

## Evaluation of sedative-hypnotic effect of ethanolic extract of five medicinal plants; *Nepeta menthoides*, *Matricaria chamomilla*, *Asperugo procumbens*, *Lippia citriodora* and *Withania somnifera*

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**Background and Aims:** *Nepeta menthoides*, *Matricaria chamomilla*, *Asperugo procumbens*, *Lippia citriodora* and *withania somnifera* have been used as sedative and hypnotic in Iranian traditional medicine, but there is no experimental proof for this effect. In this study the effect of the ethanolic extract of the plants was evaluated using experimental setups.

**Methods:** Male NMRI mice in the range of 18-25 g of weight were used in this study. Pentobarbital induced loss of righting reflex was used for evaluation of hypnotic effect of the extracts. Open field test was used for evaluation of locomotor activity and the total distance moved by the subjects were analyzed. The ethanolic extracts of the plants in doses 100-800 mg/kg i.p. were tested, and diazepam 3 mg/kg i.p. was used as positive control.

**Results:** All of the five extracts significantly reduced the locomotor activity of the mice in dose dependently manner and *Matricaria chamomilla* (200-800 mg/kg) showed significant hypnotic effect in pentobarbital induced loss of righting reflex test.

**Conclusions:** These findings show that the ethanolic extracts of the five plants tested in this study reduce the locomotor activity and this might be because of sedative effects of the extracts. Between the tested plants, *Matricaria chamomiolla* showed hypnotic effect and can be a good candidate for treatment of insomnia. Additional studies are necessary to find the exact mechanism of action of the extracts and the active components.

**Keywords:** Sedative-hypnotic; *N. menthoides*; *M. chamomilla*; *A. procumbens*; *L. citriodora*; *W. somnifera*