

Study the antianxiety effect of diazepam in rats on elevated Plus Maze



DR. YOGESH CHAND YADAV
(M. Pharm., Ph.D, MAMS)

Associate Professor

Faculty of Pharmacy, Uttar Pradesh University of Medical Sciences, Saifai,
Etawah-206130, UP, India. Email :drycy31@gmail.com

Introduction

- The elevated plus maze is a commonly used behavioral testing in rat or mice.
- Diazepam is generally recognized as an antianxiety drug and is frequently used as a standard control group in behavioral experiments in rats (1).
- Rat is placed at the one end of open arm of the four arms of the maze, facing to junction of closed arm and entries/duration that is know as transfer of latency will recorded by a video-tracking system and observer simultaneously for 5 min (2)

Study the antianxiety effect of diazepam in rats on elevated Plus Maze

- ❖ Antianxiety of diazepam in rat is carried out using elevated plus maze.
- ❖ Rat is placed at the end of an open arm facing away from the center.
- ❖ The time taken to enter any one of the closed arms is recorded as transfer latency time.
- ❖ Cutoff time allotted for each rat is 180 s,.
- ❖ If rat transfer latency time (TLT) is increased that is indicated that rats has antianxiety effect of diazepam.
- ❖ In Youtube vedio, we observed that rat move frequently on open arm without any fear resulting enhanced TLT, due to antianxiety effect of diazepam.

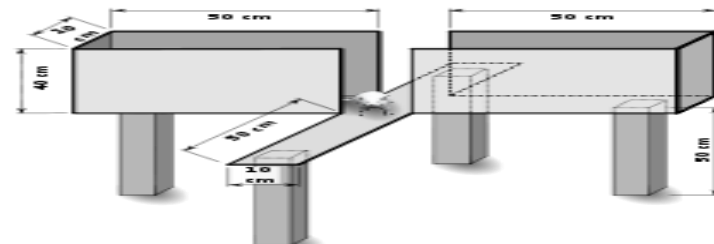


Fig.1 Elevated Plus Maze

References

1. Walf AA, Frye CA. The use of the elevated plus maze as an assay of anxiety-related behavior in rodents. *Nat Protoc.* 2007;2(2):322-8. doi: 10.1038/nprot.2007.44. PMID: 17406592; PMCID: PMC3623971.
2. Pellow S, Chopin P, File SE, Briley M. Validation of open: closed arm entries in an elevated plus-maze as a measure of anxiety in the rat. *J Neurosci Methods.* 1985;14:149–167.



THANK YOU