The effect of cinnamon extract on sex hormones in adult female rats treated lead acetate

Hemayatkhah Jahromi V.*
Department of Biology, Jahrom Branch, Islamic Azad University, Jahrom, Iran.

* Dr.hemayatkhah@yahoo.com

Received: 24 May 2016 Accepted: 25 August 2016

Abstract
Lead, a toxic heavy metal that has numerous effects on biological systems, living organisms, including humans and various risks are created such as infertility. This study is to investigate the effect of cinnamon on sex hormone changes in adult rats treated lead acetate. Animals used 42 adult female Wistar rats were divided into 7 groups, including control group that received no drug, the Sham group 1 (solvent), Sham group 2 (0.6 g daily lead acetate), Sham group 3 (1.5mg/kg of cinnamon extract daily), experimental groups 1, 2 and 3 per day in addition to 0.6g of lead acetate, respectively 0.1, 0.2 and 0.5 mg/kg cinnamon extract for 14 days. At the end of the study, blood samples were taken and the concentration of the hormones estrogen and progesterone were measured by ELISA. The results showed concentration of estrogen and progesterone hormones in the Sham group 2 has significantly decreased and in the Sham group 3 has significantly increased compared to the control group (P<0.05). The results showed that cinnamon extract in a dose dependent manner and with antioxidant properties reduce the effects of lead poisoning on sex hormones.

Keywords: cinnamon, lead, rat, sex hormones