

The Bare Facts

Androgenetic alopecia is the medical name for common male pattern baldness. It is caused by hormones in genetically susceptible people.

The critical hormone in producing the androgenetic alopecia is Dihydrotestosterone (DHT). 5-Alpha Reductase is the chemical that determines how much DHT is produced.

Inheritance of androgenetic alopecia is uncertain but it appears as though it can be inherited from either the mother or the father.

Hair growth is cyclical with each follicle undergoing periods of active growth lasting up to three years followed by periods of dormancy lasting three months before the next hair is produced from the follicle. Normally this cycle continues throughout life with each hair growing, resting, then being shed and finally being replaced by another hair of the same size. In androgenetic alopecia the replacement hair is not the same size as the one that went before it and with each passage through the hair cycle it gets finer and shorter.

Alopecia progresses relentlessly leading to advanced baldness over a variable period of time. This period may be as short as 5 years or as long as twenty years, and the hair loss often occurs in fits and bursts.

Minoxidil lotion (Regaine), Finasteride tablets (Propecia) and hair transplant surgery are the only treatments medically proven to benefit androgenetic alopecia. There are many bogus treatments on the market and it is important to discuss any treatment with a qualified medical practitioner prior to commencing any such treatment.

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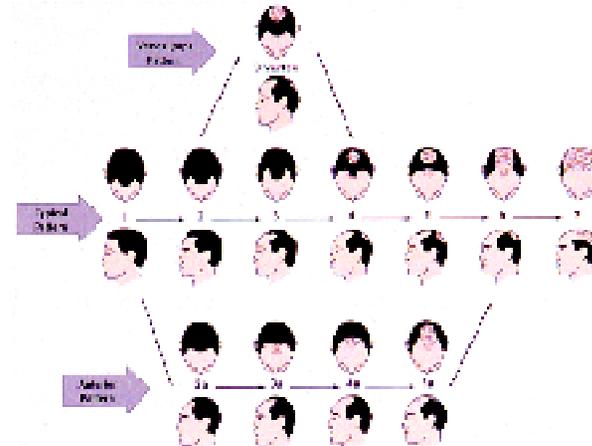
Where To Look for Help

Your Local Doctor should be the first person you see. He or she will be able to advise you on the appropriate medications to use or specialist to see.

Be sure to check any new treatments you are about to use with your doctor. There are many bogus treatments out there, most of them are expensive but relatively harmless.

Our website also has other information.

www alopecia.com.au



Male pattern baldness, Stages 1-7.

Reprinted from 'The Medical Clinician'. Male pattern baldness. Classification and incidence. South Med J 1975; 68:1369-1373.

Understanding

Common Baldness

The Australasian Hair and Wool Research Society
Department of Dermatology
St. Vincent's Hospital
41 Victoria Parade
Fitzroy VIC 3065

The Skin and Cancer Foundation (VIC)
95 Rathdowne Street
Carlton VIC 3053



Definition

Androgenetic alopecia or common baldness refers to scalp hair loss in men that occurs in a distinct pattern beginning with a receding frontal hairline, onto the development of a bald patch on the top of the head and, ultimately, complete loss of hair on the top of the head.

Every man will develop baldness eventually and what differs from person to person is the rate at which the hair is lost. In general, 20% of men will show the signs of balding by the age of 20, 30% by the age of 30, 40% by the age of 40 and 50% by the age of 50. The name androgenetic alopecia is derived from androgens (a class of male sex hormones that include testosterone), genetics (referring to the important of having inherited the balding gene) and alopecia, which means hair loss. There are many other causes of alopecia other than androgenetic alopecia and a precise diagnosis is required before any treatment is commenced.

Hormonal Influences

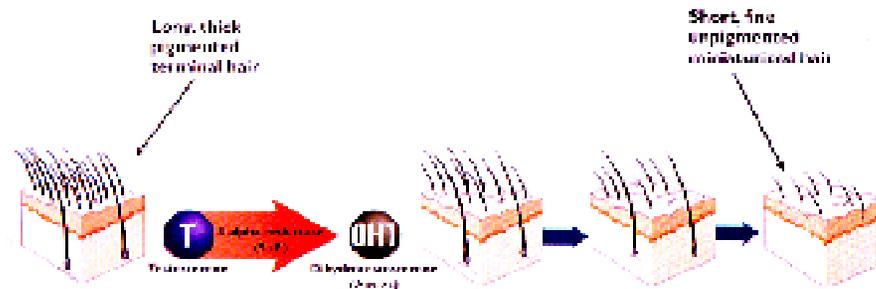
In the 1940's it was noted that men castrated before puberty did not go bald. Since that time we have learnt a lot about how androgens (male sex hormones) trigger the balding process in susceptible people. The crucial hormone is Dihydrotestosterone (DHT) which is produced in the hair follicle from testosterone. The Dihydrotestosterone is five time more active than the testosterone from which it is derived. The manufacture of Dihydrotestosterone is regulated by a chemical called 5-Alpha Reductase.

Inheritance of Balding

The tendency to develop hair loss at a young age

is passed on through families. The way in which it is passed on is not clear but it does seem as though the tendency can be inherited from either parent. While most people can identify someone in their family with hair loss this is not always the case (and such people may be the first in a long line of premature balding descendants).

How much 5-Alpha Reductase you have seems to be the inherited factor that determines when you start to go bald. The more 5-Alpha Reductase you have, the more Dihydrotestosterone you will produce and



Male Pattern Baldness: Dihydrotestosterone causes shortening and thinning of the hair, and a decreased number of large terminal hairs.

the quicker you will start to bald.

The Hair Cycle

Each hair follicle produces a number of hairs throughout your life. The first hair grows from the follicle at the rate of about 1cm a month for about three years. After that time that hair will die and no longer grow and simply sit dormant in the follicle for a further three months. After that three month interval the next hair starts to grow out of the follicle and, as it grows it pushes the first one out. This is a cycle that continues throughout life.

In the animals all the hairs are synchronised to grow and to stop growing at exactly the same time which

is why animals shed their hairs all at once during a moult. In humans the hair growth is random so that rather than losing all our hairs at once every 3 years we tend to lose a few each day. It's normal to lose up to fifty hairs a day. As long as the hairs that are lost are replaced by one of the same size and same characteristics, then the status quo is maintained.

If, however, the new emerging hair is not as thick and does not grow for as long as the one that went before it, then androgenetic alopecia starts to develop.

The mechanism of androgenetic alopecia is that in men genetically pre-disposed to produce more 5-Alpha Reductase, there will be more DHT. With each passage through the hair cycle the DHT will trigger shrinkage of the new hair and produce a gradual step-wise reduction in the size of the hairs on the scalp. Ultimately the hairs will be so small that they don't even reach the surface of the skin and all that one sees is the pore.

If you look at the skin on a bald scalp under the microscope all the follicles will still be present but they are just so tiny that they cannot be seen.

Time Frame For Balding

Hair loss can begin at any age after puberty. Once it starts it tends to continue through the various stages of hair loss over a ten to twenty year period. The hair loss is not constant but goes in fits and bursts. It is common for people to go through phases of accelerated hair loss lasting three to six months followed by periods of stability lasting six to eighteen months.

Just as it takes time to lose hair any treatment to restore hair will take many years.