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trans-Resveratrol relaxes the corpus cavernosum ex vivo and enhances testosterone levels and sperm quality in vivo.

[Shin S.](#), [Jeon JH.](#), [Park D.](#), [Jang MJ.](#), [Choi JH.](#), [Choi BH.](#), [Joo SS.](#), [Nahm SS.](#), [Kim JC.](#), [Kim YB.](#)

College of Veterinary Medicine, Chungbuk National University, Heungdeok-gu, Cheongju, Chungbuk 361-763, Korea.

We examined the effects of trans-resveratrol on male reproductive functions; ex-vivo penile erection and in-vivo sperm counts and quality. For the ex-vivo study, the relaxation effects of resveratrol on isolated New Zealand white rabbit corpus cavernosum, precontracted by phenylephrine (5x10⁻⁵ M) were measured. The in-vivo study measured reproductive organ weights, blood testosterone levels, testicular histopathology, sperm counts, as well as the epididymal sperm motility and deformity of male ICR mice given an oral dose of resveratrol (50 mg/ kg) for 28 days. Resveratrol elicited a concentration-dependent relaxing effect on corpus cavernosum, leading to a median effective concentration (EC50) of 0.29 mg/mL. Repeated treatment with resveratrol (50 mg/kg) did not cause an increase in body weight, reproductive organ weight or testicular microscopic findings; however, resveratrol did elicit an increase in blood testosterone concentration, testicular sperm counts and epididymal sperm motility by 51.6%, 15.8% and 23.3%, respectively, without influence on sperm deformity. In conclusion, we propose that resveratrol has a positive effect on male reproductive function by triggering a penile erection, as well as enhancing blood testosterone levels, testicular sperm counts, and epididymal sperm motility.

PMID: 18277612 [PubMed - indexed for MEDLINE]



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