

## The Therapeutic Effect of *Epimedium Koreanum Nakai* on 2-Bromopropane Induced Reproductive Organ Damage

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There has been a consistent increase in the number of involuntarily childless marriages in nearly all industrialized countries. About 10-15% of all couples remain involuntarily childless. In many causes of infertility, 2-bromopropane (2-BP) has been known to causes testicular toxicity and *Epimedium Koreanum Nakai* (EK) has been used for impotency, menstruation disorder in traditionally. For increasing possibility of fertility, we investigated the increasing daily sperm production and sperm count effect of EK on 2-BP induced reproductive organ damage

Forty eight SD male rats were subdivided 2 or 4 weeks dosing of EK with concomitantly injection of 2-BP, and each experiments has subgroups as 1) 2-BP group: 2-BP (1,355 mg/kg, SC) with saline PO concomitantly, 2) EK 10 group: 2-BP with EK 10mg/kg PO concomitantly, 3) EK 100 group: 2-BP with EK 100mg/kg concomitantly, 4) EK 500: 2-BP with EK 500mg/kg concomitantly. The BW, organ weight, CBC, daily sperm production, sperm count and histopathological examination was conducted. All reproductive organs were decreased during 2-BP exposure.

The absolute weight of spleen was significantly( $P<0.05$ ) increased compared to 2-BP group at 2 weeks. The protective weight loss ratio of EK 10, EK 100 and EK 500 compared to those of 2-BP group were 24%, 56%, and 48%, respectively. The daily sperm production and sperm count were significantly ( $P<0.05$ ) increased compared to 2-BP group. Also from EK 10 group, the number of degenerative seminiferous and epididymal tubules were dramatically ( $P<0.05$  or  $P<0.01$ ) decreased and effectively inhibited 2-BP induced decreases of spermatogenesis dose-dependantly.

Consequently, base on the results of the present study, it is concluded that EK extract dramatically inhibits the 2-BP induced reproductive organ damages from 10 mg/kg of dose levels.

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