CONDITION

Alopecia areata

Learn how alopecia areata causes patchy or extensive hair loss, how it is diagnosed, and which treatments and follow-up care may help.

WHAT IT IS
Autoimmune condition causing hair loss

BODY SYSTEM
Skin and hair

MAIN SYMPTOMS
Sudden patchy hair loss, widespread thinning, itching or tingling, nail pitting

WHAT CAUSES IT
Immune attack with genetic susceptibility

HOW IT IS DIAGNOSED
Clinical examination and dermatoscopy, rarely scalp biopsy

MAIN TREATMENT
Immune-modifying treatment or watchful waiting

CAN IT BE CURED?
No, regrowth is not guaranteed

IS IT AN EMERGENCY?
Sometimes, with thoughts of self-harm

LONG-TERM OUTLOOK
Unpredictable, with regrowth and recurrence possible

Overview

Alopecia areata is an autoimmune condition that causes hair loss. "Autoimmune" means the immune system mistakenly attacks part of the body. In this condition, the attack is directed at hair follicles, the small structures in the skin that grow hair.

Hair loss often appears as one or more smooth, round or oval patches on the scalp. It can also affect the eyebrows, eyelashes, beard, and other body hair. Some people lose most or all scalp hair, while others have small patches that regrow without treatment.

Alopecia areata is not contagious. It is not caused by poor hygiene, and it usually does not permanently destroy the hair follicles. Because the follicles remain present, hair may regrow. However, the course is difficult to predict. Hair can regrow and later fall out again, or new patches can develop while other areas improve.

The condition does not usually affect physical health, but it can have a major emotional and social impact. Changes in appearance may affect confidence, relationships, school, or work. Loss of eyelashes, eyebrows, or nasal hair can also reduce protection from dust, sweat, and sunlight.

Symptoms

The most common sign is sudden hair loss in clearly defined patches. The skin in these areas usually looks normal and does not have the scale, thick scarring, or open sores seen in some other scalp conditions.

Hair loss may take several forms:

Short hairs that are narrower near the skin may appear at the edges of a patch. These are sometimes called "exclamation point hairs." Broken hairs or tiny dark dots may also be visible.

The affected skin is often comfortable, although some people notice itching, tingling, or a mild burning feeling before or during hair loss.

Nail changes can occur. The nails may develop small dents called pits, roughness, ridges, or increased brittleness. Significant nail damage is less common.

Regrowing hair may initially be fine or white. Its usual color and thickness may return over time, although this is not guaranteed. Gray or white hairs may sometimes be spared during an episode.

Hair loss caused by alopecia areata is usually not a medical emergency. Arrange a routine appointment if you develop unexplained patchy or rapid hair loss. A clinician can check for other causes, including infections and conditions that may scar the follicles.

- Patchy alopecia areata: One or more smooth, round or oval areas of hair loss.
- Alopecia totalis: Loss of all or nearly all scalp hair.
- Alopecia universalis: Loss of scalp, facial, and body hair.
- Ophiasis pattern: A band of hair loss around the sides and back of the scalp.
- Diffuse alopecia areata: Widespread thinning rather than separate bald patches.

Causes and risk factors

Alopecia areata develops when immune cells gather around hair follicles and interrupt normal hair growth. Researchers do not fully understand why this happens. The condition appears to

result from a combination of genetic susceptibility and environmental or immune triggers.

Stress is sometimes reported before an episode, but it is not the sole cause. Many people develop alopecia areata without a clear stressful event. A person should not be blamed for causing the condition through stress, diet, hair care, or personal choices.

The likelihood may be higher in people who have:

Having one of these factors does not mean that alopecia areata will occur. Many affected people have no known family history or related illness.

Hair treatments do not cause alopecia areata. However, tight hairstyles, chemicals, heat, fungal infections, compulsive hair pulling, and some medicines can cause other forms of hair loss. These possibilities are considered during diagnosis.

- A close relative with alopecia areata.
- Another autoimmune condition, such as autoimmune thyroid disease or vitiligo.
- Atopic conditions, including eczema, asthma, or allergic rhinitis.
- Certain genetic conditions, including Down syndrome.

Diagnosis

A dermatologist, primary care clinician, or pediatric clinician can often diagnose alopecia areata by examining the pattern of hair loss, the scalp, and the nails. They may ask when the loss began, whether it happened suddenly, and whether similar episodes have occurred before.

The clinician may gently pull on hairs near the edge of a patch to see whether they come out easily. A handheld magnifying device called a dermatoscope can show changes around the follicles that are difficult to see with the naked eye.

The examination also helps distinguish alopecia areata from other conditions. For example, scalp ringworm may cause scaling, inflammation, or broken hairs and needs antifungal treatment. Traction alopecia is linked to repeated pulling from tight hairstyles. Trichotillomania involves repeated hair pulling, sometimes without conscious awareness. Scarring alopecias can permanently damage follicles and may need prompt treatment.

A scalp biopsy is rarely necessary. During a biopsy, a clinician removes a small skin sample after numbing the area. It may be considered when the diagnosis remains uncertain.

Blood tests are not automatically needed for everyone with alopecia areata. Testing may be guided by symptoms, medical history, family history, or examination findings. For example, a clinician may consider thyroid testing when there are symptoms or other reasons to suspect thyroid disease. Broad, repeated testing without a clinical reason may not be useful.

Treatment and management

Treatment depends on the person's age, the location and amount of hair loss, how quickly it is changing, previous treatment results, and the effect on daily life. No treatment guarantees permanent regrowth, and recurrence can happen.

For a small number of recent patches, watchful waiting may be reasonable. Hair sometimes regrows on its own. This approach still involves follow-up so that changes can be reviewed.

Corticosteroids like prednisone or hydrocortisone reduce immune activity around the follicles. A dermatologist may inject small amounts into limited scalp patches. Topical corticosteroids applied to the skin are another option and are often considered for children or for areas where injections are less practical. Side effects depend on the type, strength, treatment area, and length of use.

Minoxidil applied to the skin may support hair growth in some people. It does not directly treat the autoimmune process, so it is often used as an additional treatment rather than the only treatment. It can irritate the skin or cause unwanted hair growth where it spreads.

Specialists may use treatments that create a controlled skin reaction, such as topical immunotherapy or anthralin. These approaches require guidance because they can cause redness, itching, blistering, or skin discoloration.

Oral Janus kinase, or JAK, inhibitors are medicines that block immune signals involved in alopecia areata. In the United States, approved options for severe disease include baricitinib for adults, ritlecitinib for adults and adolescents age 12 years and older, and deuruxolitinib for adults. Eligibility varies by age, health history, disease severity, and other medicines.

JAK inhibitors affect the immune system and require medical supervision. Their prescribing information includes serious safety warnings, including risks involving infections, blood clots, cardiovascular events, cancer, and death in certain populations. Before and during treatment, clinicians may review vaccination status and order tests for infections, blood cell counts, liver function, or cholesterol. People who are pregnant, planning pregnancy, or breastfeeding should discuss this before treatment.

Supportive care is also important. Wigs, hairpieces, scarves, hats, eyebrow cosmetics, false eyelashes, or scalp micropigmentation may help a person feel more comfortable. Sunglasses can protect eyes when eyelashes are missing. Hats and sunscreen help protect exposed scalp skin.

Counseling, peer support, or a mental health referral may be useful when hair loss affects mood, self-esteem, relationships, school, or work. Seeking this support does not mean the distress is "just cosmetic."

Complications

Alopecia areata does not usually cause pain or physical disability, but its unpredictable course can be difficult. Anxiety, depression, social withdrawal, and bullying may occur. Children and teenagers may need added support at school.

Loss of scalp hair increases exposure to sun and cold. Missing eyelashes may allow more dust and debris to reach the eyes. Loss of nasal hair can make the nose feel dry or allow more particles to enter.

Nail changes may cause cosmetic concern and, if severe, discomfort. Some people also have related autoimmune or atopic conditions that require separate care.

Treatment can cause complications as well. Steroid injections may temporarily thin or lighten the treated skin. Topical treatments can irritate the skin. Medicines that suppress immune activity may increase the risk of infection and require laboratory monitoring.

Alopecia areata itself is generally not an emergency. Emergency care is appropriate for chest pain, sudden shortness of breath, signs of stroke, severe allergic symptoms, or other potentially life-threatening problems. People taking immune-modifying medicine should contact their clinician promptly for a significant fever, a painful blistering rash, signs of infection, or new one-sided leg swelling.

Follow up

Follow-up plans depend on whether the hair loss is stable, improving, or spreading and whether treatment is being used. Photographs taken under similar lighting can help track changes. Clinicians may also assess eyebrow, eyelash, body-hair, and nail involvement.

People using prescription treatment may need visits to check effectiveness, side effects, and whether laboratory monitoring is required. Treatment should not be stopped, restarted, or combined with another immune-modifying medicine without discussing it with the prescriber.

Schedule routine follow-up if new patches appear, regrown hair falls out, nail changes become troublesome, or treatment is not meeting agreed goals. An earlier assessment is appropriate if the scalp becomes painful, very red, swollen, crusted, or draining, since these findings are not typical of uncomplicated alopecia areata.

Tell a healthcare professional if hair loss is affecting sleep, appetite, mood, relationships, school, or work. Urgent mental health support is appropriate for thoughts of self-harm or feeling unable to stay safe. In the United States, call or text 988 for the Suicide & Crisis Lifeline; elsewhere, use local emergency or crisis services.

Sources

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