Chapter 2

Male hair loss - which one is yours?

"Don't worry about it - we all have to grow old one day - but now is not the time!" © Ravi Bhanot

There are many types of hair loss or alopecia and they affect men, women and children. **Male baldness is by far the most common with over 90% cases being these**. The problem has become more significant in women too. Hair loss can have several causes and underlying reasons.

The types of baldness / hair thinning or hair loss are: (*identify yours)*

1. **Male Pattern Baldness (Alopecia Androgentica)**
2. **Alopecia Areata- loss of hair in some areas only**
3. **Alopecia Totalis & Universalis**
4. **Traction Alopecia**
5. **Diffuse Alopecia**
6. **Cicatricial Alopecia**
7. **Alopecia Senilis**
8. **Alopecia Adnata**
9. **Alopecia Follicularis**
10. **Alopecia Neurotica**
11. **Trichotillomania**

1. Male Pattern Baldness

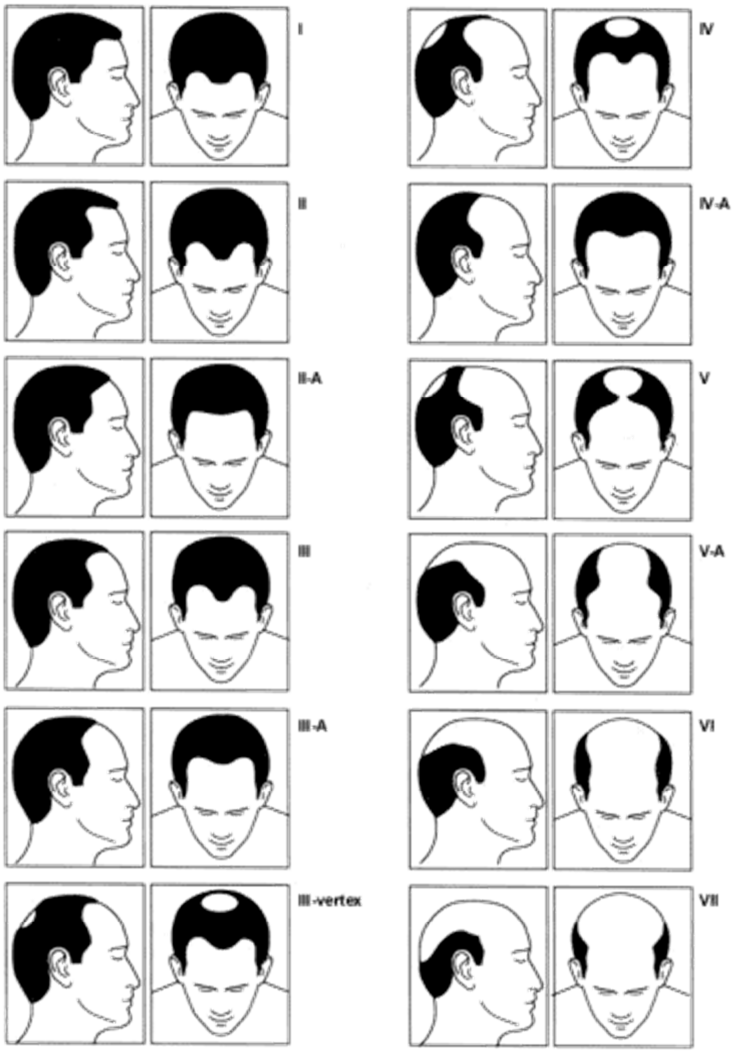
How to identify: baldness and/or thinning on top of head whilst the sides and back of the head have a strong crop of hair.

The main causes of this type of baldness are: a) genetic: a pattern in the family, b) increased amount of the hormone testosterone being secreted c) age and d) stress.

The stages of hair loss in men MPB.

Typically
hair is lost from the temples, the crown and from the frontal hairline.

With further loss the areas of baldness join up to form the common horseshoe pattern.



Norwood Classification of Male Pattern Baldness

What causes this pattern of hair loss?

- There have been many theories in the past for this type of hair loss. Strange stories such as **wearing certain tight types of hats**; **the type of musical instrument played or sexual activities have been** linked to hair loss.

The mind boggles!

- In 1942 Dr James Hamilton showed that Male Pattern Baldness (MPB) and how much it affects a male depends largely on the interaction of three factors: **Male hormones (Testosterone) or Androgens and how this is affected by the person's genetic pattern and the age of the individual** (1). Aristotle postulated that the reason why Eunuchs (castrated men) did not lose their hair was because they lacked Testosterone. This makes sense as Testosterone is involved in the process of hair loss - see below.

- This theory has been further developed now. Another factor that would appear to play a part is **an enzyme (a chemical in the body that quickens a process) called 5 Alpha Reductase.** This enzyme converts the male hormone Testosterone to Dihydrotesterone (DHT) (2).

- **Increased levels of DHT have been shown to bind to the male hormone receptor sites. These then interfere with the normal functioning of hair follicles.** These hair follicles then cause a gradual, progressive shrinkage in the length and calibre of hair follicles. This process is called miniaturization. Miniaturization results from shortening of the Anagen phase or growth phase of the hair cycle producing progressively finer hairs. 5 - Alpha reductase is found in higher quantities in the scalp of affected people.

- **It is believed that a hair follicle is genetically programmed for a certain number of growth cycles**. The shorter this cycle is in terms of time, the sooner the hair goes through the whole cycle and stops growing new hair. If for example the hair follicle is programmed for fifteen complete growth cycles each lasting an average of five years then the hair follicle will produce new hairs for 75 years (fifteen growth cycles at five years each). **If however the hair follicle is sensitive to DHT in the blood, the growth cycles will shorten from fifteen to complete by the age of fifty or less**. **Some hair follicles are programmed to have less than fifteen cycles** and this is why you see some men showing a receding hair line before the age of twenty whilst some continue growing hair until the age of thirty or forty.

Does this make you wonder whether we are similarly programmed before birth?

- **The other effect of DHT on sensitive hair follicles is that it results in thinner and less pigmented hair**. Whereas in normal hair growth, hair grows again after a rest period back to its original same thickness. Hair size in **hair follicles sensitive to DHT do not return to their full size after the rest period**. After each successive growth cycle, the hair follicle reduces in size to an even smaller size. This makes it worse as the affected hair follicles produced by these smaller hair follicles are themselves thinner and less pigmented than normal hair.

- By inhibiting the breakdown of Testosterone to DHT, hair loss can be prevented or at least slowed down.

Testosterone → DHT → Hair Loss

- In both males and females with androgenetic or MPB alopecia, the **transition from large, thick, pigmented terminal hairs to thinner, shorter, indeterminate hairs and finally to short, wispy, non-pigmented vellus hairs in the involved areas is gradual,** most would be relieved to know.

- **As hair loss progresses, the Anagen (growth) phase shortens**. As a result, more hairs are in the Telogen (resting) phase. One may notice an increase in hair shedding. The end result can be an area of total baldness.

- This area varies from one individual to another and is usually most marked at the vertex (top of head). **Women with androgenetic hair loss generally lose hair diffusely (thinly) over the crown.** This produces a gradual thinning of the hair rather than an area of marked baldness. The frontal hairline is often preserved in women with this disorder, whereas men note a gradual recession of the frontal hairline early in the process.

- In alopecia that is patterned, an increase in vellus (fine colourless short hair covering most of the body surface hairs) is seen, and fibrous root sheath (fibre looking roots) is seen below reduced sized follicles. **The hair seems patterned as you see long and short hair mixed on the scalp.** In people suffering from long-term hair loss, connective tissue may completely replace hair follicular structures-giving a bald look.

- **Hereditary hair loss happens over a period of time** so dealing with the problem early can sometimes slow the process. In addition, not all hair loss is hereditary. Hair loss may actually have a combination of causes, many of them reversible.

- **Upjohn Pharmaceuticals produced** a tablet to treat high blood pressure called Loniten, which was shown to have a side effect in 80% of patients causing hair growth. They then went on to produce from this the best-selling medicine: **Minoxidil lotion** (brand name Rogaine or Regain) to work solely on the scalp.

- So what does this show us? **<u>It shows us that affecting the chemistry of our blood can play a part in keeping our hair for longer.</u>**

- **In the animal kingdom, baldness is virtually only seen in human beings**.

(*Couldn't be due to our partners could it?)*

We can change our diet causing a negative effect to our health and to the growth of our hair more so than any other animal. There are other factors of course that need to be seen to. **Whilst we may not have the control over pollutants and chemical substances in the environment there is however no doubt that blood to the scalp and hair is one major consideration and this is under our control.**

What we can do to keep our blood more revitalized is discussed in the chapter: The *Nutrigro*® Hair Plan.

2. Alopecia Areata

How to identify: This is where there is hair loss in some areas of the scalp

- **It is seen in males and females** of all ages and races although younger people are more affected. Although this type of hair loss is **seen more on the scalp, it can occur in other parts of the body**. Onset most often begins in childhood. It can be psychologically devastating. It is not life threatening though.

In Alopecia Areata the hair follicles grow so slowly that the hair is not seen above the scalp. **The follicles can grow again with the right nurturing** (3).

What causes this pattern of hair loss?

- This is an **unpredictable, autoimmune skin disease** resulting in the loss of hair on the scalp and possibly elsewhere on the body. The affected hair follicles are mistakenly attacked by a person's own immune system or white blood cells. **This results in the hair growth stage stopping.**

If this condition starts before puberty, the prognosis is not good. Treatment for this condition is not that successful. Topical steroids and topical immunotherapy have been used as has Minoxidil but with limited success.

3. Alopecia Totalis and Universalis

How to identify: loss of hair throughout the whole scalp.

- **Alopecia Totalis is total loss of hair on scalp only whereas Alopecia Universalis is loss of hair throughout the body**. In Totalis this may start as small patches on the scalp and it has now resulted in all the hair on the scalp being lost.

Alopecia Totalis

The hair follicles are below the skin and there is a possibility of the hair growing again. In Universalis, the hair loss goes on throughout the body. **The Totalis and the Universalis are autoimmune diseases** – in other words it is the failure of the body to recognize its own constituent parts. This results in an immune response against its own cells and tissues. Alopecia Universalis is not always disadvantageous.

Ask Duncan Goodhew, the professional swimmer. He benefitted from alopecia universalis, which gave him a hydrodynamic advantage. Do bouncers voluntarily go Totalis bald to look tough or to look more sexy?

4. Traction Alopecia

How to identify: receding hairline seen where hair has been pulled

- **Traction alopecia is the hair loss that follows when there is too much tension on the hair**. **As the hair is pulled it loosens the follicles.** In tight plaiting for example, hair loss is often seen at the frontal hairline and at the sides of the base of the plait.

Is this again for a sexy image?

Devices such as tight ponytails, tight fitting helmets, tightly fitted hair rollers and tight braiding are typical reasons for this type of hair loss. If the hair were under tension for too long it is unlikely that hair would regrow.

5. Diffuse Alopecia

How to identify: diffuse hair loss across whole of scalp

- **Diffuse alopecia is a gradual hair loss everywhere on the whole scalp**. There is no itching or scaling involved. This is seen mostly in women. It may be due to an underactive thyroid, pituitary or adrenal glands or overactive thyroid gland. **Deficiencies in the diet of protein, iron or zinc can cause this type of baldness**.

- **Telogen effluvium is another type of diffuse alopecia. Here the number of hairs lost increases three months after an event**. Some drugs can cause this as a side effect. It is advisable to get medical help in this type of hair loss, as some of the reasons for this hair loss may be serious.

6. Cicatricial Alopecia

How to identify: hair loss is seen in scarred areas only

- This is **hair loss that is seen in areas scarred due to infection, wounds, burns or boils**. In these areas hair follicles don't grow. Hair loss can be diffuse or localized. The causes could be chemical or thermal burns, lupus erythematosus and infections.

7. Alopecia Senilis

How to identify: loss of hair is seen in old people for no apparent reason

- **This is hair loss due to old age**. There is no particular pattern of hair loss. It occurs due to our metabolism slowing down and the normal nutrients, which replenish the follicles not reaching them. As a result new hair does not appear as plentiful as it did in younger age.

8. Alopecia Adnata

- In rare exceptions children are born without hair.

9. Alopecia Follicularis

- Where there is **inflammation on the scalp** hair may not grow at this site.

10. Alopecia Neurotica

- **Hair loss sometimes follows a nervous disorder** or an injury to the nervous system.

11. Trichotillomania

- This occurs where there is **hair loss as a result of pulling your own hair;** sometimes this is done without the person realizing they are doing it. Young children sometimes do this to get the attention of their parents, for example after the birth of a baby in the family.

Have you figured out your type of hair loss is?