FINASTERIDE TABLETS, USP

**DESCRIPTION**

Finasteride is a synthetic 4-arylpiperazine compound, is a specific inhibitor of 5α-reductase type II, a microsomal enzyme that converts the androgen testosterone into 5α-dihydrotestosterone (DHT).

In vitro, finasteride is 3- to 5-fold more potent than cimetidine, 3- to 6-fold more potent than bepridil, and 10- to 20-fold more potent than ketoconazole as an inhibitor of the human 5α-reductase enzyme. In vivo, finasteride inhibits the formation of DHT by 90% or more, and plasma testosterone in humans by 65% or more, in normal volunteers treated with finasteride 5 mg/day for 17 days. Finasteride inhibits the formation of DHT by 90% or more, and plasma testosterone in patients with BPH by 65% or more.

**PHARMACODYNAMICS**

Finasteride is a white crystalline powder with a melting point near 250°C. It is freely soluble in chloroform and in lower alcohol and sparingly soluble in water.

Finasteride tablets, for oral administration, are film-coated tablets that contain 5 mg of finasteride and have the following inactive ingredients: hydroxypropyl cellulose, hypromellose, lactose monohydrate, macrogol 6000, magnesium stearate, microcrystalline cellulose, pregelatinized starch, sodium starch glycolate, and titanium dioxide.

**CLINICAL PHARMACOLOGY**

The development and enlargement of the prostate gland is dependent on the protein, 5α-dihydrotestosterone (DHT), which is derived from testosterone. Finasteride, a competitive inhibitor of 5α-reductase, decreases the levels of DHT in the prostate gland, liver, and skin. DHT inhibits androgen action by binding to androgen receptors in the cell nuclei of these organs. Because the 5α-reduced steroid metabolites in blood and urine are decreased after administration of finasteride, findings are of no clinical significance. See also PRECAUTIONS, Pregnancy and Lactation.


dated April 2010

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**Special Populations - Pregnancy and Lactation**

Pregnancy

Finasteride tablets are not indicated for use in pediatric patients (see PRECAUTIONS, Pediatric Use) or in women (see WARNINGS, EXPOSURE OF WOMEN - RISK TO MALE FETUS and HOW SUPPLIED).

Lactation

Finasteride tablets should not be used by lactating women, as the clinical relevance of the drug in breast milk is unknown. Although no significant amount of finasteride has been found in human breast milk, caution should be used in administering the medication to women who are breast feeding.

**WARNINGS**

Exposure of Women to Finasteride

Women should not handle crushed or broken finasteride tablets when they are pregnant or may potentially be pregnant because of the possibility of absorption of finasteride and the subsequent potential risk to a male fetus. Finasteride tablets are coated and protected against accidental ingestion, and the tablets have not been broken or crushed (see CONTRAINDICATIONS; PRECAUTIONS, Information for Patients and Pregnancy, and HOW SUPPLIED).

Exposure of Women - Risk to Male Fetus

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**CONTRAINDICATIONS**

Prior to initiating therapy with finasteride tablets, appropriate evaluation should be performed to identify other conditions such as prostate cancer, chronic prostatitis, severe infection or other prostatic disease that might mimic BPH.

Patients with large residual urine volume and/or severely impaired urinary flow should be carefully monitored for obstructive urinary tract. These patients may not be candidates for finasteride therapy.

In patients with biopsy-proven prostate cancer, finasteride significantly delayed the onset of hormone therapy. In the first year of treatment with finasteride, the incidence of prostate cancer was reduced by 20% (vs. 0.2% of placebo). This reduction was of no clinical significance and does not alter the overall risk of prostate cancer death. Finasteride tablets cause a decrease in serum PSA levels by approximately 30% in patients with BPH. This decrease is predictable over the entire range of PSA values, although it may vary in individual patients. Analysis of PSA data from over 3,830 patients in PLR told confirmed that in typical patients treated with finasteride for up to 5 years, PSA values should be reflected for comparison with normal ranges in untreated men. This adjustment preserves the sensitivity and specificity of the PSA assay and makes it possible to detect prostate cancer. Finasteride may also cause decreases in serum PSA in the presence of prostate cancer.
Exposed to any dose of finasteride

**CONTRAINDICATIONS.**

The weights of the seminal vesicles and prostate. All these effects were reversible within 6 weeks of discontinuation of treatment. No evidence of carcinogenicity studies.

4-Phase-Placebo-Controlled Study

No evidence of malformations has been observed in rabbit fetuses exposed to finasteride.

No effects were seen in female offspring. No evidence of mutagenicity was observed in an in vitro assay study.

No drug-related Leydig cell changes were seen in either rats or dogs treated with finasteride for 1 year at doses of 20 mg/kg/day and 4 mg/kg/day, respectively. However, an increase in the incidence of Leydig cell hyperplasia was noted in treated males. This was of no clinical importance. No other evidence of carcinogenicity were found in the tissues of treated animals.

In the 15-month carcinogenicity study in CD-1 mice, a statistically significant (p<0.05) increase in the incidence of testicular Leydig cell tumors was observed at a dose of ≥40 mg/kg/day (39 times the human exposure).

No evidence of carcinogenicity were found in the tissues of treated animals.

No evidence of mutagenicity was observed in an in vitro assay study.

Phase II Studies and 5-Year Open Extensions

Some men have found that this results in a significant decrease in sex drive (libido) and an associated significant decrease in the incidence of sexual activity in men over 50 years of age treated with finasteride tablets. In patients with BPH, finasteride tablets have no effect on circulating levels of cortisol, estradiol, prolactin, thyroid-stimulating hormone, luteinizing hormone, and follicle-stimulating hormone (FSH) in patients receiving finasteride tablets, but levels remained within the normal range. In healthy volunteers, treatment with finasteride tablets did not alter the levels of LH and FSH.

Patients were enrolled in 2 separate studies in patients with lower urinary tract symptoms (LUTS) attributable to BPH, to investigate the efficacy and safety of finasteride tablets.

In years 1 through 5 of the study, there was no significant difference between treatment groups in the incidence of new primary prostate cancer, decreased PSA density and ablation and ablation.

Phase III Studies and 5-Year Open Extensions

The following additional adverse effects have been reported in post-marketing experience:

- hypogonadism, irregular periods, uterine or vaginal, and nausea

 Significant lethargy was observed in male and female mice at single doses of 1500 mg/kg (530 mg/kg) and female rats at single oral doses of 50 mg/kg and 500 mg/kg (200 mg/kg).

Drug/Laboratory Test Interactions

No effect on circulating levels of cortisol, estradiol, prolactin, thyroid-stimulating hormone, luteinizing hormone, and follicle-stimulating hormone (FSH) in patients receiving finasteride tablets, but levels remained within the normal range. In healthy volunteers, treatment with finasteride tablets did not alter treatment in 18 months at a dose of 2.5 mg/kg/day (2.3 times the human exposure, estimated).

No evidence of mutagenicity was observed in an in vitro assay study.

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