KERRY SKIN CLINIC
SKIN, HAIR + NAILS SPECIALISTS

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Male pattern hair loss

What is male pattern hair loss (androgenetic alopecia)?

Hair loss resulting in thinning is known as *alopecia*. When it is related to hormones (androgens) and genetics, it is known as *androgenetic alopecia*, or more commonly just *balding*. Male pattern alopecia is characterised by a receding hairline and/or hair loss on the top of the head. A similar type of hair loss in women, female pattern hair loss, results in thinning hair on the vertex (top) of the scalp but is generally less severe than occurs in males.

Male pattern balding

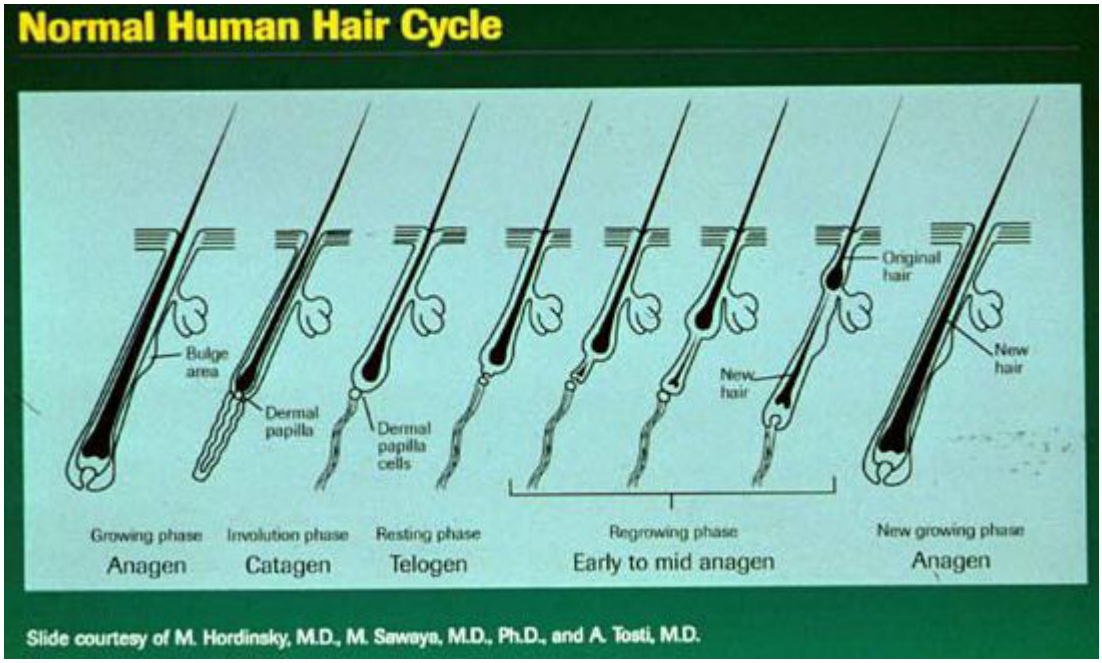
What causes pattern balding?

Male pattern hair loss is an inherited condition, caused by a genetically determined sensitivity to the effects of dihydrotestosterone, or DHT. DHT is believed to shorten the growth, or anagen, phase of the hair cycle, causing miniaturisation of the follicles, and producing progressively finer hairs. The production of DHT is regulated by an enzyme called 5-alpha reductase.
A few women present with male pattern hair loss because they have excessive levels of androgens. These women tend also to suffer from acne, irregular menses and excessive facial and body hair. These symptoms are characteristic of polycystic ovarian syndrome (PCOS) although the majority of women with PCOS do not experience hair loss. Less often, congenital adrenal hyperplasia may be responsible. Females that are losing their hair with age are more likely to present with female pattern hair loss, in which hormone tests are normal.

What is the hair growth cycle?

All hair follicles are replaced at different rates by the normal process of hair cycling. Hair growth alternates between phases of activity and rest. The growth period, called the anagen phase, lasts for two to six years. During this time, the follicle is long and deep, and produces thick, well-pigmented hair. About 90% of all scalp hairs are in the anagen phase at a given time.

Anagen is followed by a brief transition known as the catagen phase, which lasts a few weeks. During this time, the base of the follicle shrivels. The resting period, or telogen phase, lasts for two to four months. In this phase, the follicle withers even further. Following the telogen phase, the next anagen phase begins, and the old hair is dislodged and falls out to make room for a new hair to begin growing in its place.



The normal hair cycle - Image © 1998 Merck Sharpe & Dohme, with permission.

Where is DHT found in the body?

DHT is found in several tissues in the body including the scalp.

What is the role of 5-alpha reductase in the body?

5-alpha reductase is an enzyme that regulates production of DHT. An enzyme is a protein that acts as a catalyst to speed up a chemical reaction. 5-alpha reductase can be inhibited by specially synthesised drugs (see below).

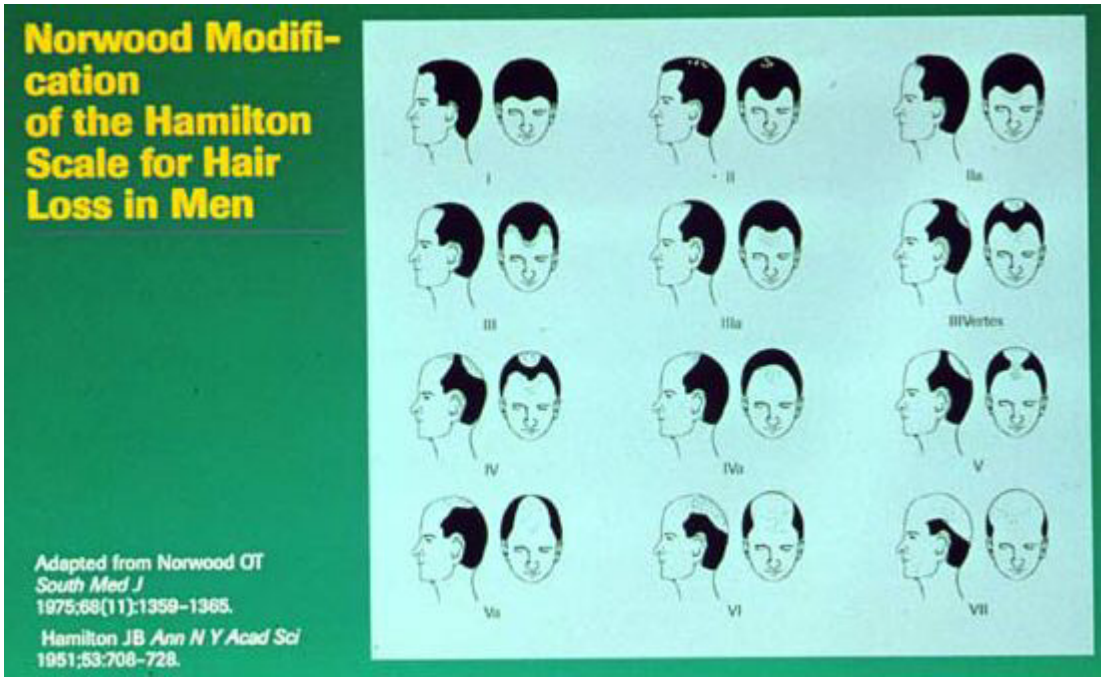
What role does heredity/genetics play in the male pattern hair loss?

Male pattern hair loss occurs in men who are genetically predisposed to be more sensitive to the effects of DHT. Researchers now believe that the condition can be inherited from either side of the family.

How common is male pattern hair loss?

Male pattern hair loss affects approximately 50% of men at some point in their lives. It affects different populations at different rates, probably because of genetics. Up to half of male Caucasians will experience some degree of hair loss by age 50, while other population groups such as Japanese and Chinese men are far less affected.

The severity of hair loss can be classified in several ways. Illustrated is the Norwood classification.



The Norwood classification of male pattern alopecia.

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Isn't hair loss just a cosmetic issue?

Male pattern hair loss can have a serious psychological impact. Studies have shown that hair loss can be associated with low self esteem, depression, introversion, and feelings of unattractiveness. This is reinforced by attitudes in Western society, which place great value on youthful appearance and attractiveness. Some studies have shown that based on appearance alone, men with hair loss are seen as less attractive, less assertive, less likeable, and less successful than men without hair loss.

What treatments are available for male pattern hair loss?

Current treatment options include:

- Hair replacement / transplantation
- Cosmetics
- Hairpieces
- Minoxidil solution
- Finasteride tablets (type II 5-alpha reductase inhibitor).
- Dutasteride (not available in New Zealand, November 2008)

There is some evidence that ketoconazole shampoo may also be of benefit, perhaps because it is effective in seborrhoeic dermatitis and dandruff.

For more information:

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