

CLINICAL STUDY REPORT

# Neofollics Hair Growth Stimulating Shampoo



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# Table of contents

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1.	Introduction	5
2.	Key ingredients and their functions	6
3.	Study findings	13
4.	Results	18
5.	References	22

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# 1. Introduction

Neofollics Shampoo is developed to be an effective and user-friendly topical therapy to hair loss. The Shampoo contains a balanced combination of proven active ingredients with multiple mechanisms addressing the complex biology of hair growth.



Neofollics Shampoo is a powerful shampoo that stimulates hair growth and inhibits hair loss. At the same time, it is very effective against dandruff and promotes the growth of thicker and fuller hair.

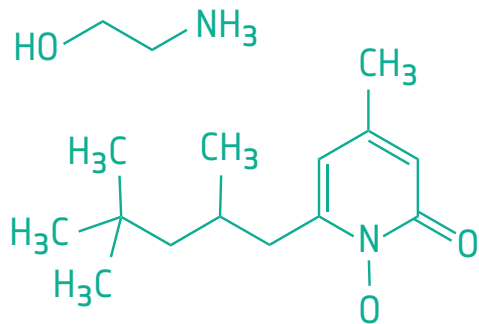
Studies on active ingredients and controlled observational investigations of the end formulation on men and women have verified the effectiveness of the Neofollics Shampoo



## 2. Key ingredients and their functions

Neofollics Shampoo contains 12 proven active ingredients. Each active ingredient has been selected based on scientific research to combat hair loss in multiple ways:

- 1% Piroctone olamine, effective on hair growth and effective against dandruff
- The hair growth molecules Caffeine and Niacinamide
- Seven powerful plant extracts, including Ecklonia Cava and Carthamus Tinctorius
- Argan oil and Wild Mint oil to nourish the scalp and hair



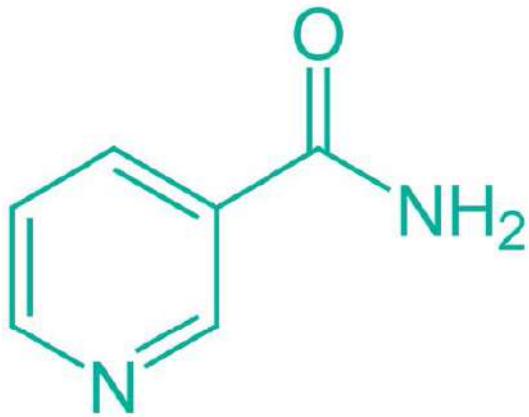
### 1. PIROCTONE OLAMINE

The ingredient Piroctone olamine has a similar effect as the pharmaceutical ingredient Ketoconazole. It reduces hair loss, stimulates hair growth, allows for the growth of thicker hair and is effective against dandruff. Studies have shown that Piroctone olamine scores better in a number of areas than Ketoconazole, such as thickness of the hairs and the number of hairs in the growth phase.



### 2. CAFFEINE

Stimulates the scalp and is easily absorbed into the skin. Caffeine has long been known as a substance with hair growth stimulating qualities. Recent studies show new hair growth promoting effects of caffeine, such as stimulation of the release of growth factor IGF-1.



### 3. NIACINAMIDE (VITAMIN B3)

When applied topically, Niacinamide (vitamin B3) works anti-inflammatory. It also allows for dilation of the blood vessels, which improves circulation in the scalp, making it easier for nutrients to reach the hair and scalp. It may also lower cholesterol, which can contribute to a reduction in hair loss.



### 4. ECKLONIA CAVA

Is a seaweed from the waters of South Korea. Ecklonia cava is a natural alternative to finasteride and minoxidil. It contains a high concentration of the substance Dieckol, which has a DHT lowering effect and a high concentration of Diocinodehydroeckol, which stimulates hair growth.





### 5. RASPBERRY KETONE

An extract from raspberry. Raspberry ketone increases the production of IGF-1 (an insulin-like growth factor), which stimulates the growth of the hair follicle. Studies show that a very low concentration of this substance already has a significant effect on hair growth.



### 6. CARTHAMUS TINCTORIUS

A thistle-like plant. Carthamus tinctorius stimulates hair growth in different ways and suppresses growth factor B-1, a peptide which is associated with hair loss.



### 7. SANGUISORBA OFFICINALIS

A plant that belongs to the rose family. Sangisorba officinalis stimulates hair growth by prolonging the growth phase of the hair follicles.

It suppresses Fibroblast Growth Factor-5 (FGF-5), a natural protein that plays a role in the (too rapid) transition of the hair from the telogen to the anagen phase.



### 8. EGCG (EPIGALLOCATECHIN GALLATE)

A polyphenol from Green Tea. EGCG inhibits the process of 5 $\alpha$ -reductase. This makes it a natural DHT inhibitor that stimulates hair growth.



### 9. PANAX GINSENG

A plant whose root is also called Chinese/ Korean ginseng. Panax ginseng may promote regrowth of the hair by inhibiting DHT. Additionally, it has an inflammatory effect.



### 10. FENUGREEK (TRIGONELLA FOENUM- GRAECUM) OIL

A plant in the Fabaceae family. Fenugreek is used as a spice in Indian and Arabic cuisine, but also has inflammatory, antibacterial and antifungal properties. The fenugreek in the formulation makes it extra effective against dandruff.



### 11. ARGAN OIL

Contains vitamin E, omega 3 and 9 fatty acids and antioxidants to nourish the hair and the scalp and to care for and protect it against external influences.



### 12. WILD MINT OIL

Gives a naturally fresh scent to the shampoo and provides a fresh feeling to the scalp. Mint is also known for its soothing effect.

### GENTLE FOR HAIR AND SCALP

The shampoo has been dermatologically tested and only contains ingredients that are gentle and safe. Therefore, it is free from SLS and other sulfates, silicones and parabens.

Rather than using SLS, Neofollics Shampoo contains gentle alternatives, such as Sodium cocoamphoacetate. This ensures an improved condition of the scalp and for the hair to become greasy less easily. The shampoo therefore does not lather as much as shampoos with SLS.



## 3. Study findings

### 3.1 STUDY 1

#### PIROCTONE OLAMINE, A COMPARATIVE STUDY WITH KETOCONAZOLE

In a study with 150 men who suffer from hereditary hair loss and dandruff, Ketoconazole and Piroctone olamine were compared. Excessive secretion of sebum, dandruff and seborrheic dermatitis are often linked with hair loss and hereditary hair loss. The 150 men received a shampoo with 1% Ketoconazole or 1% Piroctone olamine. They had to use this shampoo 2 to 3 times per week for a duration of six months. All treatments showed a reduction in itching and dandruff after 2 to 6 weeks.

The effect of the treatments on various hair growth parameters are as follows:

- The severity of hair loss decreased (Ketoconazole: -17.3%, Piroctone olamine: -16.5%)
- The percentage of hairs in the growth phase increased (Ketoconazole 4.9%, Piroctone olamine: 7.9%)
- The effect on the hair diameter increased by 5.4% with Ketoconazole and by 7.7% with Piroctone olamine.

Thus, the study shows that Piroctone olamine scores better in a number of areas in comparison to Ketoconazole:

- Compared to Ketoconazole, Piroctone olamine ensures an increase in the number of hairs in the growth phase (anagen phase) by more than 10% in 33% of people.
- Piroctone olamine gives 88% of the people thicker hair, despite hereditary hair loss
- Regarding the people that experience a significant increase (more than 10%) of the hair diameter as much as 34% with Piroctone olamine (10% larger diameter means that the hair became 20% heavier).

## 3.2 STUDY 2

### EVALUATION ON HAIR GROWTH AND DERMATOLOGICAL PROPERTIES BY PATIENTS WITH HAIR LOSS

The Neofollics Shampoo was clinically tested and evaluated as cosmetic formulation according to the same scientific evaluation methods that were used for the evaluation of Finasteride and Minoxidil, by use of self-evaluation in a questionnaire. Test subjects with Alopecia Androgenetica used the Neofollics Shampoo for 3 months (T=90 +/- 3 days). They applied the Shampoo as a recommended, on average 4 times per week. In total 20 subjects were included in the study.

#### INCLUSION CRITERIA:

- Both sexes
- Between 18 and 60

#### NON-INCLUSION CRITERIA

- Pregnancy
- Breastfeeding
- Medicated or cosmetic treatment for hair loss

## MAIN OUTCOMES

After 90 days of usage, a majority of users experience a visible improvement of hair (80%) and thicker hair (70%). 80% of the users conclude an improvement of the hair status and 80% is satisfied with the hair growth. 80% also experiences an improvement of the scalp condition.

## STUDY OUTCOMES

After 90 days users have reported their findings compared to the situation before the use of the Neofollics Shampoo 4 times per week. The results are summarised in figure 1.1.

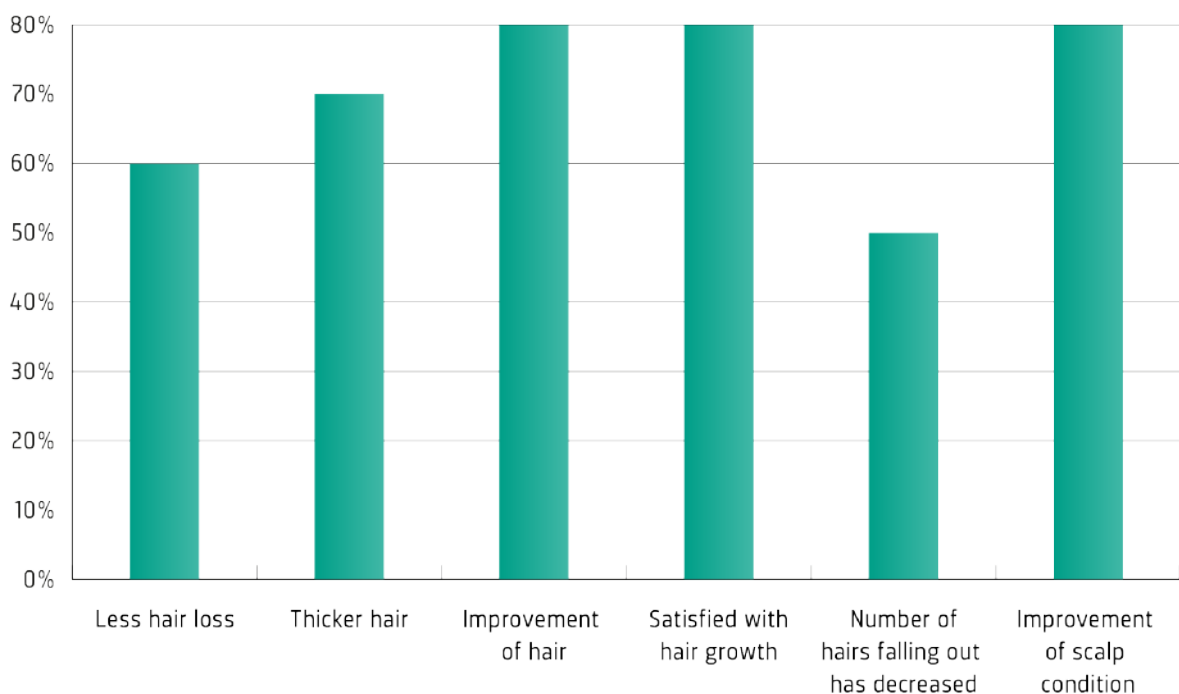


Figure 1. Key Efficacy Indicators

### USER SATISFACTION

The Shampoo was tested for user satisfaction rate. 90% of the users indicated to be satisfied with the overall usage of the shampoo. Furthermore, no side effects were reported among the users and nobody seized the treatment during the 90-day trial period due to adverse dermatological reactions and/or side effects. One user that was neutral about the user satisfaction attribute experienced to have a drier scalp then before the treatment, which was later overcome by using the Neofollics Conditioner as well.

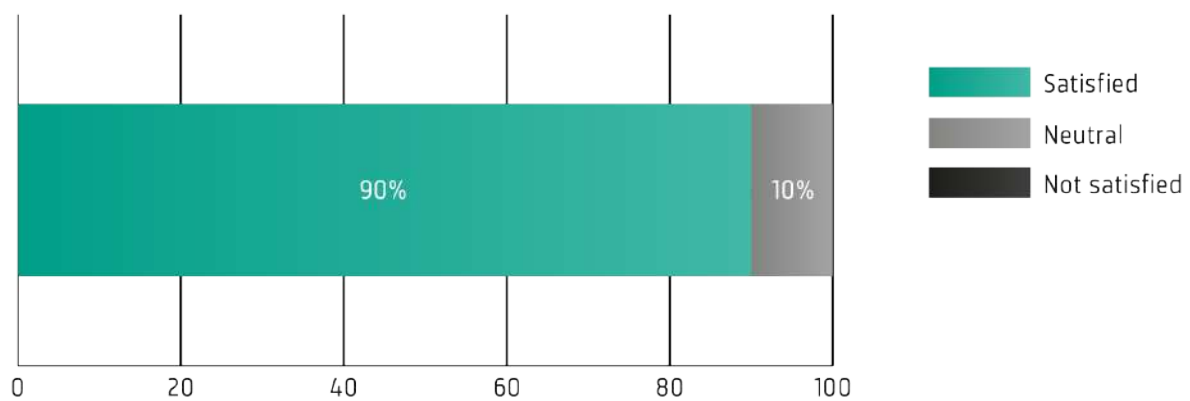


Figure 2. User satisfaction



## CONCLUSION

The formulation of the Neofollics Shampoo is extensive, with a large number of active ingredients that have different working mechanisms on hair growth and scientifically proven beneficiary effects. The Neofollics Shampoo has been evaluated with a real-life study on its efficacy as topical treatment for people with hair loss, both men and women.

The real-life clinical trial was conducted on 30 persons during 90 days with a 4 times per week application. A majority of the users in the 90-day clinical trial reported a positive outcome on main efficacy indicators already after 90 days of treatment. Furthermore, the shampoo has a user satisfaction rate of 90%.



## 4. Results

### ALOPECIA AREATA

A female patient of 47 with Alopecia Areata, under supervision of a professional trichologist has been given a multi-product treatment with Neofollics. Upon the start of the treatment the diameter of the hair loss at the crown measured over 10 cm.

- After 3 months of treatment fine density of new terminal hair growth in varying lengths. Lengths extending from 1,5 cm to 4 cm.
- After 5 months the frontal patch of terminal hair had completely grown.
- After 12 months there was a full recovery. The density of the terminal hair is the same all over the head.



Figure 3. Hair status at 0 (start), 3, 6 and 12 months respectively, using a Neofollics treatment for the recovery of Alopecia Areata. The patient was under supervision of a professional trichologist.

Treatment: Neofollics Shampoo in combination with Neofollics Tablets, Conditioner and Lotion in the recovery of Alopecia Areata.

### DIFFUSE HAIR LOSS

A patient diagnosed with diffuse hair loss and patches has been prescribed a treatment with the Neofollics Shampoo in combination with Tablets and Lotion.

- After 6 months of treatment and as prescribed use of the Neofollics range, terminal hair has grown back.

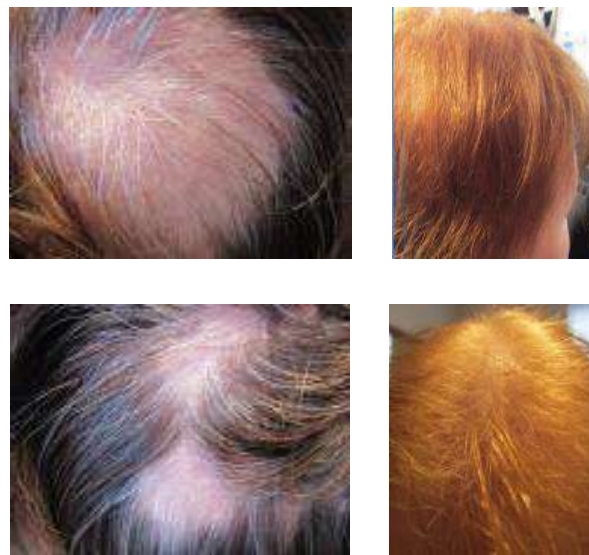


Figure 4. Hair status at 0 (start) and 6 months respectively, using a Neofollics treatment for the recovery of diffuse female hair loss. The patient was under supervision of a professional trichologist.

Treatment: Neofollics Shampoo in combination with Neofollics Tablets and Lotion in the recovery of diffuse hair loss.

### ALOPECIA ANDROGENETICA

A male patient diagnosed with Alopecia Androgenetica (Male Pattern Baldness) was prescribed a treatment with the Neofollics Shampoo in combination with the Neofollics Lotion.

- After 6 months of treatment and as prescribed use of the Neofollics range the hair density on the crown improved significantly hair has grown back.



**Figure 5.** Hair status at 0 (start) and 6 months respectively, using a Neofollics treatment for Alopecia Androgenetica. The patient was under supervision of a professional trichologist.

**Treatment:** Neofollics Shampoo in combination with Neofollics Lotion.

### ALOPECIA ANDROGENETICA

A female patient diagnosed with thinning hair was prescribed a treatment with the Neofollics Shampoo in combination with the Neofollics Tablets and Anti-Grey.

- After 6 months of treatment and as prescribed use of the Neofollics products the hair density on the vertex and hair pigmentation improved.



Figure 6. Hair status at 0 (start) and 6 months respectively, using a Neofollics treatment for thinning and greying hair.

Treatment: Neofollics Shampoo in combination with Neofollics Tablets and Anti-Grey.

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## The scientific approach to hair growth

The goal of Neofollics Hair Technology is to help people who are dealing with hair loss to gain control of their situation.

We do this by making the latest scientific insights available to every one, developing products that stimulate hair growth effectively.

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