

# Hirsutism

**Hirsutism** means **increased growth of pigmented hair in women** in places where male hair is typically present (face, upper lip, chin, neck, chest, back, inner thighs).

Complications include acne, oily skin, oligomenorrhea or amenorrhea.

## Etiology

The cause of hirsutism is increased production of **androgens** in the **ovaries or adrenal glands** (tumors, polycystic ovary syndrome, adrenogenital syndrome). Increased **5 $\alpha$ -reductase activity** in the hair follicle (it changes testosterone to dihydrotestosterone), or there is **drug hirsutism** - anabolics, danazol, cyclosporine...). Furthermore, it may arise due to increased plasma concentrations of free androgens (due to decreased SHBG production).

With significant androgen overproduction, **virilization** can occur. These are somatic changes including rougher voice, breast atrophy, enlarged clitoris and male muscle formation.

## Treatment

Treatment is always according to **etiology**.

- Antiandrogens – they block the effect of androgens on receptors (*cyproterone acetate*),
- contraceptives,
- 5 $\alpha$ -reductase inhibitors (*finasteride*),
- *spironolactone* – has an antiandrogenic effect.



Annie JONES ("bearded woman") is an example of hirsutism.

## References

### Related Articles

- Endocrine diseases of the gonads
- Adrenogenital syndrome
- Hypertrichosis

### Source

- KLENER, Pavel. *Vnitřní lékařství*. 4. edition. Praha : Galén : Karolinum, 2011. 1174 pp. ISBN 978-80-7262-705-9.