

Male Pattern Hair Loss (MPHL)

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Hair loss is no longer an inevitable march to baldness. Medical advances over recent decades mean male hair pattern loss can be arrested and partially reversed with mainstream prescription treatments.

Male pattern hair loss affects every male to some degree as they grow older. There is not a single 60 year old man on the planet who has hair like a 16 year old. The cause of this hair loss is well established. It is genetic. Identical twins go bald at the same age, same rate and in the same pattern irrespective of diet, lifestyle or stress levels.

Over 190 genes are involved, and it is the interplay between these genes that determine when and how each man develops their male pattern hair loss. Environmental factors such as diet, lifestyle and stress may contribute to male pattern hair loss, but the combined effect of these environmental factors only account for a small amount of your hair loss.

So, what are the treatment options?

Finasteride

Finasteride is a Therapeutic Goods Administration-approved tablet that doctors have been prescribing to treat hair loss for more than 20 years.

Finasteride inhibits an enzyme called 5-alpha reductase and this stops the conversion of testosterone into dihydrotestosterone (DHT) in the prostate gland and in the hair follicles. DHT activate cells in the hair follicle to produce prostaglandin D that miniaturizes hair.

A prescription is needed for finasteride and your doctor will explain the benefits and risks of the drug before you decide to proceed.

The benefits are clear: men who start taking daily finasteride at the first signs of hair loss will not go bald. There are no interactions with other medications. Finasteride has an added benefit of reducing the risk of future development of prostate cancer.

But there is a small risk of sexual side effects such as erectile dysfunction, ejaculatory problems and reduced libido, which require careful management by an experienced doctor.

Topical Minoxidil

Developed in the 1950s as a tablet to treat high blood pressure, minoxidil was an abject failure due to unwanted hair growth. Re-invented as a lotion applied directly to the scalp, it was launched in the United States in 1988 and soon became popular around the world.

Minoxidil lotion is TGA-approved and available over the counter in pharmacies. Minoxidil is also available as Regaine foam which some men find easier to use.

No prescription or trip to the doctor is required, but talk to your pharmacist if you are taking any other medicines, especially high-blood-pressure medication.

Minoxidil lotion needs to be used for a minimum of 6 months. It takes this long to see the new hair growth. Men who use topical minoxidil can expect about 5000 new hairs to grow on their scalp. As these hairs emerge from the scalp they may push out old resting dead hairs and you may notice a temporary increase in hair shedding in the first few weeks of use.

Sublingual Minoxidil

Some men find minoxidil irritates their scalp or causes dandruff. Others simply don't like the look, feel or smell of minoxidil in their hair, or find the twice daily application tedious. Men who prefer tablets to topicals can get a prescription for minoxidil sublingual tablets.

The sublingual tablet is placed under the tongue and takes about 20 seconds to dissolve. Sublingual minoxidil has minimal effect on blood pressure and grows as much if not more hair than topical minoxidil without the need to put anything in the hair.

Sublingual minoxidil also needs to be used for a minimum of 6 months. It takes this long to see the new hair growth. Men who use sublingual minoxidil can expect about 10,000 new hairs to grow on their scalp. As with the topical minoxidil, emerging new hairs push out old resting dead hairs and you will notice a temporary increase in hair shedding in the first few weeks of use. Counter-intuitively, the men who get the most shedding at 4-6 weeks get the best regrowth at 6 months. The hair shedding should settle after 2-3 weeks.

Sublingual Minoxidil may cause some hair to grow elsewhere. You may find your eyelashes get longer, your eyebrows get thicker, your beard grows faster or even some additional hair on your back and shoulders. This is usually mild and fewer than 5% need a hair removal laser treatment.

There is flexibility to adjust the dose according to response. For men who want more hair, the dose of sublingual minoxidil can be increased every few months. This needs to be supervised by your doctor.

The use of minoxidil tablets to treat high blood pressure is approved by the TGA. The off-label use of sublingual minoxidil for the treatment of hair loss is not approved by the TGA. Australia has led the world in the use of sublingual minoxidil to treat hair loss. Professor Sinclair has conducted extensive research on its safety and effectiveness. The Australian company, Samson Medical holds worldwide patents on its' use.

Kerastase Densifique and Serum Jeunesse

These products contain stemoxidine, a prostaglandin analogue that inhibits Prostaglandin D and make hairs darker, longer and thicker. They can also prevent the hair shedding seen when men first use minoxidil. Densifique is a gel sold in hair salons applied once a day for the first 4 months. After the 4 month induction, maintenance therapy can be with either the gel applied 3 times a week or with the serum jeunesse which is a daily aerosol spray. The serum jeunesse also slows the onset of gray hair.

Men who use topical densifique can expect about 1-2000 new hairs to grow on their scalp.

Hair transplant surgery

Men who start treatment too late and whose hair is too far gone to be saved by tablets and lotions might consider hair transplantation surgery, a cosmetic surgical procedure that has improved dramatically in recent years.

Various techniques are available, but all involve taking hair-bearing skin from one part of the scalp and grafting these pieces of skin onto bald or thinning areas of the scalp.

The main techniques are FUT and FUE. FUT stands for follicular unit transplantation. A 15 cm strip of hair bearing skin is removed from the back of the scalp. The follicles are separated into individual units and then implanted into the bald scalp. The main down side, apart from the cost (A\$8,000 to A\$20,000, which depends on the number of grafts required) is the linear scar left behind on the back of the head locking men into longer hair styles.

The other option is follicular unit extraction (FUE). Rather than a strip of skin and a scar, donor tissue comprises multiple tiny punch grafts that heal invisibly. Further dissection of these grafts releases single hair follicle units that can be implanted one by one into the bald scalp to recreate a natural hair line.

Low level laser light therapies

Laser caps and laser combs are also being investigated as hair loss treatments. The caps contain multiple LED lights and are worn for 15-30 minutes every day. Some men notice a reduction in hair shedding and some hair regrowth over a 3-6 month period. There is considerable person to person variation in response. Caps cost approximately \$1,000-2,000.

Platelet Rich Plasma

This technique involves taking 30-50 ml of blood, and then spinning it down in a centrifuge machine to isolate the platelets. The platelets are then injected into the scalp every month for the first 6 months and then once every 3 months. Some men notice a reduction in hair shedding and some hair regrowth over a 6-12 month period. There is considerable variation in response person to person. Each treatment costs \$500 - 750.

Micro-needling and Fractionated laser

This technique involves a laser to produce thousands of precisely controlled minute wounds in the skin to promote wound healing and with it new follicle formation. The treatment is repeated once a month for 6 months then evaluated. Responders can continue the treatment indefinitely. Each treatment costs around \$300-400.

Vitamins

Wool research has shown that nutritional supplement can enhance wool growth. As wool is just hair on a sheep, the assumption has been that these same vitamins, amino acids and lipids can also help human hair grow.

How they compare

While finasteride works best at arresting progression of genetic hair loss, some men will achieve partial regrowth over their crown. Finasteride does not help recession at the temples. The sooner you begin treatment, the more hair there is to protect.

Minoxidil stimulates new growth all over the scalp, including the temples. Minoxidil works better before you go bald. Men who still have hair, regrow more hair than men who have lost it all.

Densifique also stimulates new hair and reduces the hair shedding sometimes seen when men first start using minoxidil.

When used together, the combination of minoxidil, finasteride and Densifique are a man's best chance to both arrest hair loss progression and maximise hair regrowth.

The role of laser, Light treatments, PRP and nutritional therapy still require additional research to quantify their benefits.

The take home message for boys staring at their bald fathers' scalp and wondering what their genes have in store for them is, don't panic, but don't leave it too late.

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