

ELEVATED-PLUS-MAZE TEST

Key-words: Anxiety, Anxiolytics, Anxiogenic, Benzodiazepines,

The elevated-plus-maze test measures **anxiety-related** behavior in rats or mice ^(1,2).

Rationale – The anxiety-related behavior is measured by the animal's avoidance response to a potentially dangerous environment.

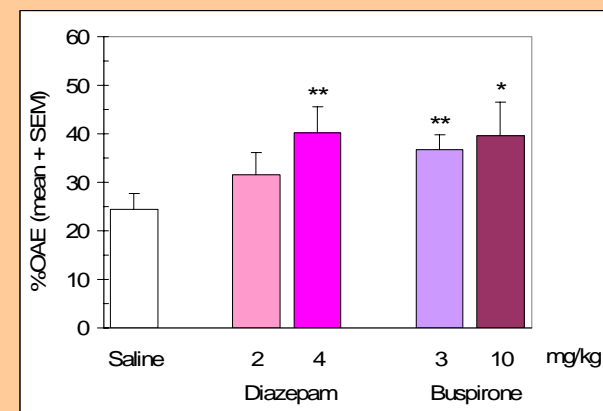
Method – The animal is placed for a 5-min session on an elevated-plus-maze made up with two open arms and two enclosed arms. Entries in open arms and in enclosed arms are recorded.

- The **index of anxiety-related** behavior is the percentage of open arms entries (%OAE)
→ %OAE is **increased** by **anxiolytic** drugs and **decreased** by **anxiogenic** drugs

Example

The two anxiolytic drugs diazepam and buspirone increase the percentage of open arm entries.

Effects of diazepam and buspirone on the percentage of open arm entries made by Swiss mice



Difference vs. Saline: * $p < 0.05$; ** $p < 0.01$

- References;**
1. Pellow and File, Pharmacol Biochem Behav 24:525-529, 1986
 2. Belzung and Griebel, Behav. Brain Res. 125:141-149, 2001