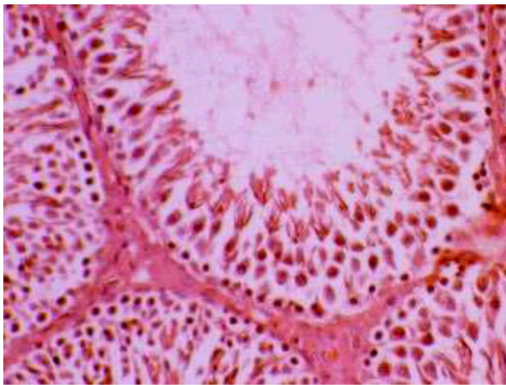


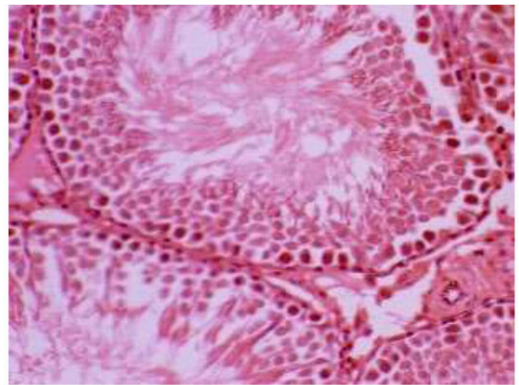
# Mucuna pruriens found to both increase and decrease sperm count in the same study

June 14 2023, by Justin Jackson

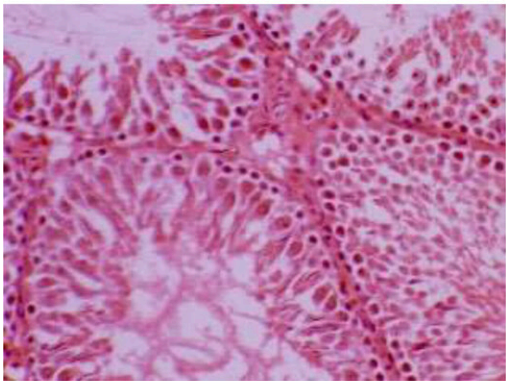
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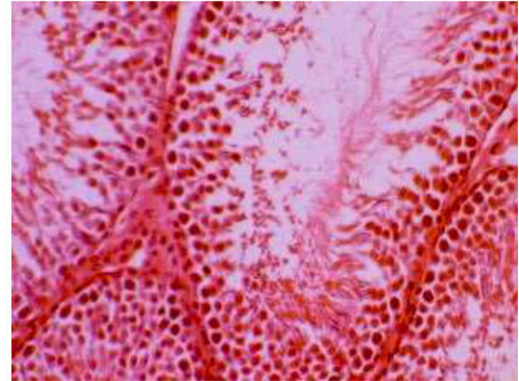
Control group



Low dose group (500 mg/kg)



Medium dose group (1000 mg/kg)



High dose group (2000 mg/kg)

Photomicrograph of cross section of the testis (400X). This figure shows the cross section of the testis in S-D rats following treatment with low dose (500 mg/kg), medium dose (1000 mg/kg) and high dose (2000 mg/kg) of *M. pruriens* for 90 days. In the control group, the testicle appeared covered by a capsule of connective tissue (the tunica albuginea). Testicular parenchyma consisted of seminiferous tubules which appeared rounded or oval with regular contour. The interstitial spaces in-between the tubules contain a delicate loose

connective tissue and Leydig cells. H and E-stained testicular samples of the low dose group, medium dose group, and high dose group revealed the same histological features of the testis. (Hematoxylin and Eosin stain, 400X). Credit: *Phytomedicine Plus* (2023). DOI: 10.1016/j.phyplu.2023.100465

Researchers at the University of Ghana have looked into the efficacy and safety of *Mucuna pruriens* seed powder on male fertility. In their paper, "Moderate doses of *Mucuna pruriens* seed powder is safe and improves sperm count and motility," published in *Phytomedicine Plus*, the team tested various concentrations of *Mucuna* seed powder on a small sample size of 28 rats.

The 28 Sprague-Dawley male rats were separated into four groups of seven and over 90 days were fed a diet that included *Mucuna pruriens* in either low dose, medium dose, high dose or distilled water as a control.

Hormonal analyses of the rats showed no statistically significant dose-dependent changes in testosterone, estrogen or follicle-stimulating hormone (FSH). No correlations were found between hormonal levels and semen analyses.

Semen analyses showed higher motility and [sperm count](#) with lower immotility in the medium-dose group. A decrease in sperm count was observed in both the low and high-dose groups.

The authors report that the rats exhibited [normal weight](#) increases over the 90 days and that *Mucuna pruriens* do not appear to cause weight increases. This is easily tracked as Sprague-Dawley (SD) rats are widely used model animals whose [growth rates](#) are well documented.

In the [study data](#), the control rats began at a significantly lower weight

than those receiving the *Mucuna* test dosages. While the average starting weight of the 21 tested rats was 190.7 g, the seven control rats weighed in at just 147.7 g. No explanation is given, and the reason is unclear.

There is no mention of a randomized sorting of the rats into groups, so it could be selection bias—placing all the runts into the control group. Interestingly, the weight tracks perfectly well with rats at least one week younger, around six weeks old, compared to seven. Either scenario could be a significant enough difference in maturity to negate the effectiveness of using them as a control in a reproductive analysis.

The 90-day end weights are also strange as they are more in line with either nine-week-old male SD rats or 18-week-old female SD rats. No explanation is given, and the reason for the apparent discrepancy is unclear.

Further anomalies can be found in the blood work of the [rats](#), as the control group has nearly half the white blood cell count and other abnormalities consistent with either a younger rat or a female rat. Again no explanation is given, and the low readings are not commented upon.

The authors conclude that their study observed increased sperm count with *Mucuna pruriens*. The data in the paper they published seems to clarify that they observed higher sperm counts 33% of the time and lower sperm counts 66% of the time compared to a [control group](#) with a lower starting [weight](#) and no *Mucuna pruriens* exposure.

**More information:** Samuel Adjei et al, Moderate doses of *Mucuna pruriens* seed powder is safe and improves sperm count and motility, *Phytomedicine Plus* (2023). [DOI: 10.1016/j.phyplu.2023.100465](https://doi.org/10.1016/j.phyplu.2023.100465)

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