## Hair & Nails

HAIR RECONSTRUCTOR MAINTENANCE - STRENGTH - GROWTH

## FOR WHOM?

- Defiant to capsules
- Beauty lovers
- All hairtypes
- People who are regularly

### stressed

- People with **nutritional** 

### deficiencies

- People suffering from **baldness**
- Post-partum women
- People in post-operation

## WHY?

### -Action on the hair

- Maintenance in good

### health

- Protection against oxidative damage
- Structure &

### Strengthening

- Shine & Luminosity

### & Radiance

- Growth & Volume
- Anti-Breakage &

### Anti-Hair Loss

- Anti-dandruff

### Action on nails

- Maintaining good

### health

- Structure &

### Fortification

- Improvement of the

### appearance

- Growth - Reduction of





**HOW MANY?** 

2 yellow gummies & 1 red per day, as a single dose ortaken separately

## WHEN?

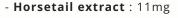
At any time of the day: during a meal or as a snack

## **HOW LONG?**

3 months to be renewed1 to 2 times a year



## **COMPOSITION?**



- **Vitamin B6** : 1,4 mg (100% RI\*)

- Vitamin B8: 108µg (217% RI\*)

- Vitamin B9: 100µg (50% RI\*)

- Vitamin B12: 2,7µg (108% RI)

- Vitamin C: 48mg (60% RI\*)

- **Vitamin D**: 5,5µg (110% RI\*)

- Vitamin E: 12,8mg (107% RI\*)

- Zinc: 10mg (100% RI\*) Lactobacillus casei: 450 M\*\*

- Lactobacillus acidophilus : 225 M\*\* \*Reference

Intakes \*\*Million CFU : Colony-Forming Units





### **GROWTH & ANTI-HAIR LOSS & BEAUTY**

**Glynis A. A** Double-blind, Placebo-controlled Study Evaluating the Efficacy of an Oral Supplement in Women with Selfperceived Thinning Hair. J Clin Aesthet Dermatol. **2012;5**(11):28-34. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3509882/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3509882/</a>

**Subjects:** 15 healthy women aged 21 to 75 years, with skin phototypes Fitzpatrick I to IV and self-perceived thinning hair.

**Duration:** 180 days

Administration: food supplement containing horsetail

Results: [after 90 days] Improvement in overall hair volume, scalp coverage and hair

body thickness [after 180 days] Further improvement in hair shine. Effective

stimulation of hair growth.

**Glynis Ablon,** "A 3-Month, Randomized, Double-Blind, Placebo-Controlled Study Evaluating the Ability of an Extra-Strength Marine Protein Supplement to Promote Hair Growth and Decrease Shedding in Women with Self-Perceived Thinning Hair", Dermatology Research and Practice, vol. **2015**, Article ID 841570, 8 pages, 2015. <a href="https://www.hindawi.com/journals/drp/2015/841570/">https://www.hindawi.com/journals/drp/2015/841570/</a>

**Subjects:** 60 healthy women aged 21 to 75 years, with skin phototypes Fitzpatrick I to IV and self-perceived thinning hair.

**Duration:** 90 days

**Administration:** food supplement containing horsetail

**Results:** Increase in the **number of terminal hairs**. Significant reduction in **hair loss**.

Stimulation of hair growth.

**A. Lassus and E. Eskelinen**, "A comparative study of a new food supplement, ViviScal, with fish extract for the treatment of hereditary androgenic alopecia in young males," Journal of International Medical Research, vol. 20, no. 6, pp. 445–453, **1992**.View at: Google Scholar. <a href="https://journals.sagepub.com/doi/abs/10.1177/030006059202000601">https://journals.sagepub.com/doi/abs/10.1177/030006059202000601</a>

Subjects: 40 young men with hereditary androgenic alopecia

**Duration**: 6 months Administration: food supplement containing horsetail

Results: Average increase of 38% of terminal hair. 95% of clinical and histological cure

of alopecia.

### ANTIOXIDANT EFFECT

**Čanadanović-Brunet,** Jasna M., et al. "Radical Scavenging and Antimicrobial Activity of Horsetail (Equisetum Arvense L.) Extracts." International Journal of Food Science & Technology, vol. 44, no. 2, **2009** pp. 269-278.

https://www.researchgate.net/publication/229803058 Radical scavenging and antimicrobial activity of horsetail Equisetum arvense L extracts

Design: in vitro

Method: electron spin resonance spectroscopy

Administration: horsetail extracts (Equisetum arvense L.): n-butanol, ethyl acetate,

water.

**Results:** [Antioxidant effect] Free radical scavenging activity significantly correlated with total phenolic content.

**Cetojević-Simin DD**, Canadanović-Brunet JM, Bogdanović GM, Djilas SM, Cetković GS, Tumbas VT, Stojiljković BT. Antioxidative and antiproliferative activities of different horsetail (Equisetum arvense L.) extracts. J Med Food. **2010** Apr;13(2):452-9. doi: 10.1089/jmf.2008.0159. PMID: 20170379.https://pubmed.ncbi.nlm.nih.gov/20170379/

Design: in vitro

**Method**: electron spin resonance spectroscopy

Administration: different horsetail extracts: n-butanol, methanol, ethyl acetate,

aqueous

Results: Suppression of lipid peroxyl radical formation. Scavenging activity of

peroxyl radicals. Source of natural antioxidants.

**Pallag A,** Filip GA, Olteanu D, Clichici S, Baldea I, Jurca T, Micle O, Vicaş L, Marian E, Soriţău O, Cenariu M, Mureşan M. Equisetum arvense L. Extract Induces Antibacterial Activity and Modulates Oxidative Stress, Inflammation, and Apoptosis in Endothelial Vascular Cells Exposed to Hyperosmotic Stress. Oxid Med Cell Longev. 2018 Feb 14;2018:3060525. doi: 10.1155/2018/3060525. PMID: 29636839; PMCID:

PMC5832138. https://pubmed.ncbi.nlm.nih.gov/29636839/

Design: in vitro

Administration: horsetail

**Results:** [low concentrations] **Antioxidant** effect. Decreased caspase-8 activity. Increase in the expression of I κ B [High doses] Prooxidant. Induction of apoptosis. Decreased IL-6 secretion.

# [SILICA CONTAINED IN HORSETAIL] HAIR : STRENGTH - STRUCTURE - SHINE

**Wickett RR**, Kossmann E, Barel A, Demeester N, Clarys P, Vanden Berghe D, et al. Effect of oral intake of choline-stabilized orthosilicic acid on hair tensile strength and morphology in women with fine hair. Arch Dermatol Res. **2007;299**:499–505. <a href="https://pubmed.ncbi.nlm.nih.gov/17960402/">https://pubmed.ncbi.nlm.nih.gov/17960402/</a>

Subjects: 48 women with fine hair

**Duration:** 9 months

Administration: Choline-stabilized orthosilicic acid (ch-OSA): 10mg/d

**Results:** Improvement of **hair properties: resistance to breakage. Structural effect** on the hair fiber by interaction (complex formation) with the amino acids that make up keratin.

Barel A, Calomme M, Timchenko A, De Paepe K, Demeester N, Rogiers V, Clarys P, Vanden Berghe D. Effect of oral intake of choline-stabilized orthosilicic acid on skin, nails and hair in women with photodamaged skin. Arch Dermatol Res. 2005 Oct;297(4):147-53. doi: 10.1007/s00403-005-0584-6. Epub 2005 Oct 26. Erratum in: Arch Dermatol Res. 2006 Apr;297(10):481. Dosage error in article text. Erratum in: Arch Dermatol Res. 2006 Feb;297(8):381. Paepe, K De [corrected to De Paepe, K]. PMID: 16205932. https://pubmed.ncbi.nlm.nih.gov/16205932/

**Subjects**: 50 women aged 40 to 65 years with clear signs of photoaging of the skin.

Duration: 20 weeks

Administration: 2 capsules per day containing 10 mg of choline-stabilized orthosilicic

acid (ch-OSA)

**Results**: Increase in hair and nail **shine**.

**Lassus A.** Colloidal silicic acid for oral and topical treatment of aged skin, fragile hair and brittle nails in females. J Int Med Res. 1993 Jul-Aug;21(4):209-15. doi: 10.1177/030006059302100406. PMID: 8112478. <a href="https://pubmed.ncbi.nlm.nih.gov/8112478/">https://pubmed.ncbi.nlm.nih.gov/8112478/</a>.

**Subjects**: women with biologically aged skin and fragile or thin hair and brittle nails. **Duration**: 90 days Administration: 10 ml of colloidal silicic acid (Silicol) once a day

**Results**: Improvement of the condition of hair and nails.

# [SELENIUM CONTAINED IN HORSETAIL] HAIR : GROWTH - PIGMENTATION - ANTI-HAIR LOSS

[Case Reports] Yannicelli S, Hambidge K, Picciano M Decreased selenium intake and low plasma selenium concentrations leading to clinical symptoms in a child with propionic acidaemia. J Inherited Metab Dis 1992;15:261–268. https://pubmed.ncbi.nlm.nih.gov/1527993/

**Subjects**: [Case Study]: 1 child - Non-receptive to biotin - Treated with a diet low in propiogenic amino acids - High body volume - Unusual hair texture and hypopigmentation.

**Duration**: 4 months

Administration: 50µg of selenium per day

Results: Normalization of plasma selenium levels. Improvement of hair growth, color

and length.

Vinton NE, Dahlstrom KA, Strobel CT, Ament ME. Macrocytosis and pseudoalbinism: manifestations of selenium deficiency. J Pediatr. 1987 Nov;111(5):711-7. doi: 10.1016/s0022-3476(87)80247-0. PMID: 3117996. <a href="https://pubmed.ncbi.nlm.nih.gov/3117996/">https://pubmed.ncbi.nlm.nih.gov/3117996/</a>

**Subjects**: 4 children with low selenium levels on long-term total parenteral nutrition (TPN) with erythrocytic macrocytosis (3/4) and loss of hair and skin pigmentation (2/4)

Duration: 3 to 6 months and 6 to 12 months

Administration: intravenous selenium supplementation: 2µg/kg/d

Results: [3 to 6 months] Increase in selenium levels [6 to 12 months] Stimulation of hair

pigmentation with change from blond to dark brown.

**Masumoto K**, Nagata K, Higashi M, Nakatsuji T, Uesugi T, Takahashi Y, Nishimoto Y, Kitajima J, Hikino S, Hara T, Nakashima K, Nakashima K, Oishi R, Taguchi T. Clinical features of selenium deficiency in infants receiving long-term nutritional support. Nutrition. 2007 Nov-Dec;23(11-12):782-7. doi: 10.1016/j.nut.2007.08.001. Epub 2007 Sep 12. PMID: 17826957. <a href="https://pubmed.ncbi.nlm.nih.gov/17826957/">https://pubmed.ncbi.nlm.nih.gov/17826957/</a>

**Subjects**: [Retrospective clinical characteristics] 6 children: 5 patients less than 6 months old (5P6) and 1 patient 14 months old (1P14), selenium deficient and with growth retardation, alopecia and pseudoalbinism.

**Duration**: [5P6] 15 months [1P14] 2-6 months

Administration: selenite [5P6] in parenteral nutrition [1P14] in food

Results: Resolution of hair symptoms. Rapid improvement of hair growth.

**Sieja K**, Talerczyk M. Selenium as an element in the treatment of ovarian cancer in women receiving chemotherapy. Gynecol Oncol. **2004** May;93(2):320-7. doi: 10.1016/j.ygyno.2003.12.013. PMID: 15099940. <a href="https://pubmed.ncbi.nlm.nih.gov/15099940/">https://pubmed.ncbi.nlm.nih.gov/15099940/</a>

**Subjects**: 31 patients with ovarian cancer undergoing chemotherapy

**Administration**: selenium supplementation **Results**: Significant decrease in **hair loss**.

## SCIENTIFIC STUDIES

[CYSTEINE CONTAINED IN HORSETAIL] HAIR : GROWTH-ANTI-HAIR LOSS - VOLUME - QUALITY

**Hertel H**, Gollnick H, Matthies C, Baumann I, Orfanos CE. Niedrig dosierte Retinol- und L-Cystin-Kombination bessern die Alopezie vom diffusen Typ nach peroraler Langzeitapplikation [Low dosage retinol and L-cystine combination improve alopecia of the diffuse type following long-term oral administration]. Hautarzt. **1989** Aug;40(8):490-5. German. PMID: 2676911. <a href="https://pubmed.ncbi.nlm.nih.gov/2676911/">https://pubmed.ncbi.nlm.nih.gov/2676911/</a>

**Subjects**: [Pilot study] 36 patients [Double-blind study] 47 patients **Administration**: 18,000 IE retinol, 70mg L-cysteine, 7000mg gelatin

Results: [Pilot study] Number of hairs in telogen phase/fall: -8.3%. Number of hairs in anagen/growth phase: +11%. Density: +6.9%. [Double-blind study]: Number of hairs in telogen/fall phase: -13.5%. Number of hairs in anagen/growth phase: +8%.

**Petri H,** Pierchalla P, Tronnier H. Die Wirksamkeit einer medikamentösen Therapie bei Haarstrukturschäden und diffusen Effluvien--vergleichende Doppelblindstudie [The efficacy of drug therapy in structural lesions of the hair and in diffuse effluvium-- comparative double blind study]. Schweiz Rundsch Med Prax. **1990** Nov 20;79(47):1457-62. German. Erratum in: Schweiz Rundsch Med Prax 1991 Feb 5;80(6):125. PMID: 1709511.PMCID: PMC4828511. <a href="https://pubmed.ncbi.nlm.nih.gov/1709511/">https://pubmed.ncbi.nlm.nih.gov/1709511/</a>

Subjects: 60 patients with diffuse effluvium capillorum and adrogenic structural

alterations of the hair **Duration:** 4 months

**Administration**: Food supplements containing cysteine

Results: Increase in hair volume and growth. Improvement of hair quality. Delayed

hair loss.

**Lengg N**, Heidecker B, Seifert B, et al. Dietary supplement increases anagen hair rate in women with telogen effluvium: results of a double-blind, placebo-controlled trial. Thérapie. 2007; 4:59-65. <a href="https://www.assospharma.com/pdf/panplus/Trueb2007.pdf">https://www.assospharma.com/pdf/panplus/Trueb2007.pdf</a>

**Subjects**: 30 healthy women with telogen effluvium.

**Duration**: 6 months

**Administration**: Food supplements containing cysteine

Results: Improvement and normalization of the average hair in anagen phase: hair

growth.

**D'Agostini F**, Fiallo P, Pennisi TM, De Flora S. Chemoprevention of smoke-induced alopecia in mice by oral administration of Lcystine and vitamin B6. J Dermatol Sci. 2007 Jun;46(3):189-98. doi: 10.1016/j.jdermsci.2007.02.005. Epub 2007 Mar 19. PMID: 17374475. https://pubmed.ncbi.nlm.nih.gov/17374475/

Subjects: 6 mice type C57BL

**Duration**: 6 months

Administration: Vitamin B6 and L-cystine, 3 doses, in food

**Results**: Prevention of alopecia induced by oxidative stress induced by cigarette smoke.

## SHINIER, BETTER ANCHORED HAIR THAT GROWS FASTER

**Levkovich T,** Poutahidis T, Smillie C, et al. Probiotic bacteria induce a 'glow of health'. PLoS One. **2013;8**(1):e53867. doi:10.1371/journal.pone.0053867. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3547054/

Subjects: 20-24 week old C57BL/6 inbred mice

Duration: 20-24 weeks

Administration: probiotic yogurt and purified probiotic organism alone of the

Lactobacillus type

**Results**: - Significantly **brighter** fur (shine) explained by:

- 1. An increase in follicular sebocytes and therefore in sebum production
- 2. An acidification of the body pH
- 3. A mechanism dependent on an anti-inflammatory cytokine: interleukin-10 Increase in the **thickness** of the **dermis**
- Upregulation of the subcuticular hair follicle cycle: more hair in the anagen phase, robust **hair growth**

## SCIENTIFIC STUDIES

# PROTECTION: DECREASED LEVELS TOXIC ELEMENTS IN THE HAIR

ang ST, Cheng DE, Huang YT, Hsu TY, Lu HHS (2018) A Pilot Study of the Influence of Probiotics on Hair Toxic Element Levels After Long-Term Supplement with Different Lactic Acid Bacteria Strains. J Prob Health 6: 203. doi:10.4172/2329-8901.1000203. https://www.longdom.org/open-access/a-pilot-study-of-the-influence-of-probiotics-on-hair-toxic-element-levelsafter-longtermsupplement-with-different-lactic-acid-bact-2329-8901-1000203.pdf

**Design**: Retrospective study **Subjects**: 319 participants

**Duration**: 6 months

Administration: 5 probiotic strains (Lactobacillus paracasei BRAP-01, Bifidobacterium

longum BR022, Lactobacillus acidophilus AD300, Lactobacillus reuteri BR101,

Lactobacillus rhamnosus AD500)

**Results**: Reduction of the concentration of toxic elements in the hair (Mercury,

Beryllium)