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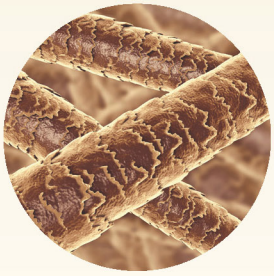
Strands of Science

The Ultimate Q&A

Expert Answers to your Hair Concerns







Editors
Iain Sallis
Bessam Farjo

MEDARC

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CHAPTER 38

I am a Male Diagnosed with Genetic Hair Loss—What are My Best Options?

Greg Williams

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INTRODUCTION

Most men will self-diagnose their genetic male pattern hair loss (MPHL) due to the typical appearance of receding temples, thinning forelocks, and balding crowns. However, there are dermatological conditions that can mimic androgenetic alopecia (AGA), so if there are atypical features or scalp symptoms such as itching, burning, or flaking, then confirmation of the diagnosis should be sought from a specialist. Options for managing MPHL range from cosmetic to nonsurgical and surgical interventions. Nonsurgical treatments can be split into pharmacological and nonpharmacological options.

COSMETIC

One of the simplest things that men with thinning hair can do, apart from using hairstyling agents, is to apply camouflage products such as microfibers, colored hairsprays, and hair colored scalp concealers.

Modern hair replacement systems can look very natural and can give the appearance of a full, thick head of hair.

Scalp micropigmentation involves tattooing tiny dots to simulate shaved stubble and gives the illusion of voluntarily shaving normal-density hair. This technique can also be used in-between hairs to give the illusion of more density in thinning areas in the right circumstances.

Nonsurgical Pharmacologic

There are two drugs that are licensed in the UK to treat AGA. About 5% topical minoxidil (Regaine®) is proven to decrease the rate of hair loss in men who have the enzyme minoxidil sulfotransferase (around 80% of men), which is required to produce the active metabolite minoxidil sulfate. It is commercially available over-the-counter as a liquid or foam and should ideally be applied to the scalp twice a day in areas where the hair is thinning.

Since MPHL is caused by the effect of dihydrotestosterone (DHT) on those hairs that have receptors for DHT, it makes sense that reducing the amount of DHT would be effective in treating MPHL. This can be achieved by stopping the conversion of testosterone to DHT, by blocking the activity of the enzyme 5α-reductase type 2 with the prescription medicine finasteride. This is commercially available on prescription under a number of different brands of which Propecia® is the most well-known. There is a side effect profile that should be considered prior to taking the drug, and this should be discussed with your prescribing doctor. More recently, a topical but mostly unlicensed form of finasteride has become available. Studies have shown that it has a lower side effect profile, but perhaps not as effective a treatment as the tablets.

A more effective blocker of 5α-reductase is dutasteride, which blocks the activity of both type 1 and type 2 5α-reductase. It is licensed in a small number of countries for the treatment of MPHL but can be prescribed almost everywhere else on an off-label basis to men for whom finasteride is not effective enough. Some practitioners have injected dutasteride into the scalp, and promising results from small case series have been published.

Oral minoxidil, which is licensed for the treatment of hypertension, can be prescribed off-label for AGA in much lower doses. There have been plenty of published studies supporting its effectiveness, and a licensed hair loss version may be in development in the near future. This is a more convenient route of using the drug, although it may be that topical minoxidil also exerts its effect by systemic absorption of the drug.

Nonsurgical Nonpharmacologic

It is possible that dry needling of the scalp (microneedling/dermarolling) might benefit early MPHL by causing microtrauma that results in inflammation, stimulation of growth factor release, and increased blood flow.

Autologous platelet-rich plasma (PRP) injections might be another way of introducing growth factors to miniaturizing hair follicles. Platelets are components of the blood that are packed with growth factors. PRP is produced by centrifuging a small volume of whole blood and is then injected into the scalp. Standardized protocols for PRP procurement are lacking and it is not possible to identify or quantify the growth factor components of PRP.

Mesotherapy is the term that is applied to the injection of vitamins such as biotin, amino acids, and other products into the scalp. Evidence for efficacy is weak.

Exosomes are cellular vesicles which can be derived from plants or animals. Like platelets, they are filled with growth factors and can be injected into the scalp. Their role in the treatment of MPHL is currently undetermined.

Low-level light therapy has been advocated to improve hair quality, and devices have been approved for safety by the Food and Drug Administration (FDA) since 2007. Stimulation of follicle growth by certain wavelengths of light has been proven in the laboratory. It is thought to be from the effect of light on the mitochondria (energy-producing component of the cell). There are over

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15 years of anecdotal support for benefits in patients, but independent high-quality randomized, double-blind, placebo-controlled studies are still largely lacking. Home-use devices such as caps and bands are more likely to encourage compliance than combs or in-office hoods.

HAIR TRANSPLANT SURGERY

This is an excellent option for suitable patients. Discussing who is or is not suitable for hair transplantation is beyond the scope of this chapter. Advice on what patients should be aware of when choosing a hair transplant surgeon or clinic can be found on the website of the British Association of Hair Restoration Surgery (BAHRS) https://www.bahrs.co.uk/patient-advice/. Advice to patients considering having hair transplant surgery abroad can be found at https://www.bahrs.co.uk/patient-advice/beware-of-the-hair-transplant-black-market/. Information regarding the basics of donor hair harvesting and recipient site insertion can be found at the International Society of Hair Restoration Surgery (ISHRS) website https://ishrs.org/patients/treatments-for-hair-loss/surgical-treatments/.

PROSTHETIC HAIR FIBERS

These are banned by the FDA in the USA due to issues pertaining to potential serious complications of their use. While they have been allocated a CE mark, and are therefore legal to use in the UK and Europe, they are not advocated for use in MPHL by this author. There may be cases where this treatment has its use, where hair transplant surgery is not possible. Guidance by the Cosmetic Practice Standards Authority is that insertion should only be performed by a hair transplant surgeon.

CONCLUSION

A healthy diet and lifestyle with adequate exercise, hydration, and rest are important for maintaining good physical health, including hair growth. Poor protein, vitamin, mineral, and trace element intake can affect hair health. Iron, vitamin D, and zinc are particularly important, and while many nutritional supplements contain biotin, additional intake of this, or any other supplement, in the absence of a measured deficiency, is unlikely to be of any benefit.

While hair cloning is not clinically proven at this time, the banking of hair cells for use in the future to rejuvenate existing hair follicles or grow new ones is currently on offer in the UK and around the world.

There are many options available to men who are experiencing genetic MPHL.

Hair transplant surgery may seem like a simple option to manage this condition, but it is a misconception that hair transplantation treats hair loss. It replaces lost hair. The earlier nonsurgical treatment for AGA is started, the better. Hair transplant surgery is an excellent option to restore hair loss but is best performed once hair loss has been stabilized with some form of treatment or at least is only progressing slowly.

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EDITOR'S NOTES

Dr Williams offers a comprehensive summary of the many options available to men diagnosed with MPHL. His answer reflects the growing scientific consensus that the most effective approach is multifaceted—involving a combination of lifestyle, medical therapy, and, where appropriate, surgical restoration.

At its core, MPHL is a chronic, progressive condition, meaning that the goal is rarely to reverse it completely, but rather to slow its progression, maintain what remains, and restore strategically when needed. In this sense, prevention—not cure—is the cornerstone of modern management.

For most men, the best outcomes come from:

- Early intervention with proven treatments (such as minoxidil or finasteride)
- Sustained commitment to a routine that supports both general health and scalp health
- Realistic expectations about what is and is not achievable

Just as important is the recognition that the decision not to treat is also valid. Hair loss is largely an emotional and psychological as well as an aesthetic issue, and while effective therapies exist, they are not obligatory. For some, acceptance, cosmetic camouflage, or simply adjusting personal identity around the change can be the right path. What matters most is that treatment decisions are made based on informed choice around feeling better about one's self, rather than pressure or panic.

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Strands of Science

Hair is more complex than what you just see on the head. It carries identity, confidence, biology, and emotion, and true expertise in hair spans far beyond any one profession. *"Strands of Science"* brings together nearly 50 of the world's top specialists—dermatologists, trichologists, surgeons, cosmetic chemists, psychologists, and hairdressers—to answer the questions people ask every day. Created by Iain Sallis MIT and Dr Bessam Farjo, this project was born from one powerful idea: No single person can know it all. Each expert was asked to answer with scientific precision—and the empathy they would show if the person asking was right in front of them. The result is a rare, human, and evidence-based guide to the science and meaning of hair. From clinical treatments to emotional truths, *"Strands of Science"* cuts across disciplines, delivering real answers with heart and honesty. It is a landmark work for professionals and anyone who understands that hair is far more than just biology.

Iain Sallis MIT IAT WTS MAPT is one of the UK's foremost trichologists, with over 20 years of clinical experience in diagnosing and managing hair and scalp disorders. He is the Founder of Hairmedic Ltd, a national network of eight clinics delivering ethical, evidence-based care to patients across the UK. A passionate advocate for multidisciplinary collaboration, Iain works closely with dermatologists, cosmetic scientists, and hair transplant surgeons to ensure a comprehensive understanding of hair loss from both clinical and cosmetic perspectives. He is Chair of the Trichology Sub-Committee for the British Association of Hair Restoration Surgery (BAHRS) and International Director of the Association of Professional Trichologists. Iain is also the Co-Founder of the International Trichology Congress (ITC), an inclusive global platform promoting open-access education in hair science. His work extends to research and product development, including an award-winning scalp health range, and he remains dedicated to raising standards and promoting professionalism in the field of trichology.

Bessam Farjo MB ChB BAO LRCPSI ABHRS FISHRS FIT is exclusively dedicated to practicing hair restoration surgery and medicine since 1993. He is a Fellow and past President of the International Society of Hair Restoration Surgery (ISHRS), past President and Co-Founder of the British Association of Hair Restoration Surgery, Diplomate and past Board Director of the American Board of Hair Restoration Surgery, Fellow and past Board Governor of the Institute of Trichologists, and Director and Co-Founder of the International Trichology Congress. Since 2000, he has been involved with hair research collaborations with Universities of Manchester, Birmingham, London, Bradford, and Durham as well as Unilever, Procter & Gamble, Intercytex plc, and HairClone Ltd (Co-Founder). He is widely published in peer-reviewed journals and has contributed numerous textbook chapters in the hair restoration and research field. In 2012, he jointly received one of the highest awards in hair restoration surgery, the ISHRS Platinum Follicle, for his work in hair loss and hair biology research.

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