior.

Results: The rats exposed to acute noise stress shown the significance ($p < 0.05$) of behavioral alterations such as impaired learning and memory, memory retention, increased fear and anxiety, obsessive-compulsive behavior, social avoidance and decreased social interaction.

Conclusion: The results report that acute noise stress affects the cognition and it became chronic may confer the increased risk of neurodegenerative disorders.

Biography

Archana A is currently pursuing her PhD in Stress Physiology in Department of Physiology, University of Madras, Tamil Nadu. She has published two papers in sleep deprivation and unpredictable acute and chronic stress. She is currently researching noise stress on hippocampus and Alzheimer's disease.

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