Alopecia (Hair loss)

Introduction

Who is affected?

Male-pattern baldness is more common than female-pattern baldness, affecting around half of all men by 50 years of age.
Female-pattern baldness becomes more common in women after the menopause (when a woman's periods stop at around age 52).
Alopecia areata can occur at any age, although it is more common in people aged 15-29. It affects one or two people in every 1,000 in the UK.
Scarring alopecia occurs in both males and females, but is less common in children than adults. It accounts for about 7% of hair loss cases.
Anagen effluvium affects most people who have chemotherapy to some degree.

Alopecia is the general medical term for hair loss.

Types of hair loss

There are many types of hair loss with different symptoms and causes. Some of the more common types of hair loss are described below.

Male- and female-pattern baldness

Male-pattern baldness is the most common type of hair loss. As well as affecting men, it can sometimes affect women (female-pattern baldness). It can be particularly difficult for both men and women to cope with.

Male-pattern baldness follows a pattern of a receding hairline, followed by thinning of the hair on the crown and temples. During female-pattern baldness, hair usually only thins on top of the head.
Male- and female-pattern baldness is also called androgenic or androgenetic alopecia. Male-pattern baldness is a condition that runs in families, but it is not clear if this is the case with female-pattern baldness.

Alopecia areata

Alopecia areata is patches of baldness that may come and go. It can occur at any age, but mostly affects teenagers and young adults. Six out of 10 people affected develop their first bald patch before they are 20 years old.
Alopecia areata is thought to be caused by a problem with the immune system (the body's natural defence against infection and illness). It is also believed that some people's genes make them more susceptible to alopecia areata, as one in five people with the condition have a family history of the condition. In many cases the hair grows back after about a year.

Scarring alopecia

Scarring alopecia, also known as cicatricial alopecia, is hair loss that can occur as a result of complications from another condition. In this type of alopecia, the hair follicle (the small hole in your skin that an individual hair grows out of) is completely destroyed. This means your hair will not grow back.
Conditions that can cause scarring alopecia include lichen planus (an itchy rash affecting many areas of the body) and discoid lupus (a mild form of lupus affecting the skin, causing scaly marks and hair loss).

Anagen effluvium

Anagen effluvium is widespread hair loss that can affect your scalp, face and body. One of the most common causes of this type of hair loss is the cancer treatment chemotherapy.
It may be possible to reduce hair loss from chemotherapy by wearing a special cap that keeps the scalp cool. However, scalp cooling is not always effective and not widely available.
In most cases, hair loss in anagen effluvium is temporary. Your hair should start to grow back a few months after chemotherapy has stopped.

Telogen effluvium

Telogen effluvium is a common type of alopecia where there is widespread thinning of the hair, rather than specific bald patches. Hair is shed from the scalp, usually as a reaction to stress or medication. This type of hair loss tends to improve without treatment after a few months.

How is hair loss treated?

More common types of hair loss, such as male-pattern baldness, do not need treatment because they are a natural part of ageing and do not pose a risk to your health.
However, any type of hair loss can be distressing, so you should see your DOCTOR if you are worried about it.
Your DOCTOR should be able to diagnose your type of hair loss by examining your hair, and they can also discuss possible treatments with you. It is advisable to visit your DOCTOR before you try a private consultant dermatologist (skin care specialist).
If you wish to seek treatment for male-pattern baldness for cosmetic reasons, two medications called finasteride and minoxidil can be used. Minoxidil can also be used to treat female-pattern baldness.

However, these treatments are not effective for everyone and only work for as long as they are continued.
Alopecia areata is usually treated with steroid injections, although it is sometimes possible to use a steroid cream, gel or ointment. A treatment called immunotherapy may also be used. This involves stimulating hair growth by causing an intentional allergic reaction in the affected areas of skin.
If you have significant hair loss of any type, you may decide to wear a wig.
There are also some surgical options for hair loss, including a hair transplant and artificial hair implants.

Emotional issues

Hair loss can be difficult to come to terms with. The hair on your head can be a defining part of your identity. It reflects the image you have of yourself and how you want others to see you.
If you start to lose your hair, it can feel as if you are losing part of your identity. This can affect your self-confidence and sometimes lead to depression.
Speak to your DOCTOR if you are finding it difficult to deal with your hair loss. They may suggest counselling, which is a type of talking therapy where you can discuss your issues with a trained therapist.
You may benefit from joining a support group or speaking to other people in the same situation – for example, through online forums.

Symptoms of hair loss

Different types of hair loss have different symptoms. Sometimes, both the head and body can be affected.
Male- and female-pattern baldness

Male-pattern baldness usually starts around the late twenties or early thirties. By their late thirties, most men have some degree of hair loss.
Male-pattern baldness is so called because it generally follows a set pattern. The first stage is usually a receding hairline, followed by thinning of the hair on the crown and temples. This can leave a horseshoe shape of hair around the back and sides of the head. Sometimes it can progress to complete baldness, although this is uncommon.

Women's hair gradually thins with age, but women generally lose hair from the top of their head only. This is usually more noticeable after the menopause (when a woman's periods stop at around 52 years of age).

Alopecia areata

Alopecia areata causes patches of baldness about the size of a large coin. They usually appear on the scalp but can occur anywhere on the body.
There are usually no other symptoms, although in around one in 10 people the fingernails may also be affected, and may have a pitted or grooved appearance.
In most cases of alopecia areata, hair will grow back in a few months. At first, hair may grow back fine and white, but over time it should thicken and regain its normal colour.
Some people with alopecia areata go on to develop a more severe form of hair loss, such as:
alopecia totalis (no scalp hair)
alopecia universalis (no hair on the scalp and body)

Scarring alopecia

As scarring alopecia is caused by another health condition, you will have symptoms relating to this condition besides hair loss. Unlike other

forms of hair loss, the skin where the hair has fallen out is likely to be affected in some way.
For example, in cases where lichen planus has caused scarring alopecia, the skin may develop an itchy rash and may be inflamed.
In scarring alopecia, the hair follicles (small holes in the skin that contain the roots of each hair) are damaged and replaced with scar tissue. This means that new hair cannot grow, so the hair loss is permanent.

Anagen effluvium

Anagen effluvium, most commonly caused by chemotherapy, usually occurs quickly. In most cases, hair loss is noticeable within a few weeks of chemotherapy starting.
In anagen effluvium, hair loss is widespread, rather than in patches. As well as losing hair from your scalp, you may also lose hair from your body and face.
This type of hair loss is usually temporary. Your hair should stop falling out and start to grow back a few months after chemotherapy has stopped.

Telogen effluvium

In telogen effluvium, there is widespread hair loss from your scalp, rather than specific bald patches. Your hair may feel thinner than before, but you are unlikely to lose it all. Your other body hair will not usually be affected.
In most cases of telogen effluvium, your hair will stop falling out and start to grow back within six months.

Causes of hair loss

Each type of hair loss has different causes, although the causes of some types are poorly understood.

Male- and female-pattern baldness

Male-pattern baldness is hereditary, which means it runs in families. It is not clear if this is the case with female-pattern baldness.

Male-pattern baldness is thought to be caused by oversensitive hair follicles (holes in the skin that contain the roots of each hair). This is linked to the hormone dihydrotestosterone (DHT), which is made from the male hormone testosterone.

If there is too much DHT, the follicles react to it. The hair becomes thinner and grows for a shorter length of time than normal. The balding process is gradual because different follicles are affected at different times.

The causes of female-pattern baldness are less well understood. Women who have been through the menopause may have an increased chance of female-pattern baldness because they have fewer female hormones.

Alopecia areata

Immune system imbalance

Alopecia areata is an autoimmune condition. The immune system is the body's natural defence system, which helps protect it from infection by bacteria and viruses.

Usually, the immune system attacks the cause of an infection, but in the case of alopecia areata it damages the hair follicles instead. It is not clear exactly why this happens. Fortunately, the hair follicles are not permanently damaged and in many cases the hair grows back within a few months.

Alopecia areata is more common among people with other autoimmune conditions, such as:

thyroid disease – conditions that affect your thyroid gland, such as an overactive thyroid (hyperthyroidism)

diabetes – a condition caused by too much glucose (sugar) in the blood

vitiligo – a condition that produces white patches on the skin

Alopecia areata is also more common among people with Down syndrome, a genetic condition that causes learning difficulties and affects physical development. More than one in 20 people with Down syndrome have alopecia areata.

Genetics

Some people may be genetically more vulnerable to alopecia areata. Certain genes (units of genetic material) may make the condition more likely.

Around one in five people with alopecia areata have a family history of the condition, suggesting that the tendency to develop the condition may be inherited. You may also be at an increased risk of alopecia areata if a member of your family has one of the autoimmune conditions mentioned above.

Scarring alopecia

Scarring alopecia is caused by permanent damage to the hair follicles. In many cases, it is not clear why this happens, although it is sometimes the result of another condition.

Conditions that can cause scarring alopecia include:

scleroderma – a condition that affects the body's connective (supporting) tissues, resulting in hard, puffy and itchy skin

lichen planus – a non-infectious, itchy rash that can affect many areas of the body

discoid lupus – a mild form of lupus that affects the skin, causing scaly marks and hair loss
folliculitis decalvans – a rare form of alopecia that most commonly affects men, causing baldness and scarring of the affected areas
frontal fibrosing alopecia – a type of alopecia that affects post-menopausal women where the hair follicles are damaged, and the hair falls out and is unable to grow back
Anagen effluvium

Anagen effluvium is usually caused by medical treatments for cancer, most commonly chemotherapy.
However, not all chemotherapy drugs cause hair loss and sometimes the hair loss is so small it is hardly noticeable.
In some cases, other cancer treatments – including immunotherapy and radiotherapy – may also cause hair loss.
Telogen effluvium

Telogen effluvium is a type of temporary hair loss that can be caused by your body reacting to:
hormonal changes, such as those that take place when a woman is pregnant
intense emotional stress
intense physical stress, such as childbirth
a short-term illness, such as a severe infection or an operation
a long-term illness, such as cancer or liver disease
changes in your diet, such as crash dieting
some medications, such as anticoagulants (medicines that reduce the ability of your blood to clot) or beta-blockers (used to treat a number of conditions, such as high blood pressure)

Treating hair loss

Although hair loss rarely needs to be treated, many people seek treatment for cosmetic reasons.
Many cases of hair loss are temporary (for example, due to chemotherapy), or are a natural part of ageing and don't need treatment. However, hair loss can have an emotional impact, so it is best to seek treatment if you are uncomfortable with your appearance.
If hair loss is caused by an infection or another condition, such as lichen planus or discoid lupus, treating the underlying problem may help prevent further hair loss.

Male-pattern baldness

Male-pattern baldness is not usually treated, as the treatments available are expensive and do not work for everyone.
Two medicines that may be effective in treating male-pattern baldness are:
finasteride
minoxidil
You may also want to consider wearing a wig or having surgery.

Finasteride

Finasteride is available on private prescription from your DOCTOR. It comes as a tablet that you take every day.
It works by preventing the hormone testosterone being converted to the hormone dihydrotestosterone (DHT). DHT causes the hair follicles to shrink, so blocking its production allows the hair follicles to regain their normal size.

Studies have suggested finasteride can increase the number of hairs people have (hair count) and can also improve how people think their hair looks.
It usually takes three to six months of continuously using finasteride before any effect is seen. The balding process usually resumes within six to 12 months if treatment is stopped.
Side effects for finasteride are uncommon. Less than one in 100 men who take finasteride experience a loss of sex drive (libido) or erectile dysfunction (the inability to get or maintain an erection).

Minoxidil

Minoxidil is available as a lotion that you rub on your scalp every day. It is available from pharmacies without a prescription. It is not clear how minoxidil works, but evidence suggests it can cause hair regrowth in some men.
The medication contains either 5% or 2% minoxidil. Some evidence suggests the stronger version (5%) is more effective. Other evidence has shown that this is no more effective than the 2% version. However, the stronger version may cause more side effects, such as dryness or itchiness in the area it is applied.
Like finasteride, minoxidil usually needs to be used for several months before any effect is seen. The balding process will usually resume if treatment with minoxidil is stopped. Any new hair that regrows will fall out two months after treatment is stopped. Side effects are uncommon.
Female-pattern baldness

Minoxidil is currently the only medicine available to treat female-pattern baldness.
Minoxidil lotion may help hair grow in around one in four women who use it, and it may slow or stop hair loss in other women. In general,

women respond better to minoxidil than men. As with men, you need to use minoxidil for several months to see any effect.
Other treatments for hair loss include wigs and surgery (see below).

Alopecia areata

There is no completely effective treatment for alopecia areata. However, in most cases the hair grows back after about a year without treatment. So "watchful waiting" is sometimes best, particularly if you just have a few small patches of hair loss.
Some treatments for alopecia areata are outlined below.

Corticosteroid injections

Corticosteroids are medicines containing steroids, a type of powerful chemical called a hormone. They work by suppressing the immune system (the body's natural defence against infection and illness). This is useful in alopecia areata because the condition is thought to be caused by the immune system damaging the hair follicle.
Corticosteroid injections appear to be the most effective treatment for small patches of alopecia. As well as your scalp, they can also be used in other areas, such as your eyebrows.
A corticosteroid solution is injected several times into the bald areas of skin. This stops your immune system from attacking the hair follicles. It can also stimulate hair to grow again in those areas after about four weeks. The injections are repeated every few weeks. Alopecia may return when the injections are stopped.
Side effects of corticosteroid injections include pain at the injection site and thinning of your skin (atrophy).

Topical corticosteroids

Topical corticosteroids (creams and ointments) are widely prescribed for treating alopecia areata, but their long-term benefits are not known.

They are usually prescribed for a three-month period. Possible corticosteroids include:

betamethasone

hydrocortisone

mometasone

These are available as a lotion, gel or foam depending on which you find easiest to use. However, they cannot be used on your face, for example on your beard or eyebrows.

Possible side effects of corticosteroids include thinning of your skin and acne (spots).

Corticosteroids tablets are not recommended due to the risk of serious side effects, such as diabetes and stomach ulcers.

Minoxidil lotion

Minoxidil lotion is applied to the scalp and can stimulate hair regrowth after about 12 weeks. However, it can take up to a year for the medication to take full effect.

Minoxidil is licensed to treat both male- and female-pattern baldness, but is not specifically licensed to treat alopecia areata. This means it has not undergone thorough medical testing for this purpose.

Minoxidil is not recommended for those under 18 years old.

Immunotherapy

Immunotherapy may be an effective form of treatment for extensive or total hair loss, although fewer than half of those who are treated will see worthwhile hair regrowth.

A chemical solution called diphencyprone (DPCP) is applied to a small area of bald skin. This is repeated every week using a stronger dose of DPCP each time. The solution eventually causes an allergic reaction and the skin develops mild eczema (dermatitis). In some cases, this results in hair regrowth after about 12 weeks.

A possible side effect of immunotherapy is a severe skin reaction. This can be avoided by increasing the DPCP concentration gradually. Less common side effects include a rash and patchy-coloured skin (vitiligo). In many cases, the hair falls out again when treatment is stopped.
Immunotherapy is only available in specialised centres. You will need to visit the centre once a week for several months. After DPCP has been applied, you will need to wear a hat or scarf over the treated area for 24 hours because light can interact with the chemical.

Dithranol cream

Similar to immunotherapy, dithranol cream is applied regularly to the scalp before being washed off. It causes a skin reaction, followed by hair regrowth in some cases.
However, it has not been proven that dithranol cream is significantly effective in the long term. It can also cause itchiness and scaling of the skin and can stain the scalp and hair. For these reasons, dithranol is not widely used.

Ultraviolet light treatment

Two to three sessions of light therapy (phototherapy) are given every week in hospital. The skin is exposed to ultraviolet (UVA or UVB) rays. In some cases, before your skin is exposed to UV light you may be given a medicine called psoralen, which makes your skin more sensitive to the light.
The results of light therapy are often poor. The treatment can take up to a year to produce maximum results and responses vary, with a high relapse rate. It is often not a recommended treatment because side effects can include:
nausea (feeling sick)
pigment changes to the skin

an increased risk of skin cancer

Tattooing

For many people, it is possible to replicate hair with a tattoo. This is known as dermatography and generally produces good long-term results, although it is usually expensive and can only be used to replicate very short hair.
This is usually carried out for eyebrows over a few hourly sessions and can even be used as a treatment for scalp hair loss caused by male-pattern baldness.

Wigs

Wigs can be a useful treatment for people with extensive hair loss.
Synthetic wigs

Acrylic wigs last for six to nine months. They are easier to look after than wigs made of real hair because they do not need styling. However, acrylic wigs can be itchy and hot, and need to be replaced more often than wigs made from real hair.
Real hair wigs

Some people prefer the look and feel of wigs made from real hair even though they are more expensive.
Real hair wigs last for three to four years, but are harder to maintain than synthetic wigs because they may need to be set and styled by a hairdresser and professionally cleaned.

Complementary therapy

Aromatherapy, acupuncture and massage are often used for alopecia, but there is not enough evidence to support their use as effective treatments.

Hair loss surgery

Most men and women considering hair loss surgery have male-pattern or female-pattern baldness. However, surgery is sometimes suitable for a range of alopecia conditions.

Surgery for hair loss should only be considered after trying less invasive treatments.

The success of hair loss surgery depends on the skill of the surgeon, as complications can arise. It's best to speak to your DOCTOR for advice before seeking out a surgeon in the private sector.

The main types of hair loss surgery are explained below.

Hair transplant

Under local anaesthetic (painkilling medication), a small piece of scalp (about 1cm wide and 30-35cm long) is removed from an area where there is plenty of hair. The piece of scalp is divided into single hairs or tiny groups of hairs, which are then grafted onto areas where there is no hair.

Stitches are not needed to attach the grafts because they are held in place by the clotting (thickening) action of the blood when the hairs are inserted. Fine hairs are placed at the front of the scalp and thicker hairs towards the back in a process called grading. This helps achieve a more natural result. Within six months, the hair should settle and start to regrow.

Hair transplants are carried out over a number of sessions. There should be a break of nine to 12 months between procedures. As with any type of

surgery, there is a risk of infection and bleeding, which can lead to hair loss and noticeable scarring.
Hair transplantation can be expensive and take a long time.

Scalp reduction

Scalp reduction involves removing pieces of bald scalp from the crown and the top of the head to move hairy parts of the scalp closer together. This can be done by cutting out loose skin and stitching the scalp back together, or it can be done by tissue expansion.
Tissue expansion is where a balloon is placed underneath the scalp and inflated over several weeks to expand the skin in stages. The balloon is then removed and the excess skin is cut out.
Scalp reductions are not suitable for hair loss at the front of the scalp because it can cause scarring. There is also the risk of infection in the area.
Scalp reduction is not usually used for male-pattern baldness, but it is available to people with scarring alopecia. Surgery should only be carried out after any underlying conditions have cleared up.
Artificial hair

Artificial hair implantation is marketed as a treatment for male-pattern baldness. It involves implanting synthetic fibres into the scalp under local anaesthetic.
Artificial hair implantation carries serious risks of infection and scarring, but clinics may be reluctant to inform people of the possible complications to avoid losing potential clients.
Artificial hair implantation is not recommended by dermatologists due to the risk of complications such as:
infection
scarring
synthetic fibres falling out

People considering hair loss surgery should explore more established treatments, such as hair transplantation and scalp reduction, because the advantages and disadvantages of these techniques are better understood.

Cloning

The latest research into hair loss treatments is studying hair cell cloning. The technique involves taking small amounts of a person's remaining hair cells, multiplying them, and injecting them into bald areas.
Cloning is intended to treat both male- and female-pattern baldness. However, the science behind the technique is new and more trials are needed before it can be fully assessed.