

## **FIBROSTROGEN ELIMINATES UTERINE FIBROID BY MODULATING UTERINE ESTROGEN AND PROGESTERONE RECEPTORS**

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### **Abstract Body**

**OBJECTIVE:** Uterine fibroid a gynecological problem among women of reproductive age adversely affects fertility and pregnancy outcomes. According to a 2010 World Health Organization report, uterine fibroid affects about 235 million women which represent about 6.6% of global women population. Despite its adverse effects on fertility, pregnancy outcome and sometimes poor surgical outcomes, there are few medical treatments of uterine fibroids that are effective. Fibrostrogen, an herbal supplement has been shown to significantly reduce and eliminate uterine fibroids in volunteers without surgery including those that reoccur after myomectomy. However, its mechanism of action is presently not known. The present study examined its mechanism of action in rats. **DESIGN:** Basic animal research in a university teaching hospital setting. **MATERIALS AND METHODS:** Thirty adult female Sprague-Dawley rats were randomly allocated into three groups. Group A was the control while groups B and C served as treatment groups. Group A received 0.5ml normal saline daily while groups B and C received 0.74mg/kg and 1.36mg/kg body weights of Fibrostrogen respectively, via oral gavage. After four weeks, rats were sacrificed and sera obtained were assayed for sex steroid hormones; Estradiol and Progesterone. Ovaries and uteri removed were weighed, processed for histology and immunohistochemistry for estrogen and progesterone receptors. **RESULTS:** Fibrostrogen treatment significantly reduced ovarian wet weights while uterine wet weights were not reduced when compared to controls. Progesterone was reduced while estrogen was increased when compared with controls. Uteri of controls did not express estrogen receptors(ER) while progesterone receptors(PR) were strongly expressed. Fibrostrogen treatment upregulated ER to weak expression and down regulated PR expression also to weak expression. **CONCLUSIONS:** Fibrostrogen, an herbal supplement eliminates uterine fibroids by modulating ER and PR. It may be a promising medical treatment for uterine fibroids eliminating myomectomy.