

Baicapil™

The new paraben-free unisex hair growth complex stimulates hair growth, reduces hair loss and makes hair thicker.

The result is hair that is younger-looking and healthier.

The Baicapil™ complex consists of 3 plants (Baikal skullcap, common wheat and soybean germ), which increase cell energy and activate the stem cells of hair follicles while protecting the hair from ageing.

The hair is a complex organ consisting of an external part, the hair fibre, and an inner part under the skin, the hair follicle. Hair growth involves three phases: the growing phase, the transition phase and the resting phase, when the hair no longer grows and falls out.

The stem cells in the hair follicle are self-renewing and become more mature, but smaller. The division of these stem cells is responsible for hair growth and loss. Stem cell groups consist of two biochemically and functionally different groups. One group is responsible for the differentiation and growth of these different cell types to produce hair pigment.

The other stem cells come into contact with the dermal papilla, which activates the hair growth control mechanism and the formation of a new hair follicle.



Hair growth cycle

1. The anagen, or growth phase, usually lasts for 2–8 years, during which the multiplication of cell groups creates a base for the hair. Approximately 85–90% of all hair is simultaneously in the growth phase. The length of this phase depends on the length of the hair, which in turn is affected by individual characteristics and age. Hair grows approximately 10 cm a year.

2. The catagen, or transition phase, lasts for 2–3 weeks when the hair follicles stop growing. The hair fibre production phase has ended, cell growth and pigmentation stop, the hair follicle separates from the dermal papilla, regresses, shrinks, and the hair enters the resting phase. 1–2% of the hair follicles are in this phase.

3. Telogen, or rest phase usually lasts for 2–4 months.

During this phase, fully keratinised hair is formed and is separated from the hair follicle, usually when combing or washing. A person sheds an average of 50–150 hairs a day. Approximately 5–15% of all hair is simultaneously in this phase, but if the percentage increases, the result is a massive loss of hair. At the end of the telogen phase, the hair follicle once again enters the growth phase. The dermal papilla and the base of the hair follicle reconnect and new hair starts forming.

At birth, the human body is covered by about 5 million hair follicles. No new hair follicles form after birth, but the size of the hair and the hair follicles changes over time. Any changes in the hair growth cycle may lead to hair loss, which may be caused by stress, genetic effects, or an androgen metabolism:

- change in the hair growth cycle, where the number of hairs in the anagen or growth phase decreases and more hair remains in the telogen phase
- shortening of the anagen phase, which causes early termination of hair growth, and the hair becomes shorter and thinner
- prolongation of the telogen phase.

Some alopecia (hair loss) types are considered reversible as the hair cycle is disrupted, but the hair follicles remain and follow the hair cycle, even on a bald scalp. In terms of ingredients used to prevent hair loss, it is important that they can maintain a long growth phase and a short telogen phase, and can improve the condition of the hair follicles, and their micro-environment, which ensures the balance between different hair growth cycles.

Baicapil™ is a combination of three plants, **Baikal skullcap** (*Scutellaria baicalensis*), **wheat** (*Triticum vulgare*) and **soybean** (*Glycine max sprout*), which increase cell energy, activating the stem cells of hair follicles while protecting them from ageing. The combination efficiently combats hair loss by:

- stimulating hair growth,
- increasing hair density,
- reducing hair loss,
- restoring the healthy and strong appearance of the hair.

The roots of the Baikal skullcap contain numerous flavonoids (26 types) and the plant is widely used in Chinese medicine.

Soy and wheat germs are included in the Baicapil complex due to their rich carbohydrate, protein, lipid, and mineral element content.

Hair follicles that are growing, use up glucose twice as fast, to generate cell energy, compared to the follicles in the resting phase. **Baicapil™ provides follicles with additional sugars, which increases cell oxygen consumption to increase cell energy. Nutrients help the hair follicles to increase and be more active in hair growth and density and in extending the growth phase.**

The stem cells of a dormant hair follicle are activated to produce new hair. By activating the stem cells, Baicapil accelerates the onset of the anagen phase, producing a new hair strand.

Oxidative stress is one of the mechanisms contributing to hair loss and thereby triggering the premature onset of the catagen phase. The active ingredients in Baicapil protect the hair follicle from oxidative stress, improve the energy of hair follicles and thus reduce hair loss.

Baicapil

- increases cell energy by adding glucose and making the follicles more active and viable,
- activates stem cells, leading to a new anagen phase, and improving hair growth and density,
- protects from oxidative stress, the cells are more active and healthier,
- protects the hair follicles from ageing, and thereby extends the growth phase of the hair.

The Baicapil complex has been proven to reduce hair loss. In a test group using Baicapil for 6 months, the proportion of hair follicles in the telogen phase was reduced by 34% compared to the group using a placebo product. The proportion of hair follicles in the anagen phase increased by 68% compared to the placebo group.

After three months of using Baicapil, a 61% reduction in hair loss was observed compared to the baseline of the test. After 6 months of use, the reduction in hair loss slowed down slightly to 51%, explainable by the adaptation of the metabolism of the hair follicles to the active ingredients in Baicapil.

The Baicapil™ complex is part of the ingredients in the following S+ Haircare line products: **Anti Hairloss Shampoo** and **Anti Hairloss Treatment**.

