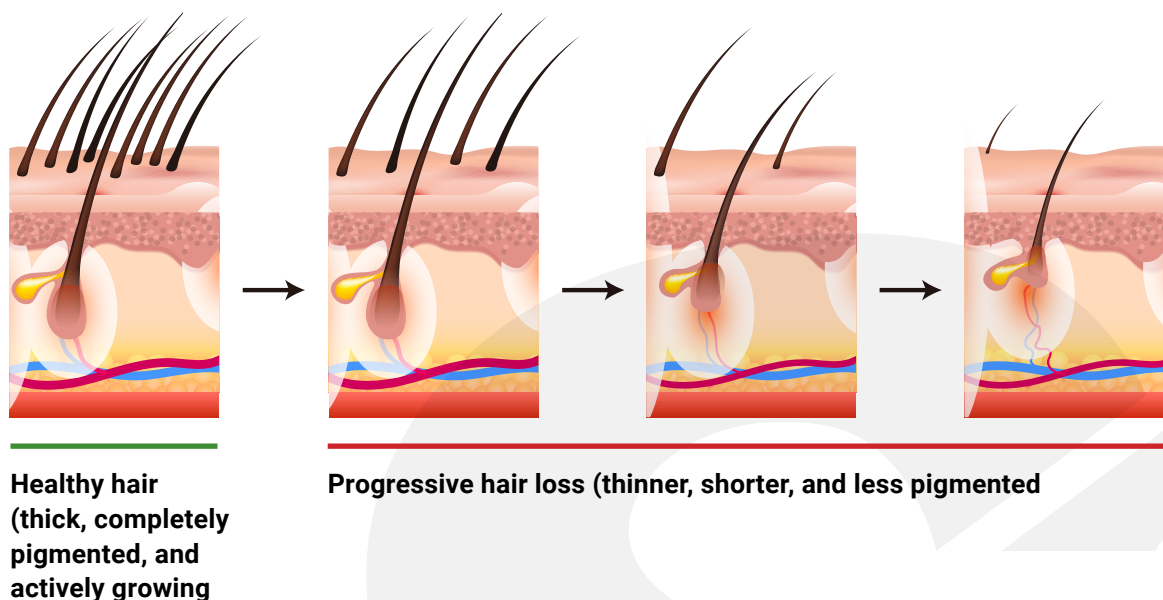

Hair Loss guide

By Fynn the kid

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Androgenetic alopecia



Lets start this little ebook talking about the villain of the movie, androgenetic alopecia ... If you suffer from it, it is your parents' fault, I'm sorry.

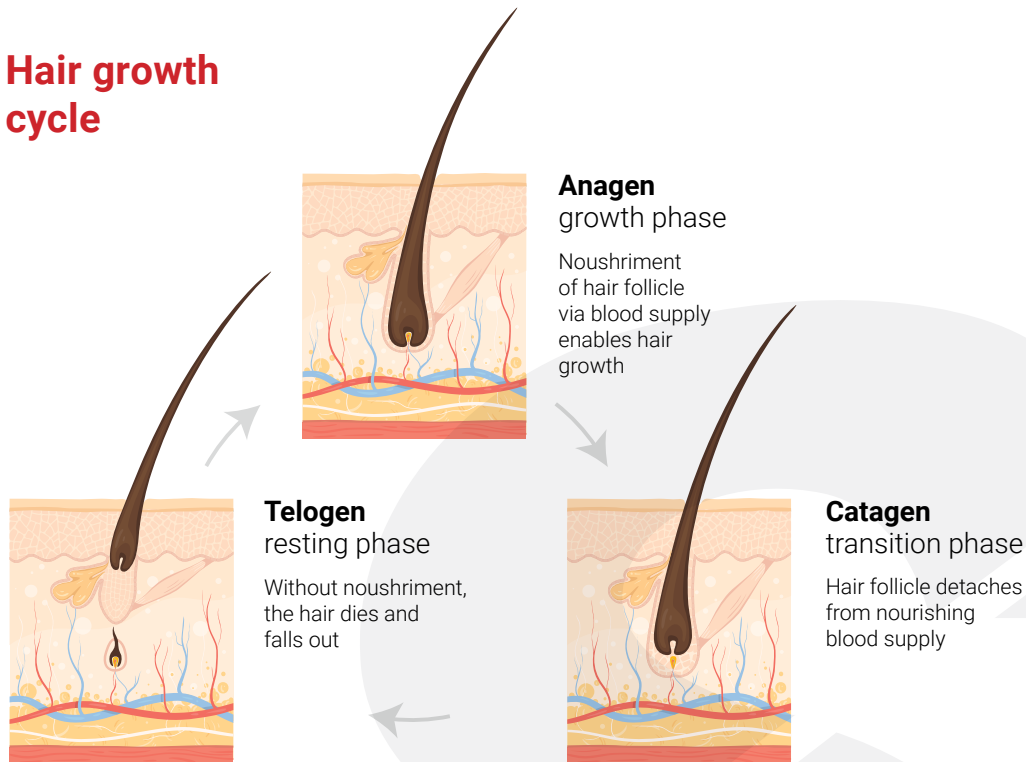
Androgenetic alopecia is a genetically determined loss or reduction of hair, it is the main cause of baldness (it occurs in 80% of men and 30% of women) but its severity will not always be the same, you can suffer from androgenetic alopecia and not be bald even when you get old or you can suffer a severe case of androgenetic alopecia and become bald as a teen.

There are various mechanisms involved in its cause, but the main one would be the overactivation of androgen receptors in the hair due to the action of hormones with a high androgenic activity that occurs at the transcriptional level in the follicles of the scalp.

DHT is the main cause of androgenetic alopecia, but the important thing will not be the levels of DHT in the blood as it has already been demonstrated in various studies, among them the study titled: "Relations between sex hormone level and characters of hair and skin in healthy young men", Rainer Knussmann, 1992; the most important thing is the levels of DHT within the hair follicle itself.

The pilo-sebaceous follicles

Hair growth cycle



The pilo-sebaceous follicle is physiologically classified as a fairly complex organ, throughout the life of the human being it performs a cycle called the «hair follicle cycle» that consists of repeating phases of growth, regression and degeneration, this cycle is regulated by various factors (including the hormonal ones).

Follicular growth is divided into three stages:

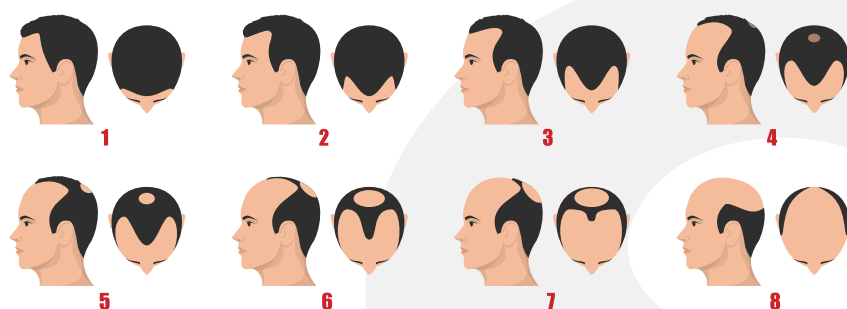
- Anagen phase: this phase lasts from 2 to 6 years depending on the individual, situation and type of hair, consists of the growth phase of the hair follicle, more than 85% of the scalp is in this phase.
- Catagen phase: this phase lasts from 2 to 3 weeks, it consists in that the two thirds of the hair follicle closest to the root are in a state of involution, less than 1% of the scalp is in this phase.

- Telogen phase: this phase lasts around 3 months, between 9 and 15% of the scalp will be in this resting phase.

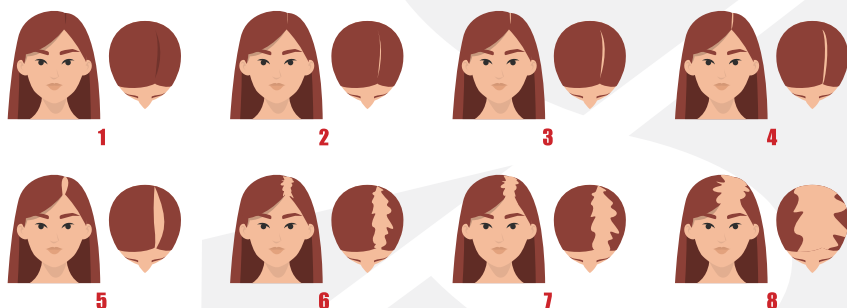
Androgenetic alopecia due to hormonal regulation reasons (and through DHT within the hair follicle) will mainly and drastically affect the Anagen phase, the follicles will not be considered mature and with the passage of time, the size of the the follicle will gradually shrink (to understand it in a simple way: hair grows like a fruit that needs time to mature, androgenetic alopecia does not allow it to grow and the fruit, as with certain diseases that affects them, will produce an unripe fruit (the follicle)), with the passage of time the density of the scalp will gradually reduce (a process that is very difficult to detect at first) ending in a pattern of baldness.

Hamilton and Ludwig alopecia patterns for male and female androgenetic alopecia

The degree of alopecia will depend on different factors, both men and women can use two very useful scales to know the severity of their degree of alopecia.



Here we have the Norwood scale that indicates the degree of alopecia in men, the greatest part of the alopecia will occur in the frontal and parietal areas of the skull



Here we have the Ludwig scale that indicates the degree of alopecia in women, alopecia will manifest itself more in the Temporal and Occipital areas of the skull.

Treatments

Nowadays there are a large number of treatments for alopecia, as well as a large number of articles published on different platforms such as Pubmed, Cochrane and Embase evaluating their effectiveness, therefore our function will be to analyze each of these articles to filter the evidence for «good quality (...)» non-surgical androgenetic alopecia treatments ... or that would be my job if the wonderful researchers Areej Adil and Marshall Godwin hadn't already done this job for me, thank you.

Areej Adil and Marshall Godwin were dedicated to selecting the most reliable articles to perform a systematic review with meta-analysis of the most effective treatments, in which the following were reviewed: "treatments: low-level laser light therapy in men, 5% minoxidil in men, 2% minoxidil in men, 1 mg finasteride in men, and 2% minoxidil in women" their conclusions were: " This meta-analysis strongly suggests that minoxidil, finasteride, and low-level laser light therapy are effective for promoting hair growth in men with

androgenetic alopecia and that minoxidil is effective in women with androgenetic alopecia.”

SPOILER: the final results were as follows:

Men

- Finasteride 1mg per day: 18.37 hairs / cm²

Minoxidil:

- 5% Minoxidil administered twice daily: 14.94 hairs / cm²
- 2% Minoxidil administered twice a day: 8.11 hairs / cm²
- Low level laser light therapy: 17.66 hairs / cm²

Women

- 2% Minoxidil administered twice a day: 112.41 hairs / cm²

IMPORTANT: some protocols include the addition of a «compounding formula» this is an improved formulation of the recommended compound (possibly combined with another compound) that will require the help of a pharmacist or chemist to be carried out.

The pilo-sebaceous follicles

The results of this therapy were impressive, 17.66 hairs / cm² surpassing the potency of Minoxidil and almost matching the potency of Finasteride.

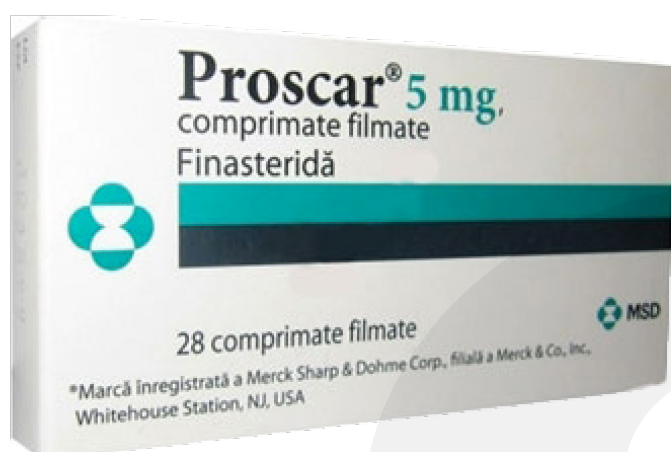
The most used and studied device currently (and therefore the only one that I am going to recommend) is the Hairmax Lasercomb (which costs between 200 and 400 dollars depending on the model, having a price that is not expensive at all and being very profitable in the medium and long term).

Protocol

- Use it for 15 to 25 minutes 3 times per week.



Finasteride, Topical Finasteride and Topical Finasteride with Minoxidil



As I have previously said since the problem is not about the blood levels of DHT but the amount of DHT within the hair follicle, while using oral Finasteride we will not only be inhibiting DHT within the follicle but also at the blood level, which can cause long term side effects, such as gynecomastia, loss of libido and depression among others (yes guys, Post-Finasteride syndrome does exist and is worse than going bald for people who have unfortunately experienced it ... remember that Finasteride was originally invented as a prostate aid). If we want to use oral Finasteride we would have to take 1mg a day.

The good news are that if we use topical Finasteride, we would avoid all these annoying side effects (to a certain extent, since inhibition at the blood level would continue to occur but at a much lower rate, focusing mainly on inhibition at the follicular level).

How to prepare topical Finasteride with Minoxidil

It should be noted that making this preparation is very simple and does not require any type

chemistry knowledge (later on we will talk about a more advanced preparation that will require the help of a pharmacist).

Our goal is to achieve a 5% solution of Minoxidil with 0.1% (we can increase up to 1%) of Finasteride, which would basically be 1mg of Finasteride for every 1ml of the topical lotion.

Materials

- Kitchen mortar
- 5% minoxidil
- Finasteride (Proscar).

Manufacturing

1. Grind with a kitchen mortar 60mg of Finasteride (you have to try to make the particles as small as possible).
2. Mix it with a whole bottle of 5% Minoxidil (they are 60mL).
3. Shake it vigorously for several minutes.
4. Let it sit overnight.

Minoxidil



Minoxidil it is very in mitigating androgenetic alopecia, it is a vasodilator drug which was created as a treatment for patients with kidney problems, in clinical trials it was discovered that its topical use caused hair growth .

Protocol for men:

- 5% Minoxidil administered twice daily: 14.94 hairs / cm²
- 2% Minoxidil administered twice a day: 8.11 hairs / cm²

After knowing the previous results, I recommend using the highest concentration.

Protocol for women:

- 2% Minoxidil administered twice a day: 112.41 hairs / cm²

As you can see, the treatment of alopecia in women with the use of Minoxidil is much more effective than in men, therefore this protocol would enough.

Ketoconazole



It is a drug used to treat vaginal conditions in women, it also serves as an antiandrogen, it can be bought very easily at any pharmacy.

In certain situations, especially with the use of anabolic steroids that do not require an enzymatic conversion to be converted to DHT, it will be much more useful than Finasteride because acting on the enzyme would have no effect but Ketoconazole acting as a topical antiandrogen would have a noticeable effect.

Protocol

- Apply once or twice a day to the most affected areas of the hair.

Latanoprost Ophthalmic solution



This is a drug derived from prostaglandins that is used in people who have ocular hypertension, like the drugs previously named, this drug also has a different use than its main one.

In clinical trials it was noticed that the use of these drops lengthened the hairs of the eye-brows in a remarkable way, the prostaglandins lengthened the duration of the anagen phase allowing a greater “maturation” of the follicles avoiding or mitigating the effects of DHT.

Protocol

Apply Latanoprost Ophthalmic solution at a dose of 0.005% in the most affected areas on a daily basis.

TIP: you can ask the pharmacists to make two compounding formulas:

Latanoprost cream

- Latanoprost 0.005%
- Fitalite (or any similar compound).

Latanoprost and minoxidil cream

- Minoxidil 5%
- Latanoprost 0.005%
- Fitalite (or any similar compound).

Macro treatment for hair loss

Stimulation of hair growth with daily application	Minoxidil, procapil, peptides, epigenin, biochinin, LLLT, PRP, growth factors
Support rapid cell division and hair growth cycles	
Day 1	Antioxidants, calcium
Day 2	Iron, folic acid, vitamin C, omega 3
Day 3	Amino acids, B-complex and biotin
Antidandruff head wash every 3 days	2% ketoconazole
Regular use of or daily use of shampoo	Mild shampoo, Ph balanced without any additives

In the case that we want to get the most out of our hair growth, the Indian researcher Rajendrasingh Rajput made a table combining most of the treatments that have proven to be effective.

The following guidelines must be followed:

- Do not consume a multivitamin (high doses of vitamin D for example cause hair loss).
- Minoxidil will have to be applied every night (it can also be used at night and in the morning).

Finasteride best compounding formula

This compounding formula is based on the article entitled «Clinical Efficacy of a Topical Compounded Formulation in Male Androgenetic Alopecia: Minoxidil 10%, Finasteride 0.1%, Biotin 0.2%, and Caffeine Citrate 0.05% Hydroalcoholic Solution» in my opinion is the best compounding formula that can be done, but to make it we will need the help of a pharmacist or chemist.

The formulation will be based on the following compounds: Minoxidil 10%, Finasteride 0.1%, Biotin 0.2%, Caffeine Citrate 0.05% Hydroalcoholic Solution.

Preparation method:

- Calculate the required amount of each ingredient.
- Accurately weigh or measure each ingredient.
- Mix the propylene glycol, ethyl alcohol (40 ml), and purified water.
- Add the minoxidil while stirring.

- A Ketoconazole shampoo has to be used every three days.
- The rest of the days the hair will be washed with a neutral pH shampoo.
- We can use peptides from egg yolks.
- We can use low-level laser light therapy 20 minutes per week (or use the indications previously given in its respective chapter).

- Slowly and drop by drop, add the 20% sulfuric acid solution to a pH between 4.5 and 5.0. Add biotin, finasteride and caffeine citrate, mix them properly.
- Add enough ethyl alcohol to reach the desired final volume and mix it properly.
- Packaging and label.

Container:

- Hermetic containers.

Data to take into account

Finally I am going to talk about certain factors that can promote hair loss or prevent it.

The following external and internal factors will promote hair loss:

Internal factors	External factors
Iron deficiency	Smoking and passive smoking
Calcium deficiency	Stress
Zinc deficiency	Alcoholism
Vits. A, C, E, and D deficiency	Lack of sleep
Obesity, insulin resistance	Crash dieting, fad diets, high protein diet
Metabolic disorders, gout, PCOS	Dryness, poor fluid intake
Seborrheic scalp	Poor scalp hygiene
Prolonged illness, surgery	Dust, pollution, fumes
Prolonged medication	Endocrine disrupting chemicals

We will need the following factors for the hair to be healthy:

- Minerals: Iron (in the form of ferrous fumarate), calcium and magnesium, on manganese, iodine, chromium, zinc, copper and molybdenum, the most important for me is zinc.
- Vitamins: Biotin (vitamin B7) for hair growth, Nicotinamide (vitamin B3) for its anti-inflammatory function, Cyanocobalamin to prevent anemia; Pyridoxine HCl (B6) to prevent anemia, vitamin C as the main antioxidant and for the synthesis of collagen, vitamin A and vitamin E as antioxidants; folic acid (B9) to avoid anemia and vitamin D (amounts less than 2,000 IU / d).
- Amino acids: L-histidine, tyrosine and lysine to improve hair growth; L-ornithine, which promotes DNA and protein synthesis, arginine, which participates in cell division, repair and endothelial stability, taurine, which has detoxifying effects; glycine, which is a precursor to the biosynthesis of various proteins.

Official store

I would like to clarify that all the products mentioned in the ebook can be purchased from Steroidify (<http://steroidify.com/>), which are the sponsors of this book, if you are interested in reading reviews about their reliability, look at the reviews they have in Eroids (<https://www.eroids.com/>) and you can see for yourself why it is the first source in the ranking.

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