

Thinning and Hair Loss

Also known as: Alopecia; Alopecia; Baldness

Description

Hair Loss refers to the visible loss of Hair due to acceleration in the rate of "dropping" of Hair and its non-replacement by new Hair growth.

These Substances Enhance Hair Growth (if Hair Follicles are still Alive)

Amino Acids

- Hair Loss can occur as a result of **Arginine** deficiency.
- Supplemental **Cysteine** (1,000 - 2,000 mg per day) accelerates Hair Growth and retards Hair Loss:
 - Cysteine prevents Free Radical damage to Hair Follicles.
 - Persons using supplemental Cysteine report noticeable improvement in Hair Growth
 - Cysteine comprises 8% of human Hair.
 - Many people with thin or slow growing Hair report noticeable improvement in Hair growth with 1,000 - 2,000 mg of Cysteine daily, and in some cases the amount of Hair has doubled (Cysteine normally comprises 8% of human Hair).
- Hair Loss can occur as a result of **Lysine** deficiency.
- **Tyrosine** alleviates Hair Loss (where Hair Loss is caused by Hypothyroidism).

Enzymes

- **Superoxide Dismutase** (SOD) decreases Hair Loss (by preventing the inhibitory action of Superoxide Free Radicals on Nitric Oxide).

Lipids

- Hair Loss can occur as a result of **Linoleic Acid** (LA) deficiency.

Minerals

- Hair Loss can occur as a result of **Chlorine** deficiency.
- **Copper** facilitates Hair Growth and is thereby involved in the prevention (and possibly treatment) of Hair Loss (e.g. Hair Loss can occur as a result of Copper deficiency, although caution in this area is warranted as excessive Copper can also cause Hair Loss):
 - Copper stimulates the synthesis of the constituents of the extracellular matrix (e.g. Collagen and other Glycoproteins) in the Dermal Papilla of the Scalp's Hair Follicles during the anagen phase of Hair Growth.
- Poor Hair growth can be a symptom of **Iron** deficiency.

- Hair Loss can occur as a result of **Potassium** deficiency.
- Hair Loss can occur as a result of **Silicon** deficiency - Silicon supplementation can accelerate the growth of Hair.
- Premature Hair Loss can occur as a result of **Zinc** deficiency:
 - Caution: excessive Zinc can also CAUSE Hair Loss.

Neurotransmitters

- **Nitric Oxide** decreases Hair Loss by dilating the small Blood Vessels that supply the Hair Follicles (Minoxidil - discussed below - is believed to be a synthetic form of Nitric Oxide).

Sulfuric Compounds

- **Methylsulfonylmethane** (MSM) may facilitate Hair Growth (due to its Sulfur content).

Vitamins

- Hair Loss can occur as a result of **Biotin** deficiency. [research](#)
- Hair Loss can occur as a result of **Folic Acid** deficiency:
 - Supplemental **Folinic Acid** (a metabolite of Folic Acid, available in Pharmaceutical Drug form as Leucovorin Calcium [Immunex, Wellcovorin] counteracts the Hair Loss caused by Methotrexate (as Methotrexate blocks the conversion of Folic Acid to endogenous Folinic Acid).
- **Inositol** is involved in Hair Growth and Hair Loss can occur as a result of Inositol deficiency. [research](#)
- **Para Aminobenzoic Acid** (1 - 3 grams per day) helps to prevent Hair Loss (due to PABA's Antioxidant properties and its ability to stabilize the Cell Membranes of Lysosomes). [research](#)
- The **Nicotinic Acid** form of **Vitamin B3** (applied topically to the Scalp) helps to improve Blood Circulation to the Scalp (and may thereby help to retard Hair Loss).
- **Vitamin C** facilitates Hair growth (by improving Blood Circulation to the Scalp).

Other Factors that may Accelerate Hair Growth

- **Scalp Massage** is speculated to stimulate Blood Circulation to the Scalp, possibly leading to improved function of Hair Follicles:
 - However most modern research now refutes this claim.
- Hair Growth occurs during **Sleep**.

These Foods or Herbs may Promote Hair Regrowth if Follicles are still alive

Chinese Herbal Formulas

- **Shen Ying Yang Zhen Tang** is claimed to facilitate Hair Growth in persons afflicted with Hair Loss according to trials performed on persons with Hair Loss (ranging from areas as

small as 2 cm x 2.5 cm to areas of baldness affecting the whole head) by Traditional Chinese Herbalists.

Herbs

- **Burdock** (oil applied topically) is a popular Hair Growth regenerator.
- **Equisetum** (Horsetail) promotes Hair Growth (due to the Silicon content of Equisetum).
- **Gotu Kola** stimulates Hair growth (and may therefore be useful in the prevention of Hair Loss).
- **Hops** stimulate Hair growth if the Hair follicles are still alive.
- **Parsley** reputedly prevents Hair Loss.
- **Rosemary** (oil massaged topically into the Scalp) is believed to prevent Hair Loss (by stimulating the activity of Hair Follicles).
- **Sage** (infusion applied topically to the Scalp) sometimes stimulates Hair Growth.
- **Saw Palmetto** (berry consumed orally) retards further Hair Loss in persons afflicted with Male Pattern Baldness (by inhibiting the conversion of Testosterone to Dihydrotestosterone (DHT) by the 5-Alpha-Reductase enzyme) and Saw Palmetto (extract applied topically) also retards further Hair Loss in Male Pattern Baldness sufferers.

Oils: Non-Dietary

- **Castor Oil** (massaged topically onto the Scalp) facilitates Hair Growth.
- **Emu Oil** (applied topically) may prevent or treat Hair Loss (it is claimed that Emu Oil "awakens" Hair Follicles that are in their "resting-phase" (due to specific Fatty Acids in Emu Oil):
 - In one study it was claimed that over 80% of Hair Follicles that were in their "resting-phase" were "awoken" and began growing Hair after two weeks of once-a-day topical application of Emu Oil.
- **Tea Tree Oil** (shampoo applied topically to the Scalp) is claimed to facilitate Hair Growth.

Seeds

- **Fenugreek Seeds** are presently being tested for the treatment of Hair Loss.

Vegetables

- **Cucumber** promotes Hair growth (due to its Silicon content).

These Ailments can Cause Hair Loss

Hair

- The processes that underly Hair Loss cause Hair Follicles to produce Vellus Hair rather than **Terminal Hair**. [research](#)

Immune System

- Lupus Erythematosus can cause some forms of Hair Loss.

Metabolism

- Systemic Amyloidosis is associated with Hair Loss.
- Hyperthyroidism can cause Hair Loss (50% of Hyperthyroidism patients exhibit diffuse Hair Loss in which the Scalp Hair becomes fine and soft, whilst 1 - 2% of persons afflicted with Hyperthyroidism suffer from Alopecia Areata).
- Hypothyroidism (underactive Thyroid) may cause Hair loss. [research](#)

Nervous System

- Excessive Stress can cause some types of Hair Loss (particularly the Alopecia Areata and Telogen Effluvium forms of Hair Loss):
 - Hair Loss caused by excessive Stress usually occurs 2 - 3 months after the period of Stress and (unless the cause of Stress is repeated) regrowth of Hair normally occurs.

Skin

- One of the underlying causes of Hair loss is believed to be accelerated Aging of the Hair Root, characterized by Fibrosis. Fibrosis causes Hair Roots to become rigid and compresses the Blood Vessels that nourish and stimulate Hair Roots. This leads to weakening of the Hair Roots and subsequent Hair loss.
- Long-standing Psoriasis (when it affects the Scalp) can cause Hair Loss.

These Substances are Implicated in Hair Loss

Free Radicals

- Superoxide Free Radicals are implicated in Hair Loss - they interfere with Nitric Oxide (which is regarded as a Hair Growth Factor) and also appear to issue instructions to Hair Follicles to make the transition from their Hair Growth phase to the Hair Loss phase.

Hormones

- Dihydrotestosterone (DHT) stimulates the production of excessive amounts of Sebum (which is implicated in excessive Hair Loss).

Lipids

- Excessive production of Sebum has been implicated in Hair Loss (by “clogging” the Hair Follicles, it is speculated that Hair Growth is impaired by excessive production of Sebum).

Minerals

- Arsenic accumulates in the Hair and can cause Hair Loss.
- Oral ingestion or topical application of Boric Acid (the Mineral Acid form of Boron) can cause Hair Loss.
- **Excessive** consumption of Copper can cause premature Hair Loss.
- Excessive exposure to or ingestion of Thallium can cause Hair Loss (approximately 15 - 30 days following its ingestion).
- **Excessive** consumption of Zinc can cause Hair Loss.

Pharmaceutical Drugs

- Cyclophosphamide (a Cytotoxic Drug often used in Chemotherapy) causes Hair Loss in 20% of Cancer patients taking low dosages of Cyclophosphamide and in 100% of Cancer patients taking high dosages of Cyclophosphamide.
- Doxorubicin can cause Hair Loss.
- Methotrexate often causes Hair Loss (by blocking the conversion of Folic Acid to Folinic Acid, a substance that is essential for Hair Growth).

Vitamins

- Excessive consumption of Vitamin A can cause (temporary and reversible) Hair Loss.