



Short communication

Anxiolytic-like activity of zinc in rodent tests

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Abstract:

Because zinc deficiency induces depression and anxiety-like behavior in rodents, we examined the effects of zinc administration in several tests by measuring anxiolytic activity in mice and rats. We now report that zinc significantly increased the number of entries into the open arms in the elevated plus maze in rats. Moreover, zinc treatment significantly increased the number of punished crossings in the four-plate test and attenuated stress-induced hyperthermia (SIH) in mice. However, no effect of zinc administration was observed in the elevated plus maze test in mice. This lack of effect in the latter case was probably due to the substantial zinc-induced reduction in locomotor activity by the doses used in mice. The present data demonstrate for the first time the anxiolytic-like activity of zinc in rodents and may indicate that zinc could be used as a novel therapeutic/adjunct agent in anxiolytic therapy.

Key words:

zinc, elevated plus maze, stress-induced hyperthermia, four-plate test, mice, rats, anxiolytic activity
