

# Effects of microinjection of angiotensin II and captopril into nucleus accumbens on morphine self-administration in rats

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**Abstract:** With an aim to investigate the effects of injection of angiotensin II (Ang II) and captopril into the nucleus accumbens (NAC) on morphine self-administration, male Wistar rats were first trained to receive small pellets of food by pressing the active lever in self-administration apparatus. The animals, divided into 4 groups (saline, morphine, captopril and Ang II) were placed in self-administration apparatus and were allowed to self-administer morphine (0.5 mg per infusion all test groups) or saline (saline group) during consecutive days, for 2 h/sessions. Captopril (30 µg) and Ang II (0.5 µM) were injected into NAC in the corresponding groups before each session. In morphine group, the number of active lever pressing was significantly higher than passive during all 5 days and was also significantly higher than saline group. In captopril group, there were no significant differences between the number of active and passive lever pressings. However, the number of active lever pressing was significantly lower than morphine group. The results highlight the interaction between captopril and opioid system in NAC.

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