

# UT News

Office of Medical Information  
The University of Texas Health Science Center at Dallas  
5323 Harry Hines Boulevard Dallas, Texas 75235  
214/688-3404

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CONTACT: Ann McVay  
OFFICE: 214/688-3404  
HOME: 214/494-0391

\*\*\*\*Abnormal hair growth in women is caused by excess testosterone

"You should be women, and yet your beards forbid me to interpret that you are so."  
Macbeth, I,iii,45

DALLAS -- The queen of the sideshow, the bearded lady, is one of the biggest draws of the fair. We love to gawk at the different, the bizarre.

But for 5 to 10 percent of all women -- including the bearded woman on the other side of the glass -- abnormal hair growth is no laughing matter. Women with markedly abnormal hair growth are called hirsute. Depending on the cause of the excessive hair growth in what is traditionally considered male distribution, hirsutism can mean anything from a cosmetic hassle to a life-threatening condition.

A hirsute woman may have increased amounts of hair on the face, chest and back areas, and extremities. But the spectrum of abnormality, according to Dr. Mark Leshin, assistant professor of internal medicine at The University of Texas Health Science Center at Dallas, ranges from a woman who has only scattered patches on the face and chest to a woman with full beard.

"As many as 25 percent of all women may have some minimal and scattered facial hair growth. A third or less of that percentage show more extreme presentations of the abnormal hair growth," Leshin says. The dividing line for what is markedly abnormal is arbitrary, depending on cultures and racial groups. "In some racial groups, an increase in hair growth may not be abnormal," he says.

Vellus hair is the thin, usually unpigmented hair that covers most of the body before puberty. In women, hair on the face and trunk usually remains vellus throughout life. Terminal hair is the thick, pigmented hair that before puberty is present only on the scalp, eyebrows and eyelashes. In women with hirsutism, terminal hair increases. When the follicle is exposed to a critical amount of the masculinizing hormone, testosterone, vellus follicles convert to terminal follicles. Most hirsute women have an overproduction of testosterone, a principal male hormone responsible for male characteristics.

The most common kind of hirsutism, idiopathic hirsutism, is characterized only by increased hair growth that may be associated with a rise in the blood level of testosterone. Ovulation and fertility in these women are normal.

Some studies imply that idiopathic hirsutism may be an early manifestation of another common disorder associated with abnormal hair growth in women, polycystic ovarian syndrome (PCOS). An overproduction of testosterone in women with PCOS occurs because of a disturbance in the regulation of the normal, cyclic function of the ovaries. Both idiopathic hirsutism and polycystic ovarian syndrome usually become apparent around the time of puberty. "Polycystic ovarian syndrome, however, is different from idiopathic hirsutism in that the woman with PCOS may also have ovarian enlargement from cysts, clitoral enlargement, irregular or no menstruation and, consequently, infertility," Leshin says. "Obese women with PCOS are likely to have less severe abnormal hair growth."

Treatment for both idiopathic hirsutism and PCOS depends on the woman's medical history, age and current health status. Infertility, for instance, can be reversed by hormonal therapy, and cosmetic treatments are available for mild as well as moderate-to-severe abnormal hair growth. Oral contraceptives, which suppress testosterone production by the ovaries, may also be prescribed for women with moderate-to-severe hair growth if the women do not have diabetes, high blood pressure or other high risk factors. Other medications are available that either suppress secretion of testosterone or inhibit its activity. However, the longer the hair follicle has been exposed to the testosterone, the less likely that hair will return to an entirely normal growth pattern.

(More)



A rare cause of hirsutism -- and one that can be life-threatening -- is an ovarian or adrenal gland tumor. Such tumors directly produce testosterone or testosterone precursors. Typically, a woman will see her physician because of a rapid increase in body hair growth. The woman may also have noticed changes in her menstrual cycle, as well as enlarged muscles and clitoris. The condition requires surgical removal of the tumor, whether benign or malignant. Once the tumor is gone, hormonal production returns to normal and ovulation is restored. Abnormal hair growth diminishes.

Another less common cause of hirsutism is late-onset adrenal hyperplasia, an enzymatic disorder which may begin during puberty. With adrenal hyperplasia, a lack of an adrenal enzyme triggers an overproduction of testosterone by the adrenal gland. As many as 1 to 3 percent of hirsute women have the enzymatic disorder. Treatment for late-onset adrenal hyperplasia consists of an oral hormone replacement, which directly treats the disorder and reverses the hirsutism.

"For most women with hirsutism, the psychological distress is the primary factor that must be dealt with," says Leshin. "In certain cultures and societies, including ours, hirsutism is generally considered to be unfeminine, and that can have an affect on a woman's self esteem.

"However, in most cases, the woman can be reassured that the condition is not medically serious and can be treated with either cosmetic therapy alone or with a combination of cosmetic and medical therapy."

The hirsute woman has a variety of cosmetic options for control of excessive hair growth. "With mild hirsutism, I would not recommend any medical therapy. I would encourage local cosmetic therapy such as bleaching, shaving, depilatories (hair removers) and electrolysis," Leshin says. Although lengthy and expensive by most standards, electrolysis can permanently remove specifically-treated areas of excess hair.

"Cosmetic therapy is an important part of the treatment for hirsutism," says Leshin. "People need to know that it's okay to want to look good. When physicians recommend cosmetic therapy, they set the patient at ease and let her know that it's all right to do what it takes to feel good about herself."

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Distribution: AA,AB,AC,AF,AF1,AG,AG1,AH,AI,AK,AK1,AM,SC,SL

NOTE: The University of Texas Health Science Center at Dallas comprises Southwestern Medical School, Southwestern Graduate School of Biomedical Sciences and the School of Allied Health Sciences.