

Effects of Judo 40 on the sexual behavior of male rats

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Judo 40 (active ingredient – Chlorpyrifos) is an organophosphate insecticide widely used in Sri Lanka. Since organophosphates are known to create health problems including adverse reproductive effects, the objective of this investigation was to evaluate the effects of this insecticide on the sexual functions using male albino rats as the animal model. Sexually experienced male rats kept under standardized animal house conditions were orally treated with two different doses of Judo 40 (20 and 50 mg/kg body weight) or the control (corn oil) two times a day for two consecutive days. The number of replicates was nine per each group. Their sexual behavior was evaluated on post treatment days one, three and seven by pairing individually with a receptive female for a period of 20 minutes. The following indices were recorded; the percentage of rats mounted, intromitted and ejaculated, number of mounts and intromissions, mounting, intromitting and ejaculating latencies, copulatory efficiency and intercopulatory interval. Another two groups of similarly treated rats were used to evaluate sedative, analgesic and muscular effects using the rat hole board, hot plate and bar and bridge tests, respectively. Changes in blood Acetylcholine Esterase activity and external toxicity symptoms were observed at the same time. Results revealed that Judo 40 impaired most of the parameters of male sexual behavior significantly ($P < 0.05$) on post treatment days one and seven. The observed demasculinized effects might be attributed to the sedative or cholinergic toxic effects of Judo 40. Accordingly, it can be concluded that Judo 40 has significant effects on sexual behavior of male rats and it is a matter of concern if the data is applicable to man.