

“Hair Cosmetics-what you need to know”

Vicky Jolliffe

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The Royal London Hospital and Queen Mary University of London



Disclosures

- Advisory board Pantene(Procter and Gamble)

VOLUMISING SHAMPOOS

- Aussie Aussome Volume
- Bumble and Bumble Full Potential
- Aveda Pure Abundance
- Kerastase Bain Densite



www.totalbeauty.com/content/slideshows/best-shampoo-for-fine-hair-140826

<https://www.elle.com/uk/.../hair/.../product-review-volumising-shampoos-and-conditio...>

VOLUME-DRY PRODUCTS

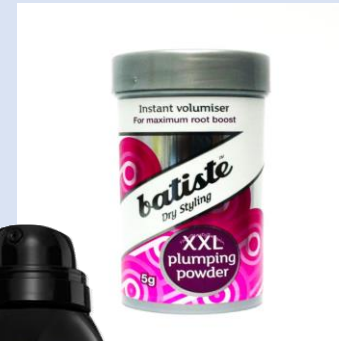
- Dry Shampoo

Batiste Dry Shampoo Plus
Heavenly Volume

- Volumiser Powders

Batiste XXL Plump Powder

Shu Uemura Volume Maker



HAIRSPRAYS AND FINISHING



- Got 2b glued
- KENRA VOLUME SPRAY

COLOUR - 2 Methoxymethyl PPD / ME PPD

PPD

6% allergic to PPD

Most 'PPD Free' products contain
toluene diamine sulfate

Grecian, Indigo Henna, Lush

2 MEPPD

Reaction less severe

Colour performance equivalent

Low risk of initial contact sensitisation



COLOUR - GREYING HAIR

L'Oreal Serum Jeunesse

- Mimic DOPAchrome tautomerase
- Protects melanocytes from oxidative damage
- Daily spray delays greying



AFRO-TEXTURED HAIR

- “Low POO” weekly, antiyeast
- “Co-Wash”
- Leave In Conditioners
- Heat Protection
- PK Elasticiser
- Tresemme



FIBERS

- Online
- £15
- Spray
- Got2be



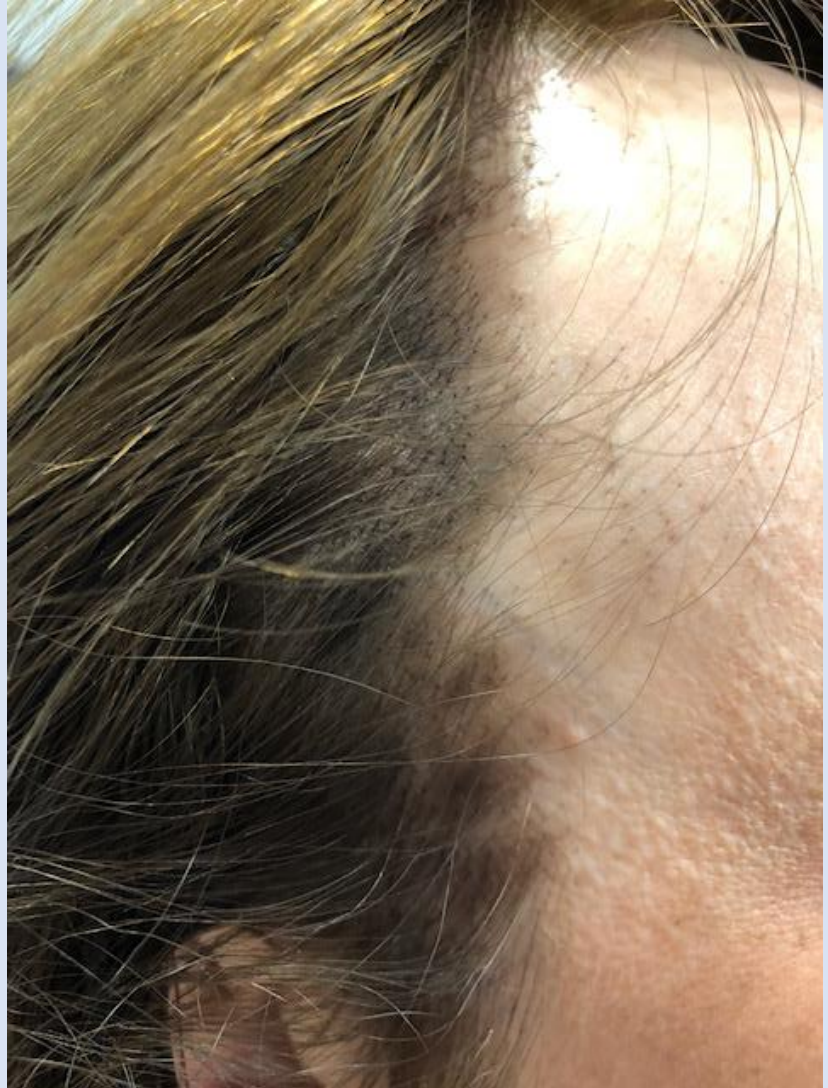
Nanogen fibers



HIDING PATCHES

- WOW
- ACQUAMATCH
- MANE SPRAY







Mascaras/Eyes

- Maybelline Lash Sensational
- Benefit They're Real!
- Lancome Hypnose Drama
- Urban Decay 24/7 Waterline Pencil



Brow Cosmetics

- Anastasia Beverly Hills
- Freedom
- Wunderbrow
- Suqqu Brow pen
- Toppik Brow Builder



IN PRACTICE

- Bimatoprost 0.03% vials
- Nightly 3 months then 3 x week
- Hyperpigmentation, fat atrophy, irritation



BIMATOPROST

- Prostaglandin F2 analogue
- Extends anagen phase

The screenshot displays the JAAD website interface. At the top, the JAAD logo is on the left, and social media links and a welcome message for a member are on the right. A navigation bar contains links for Articles & Issues, CME, Multimedia, For Authors, Journal Info, Resources, AAD, Collections, and JAAD / JID Junction. Below this is a section for Open Access Articles with various topic tags like AAD Clinical Guidelines, ACNE, Artificial Intelligence, Atopic Dermatitis, Game Changers, Melanoma, Nonmelanoma Skin Cancer, Psoriasis, and Shared Science. A search bar is present with a dropdown for 'All Content'. The main article section features the title 'Hypertrichosis of the eyelashes caused by bimatoprost' by Antonella Tosti, Massimiliano Pazzaglia, Stylianos Voudouris, and Giovanni Tosti. It includes a DOI link, PlumX Metrics, and a list of article tools such as PDF download, image download, email article, and citation alert.

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Hypertrichosis of the eyelashes caused by bimatoprost

[Antonella Tosti](#), MD^a, [Massimiliano Pazzaglia](#), MD^a, [Stylianos Voudouris](#), MD^a, [Giovanni Tosti](#), MD^b
Bologna and Trecenta-Rovigo, Italy

PlumX Metrics

DOI: <https://doi.org/10.1016/j.jaad.2004.05.002>

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Bimatoprost for eyelash growth

Smith et al 2012

- Multicenter, randomized, double-masked, vehicle-controlled, parallel-group study of subjects with a global eyelash assessment score (GEA) of 1 or 2
- 137 given once-daily bimatoprost 0.03%, 141 given placebo for 5 months
- Bimatoprost subjects had significantly greater increases in eyelash length and thickness as evaluated by digital image analysis
- Patient reported outcome questionnaire demonstrated a statistically significant greater change from baseline for bimatoprost subjects ($p < 0.05$)

Smith S et al. Eyelash growth in subjects treated with bimatoprost: a multicenter, randomized, double-masked, vehicle-controlled, parallel-group study. J Am Acad Dermatol. 2012 May;66(5):801-6

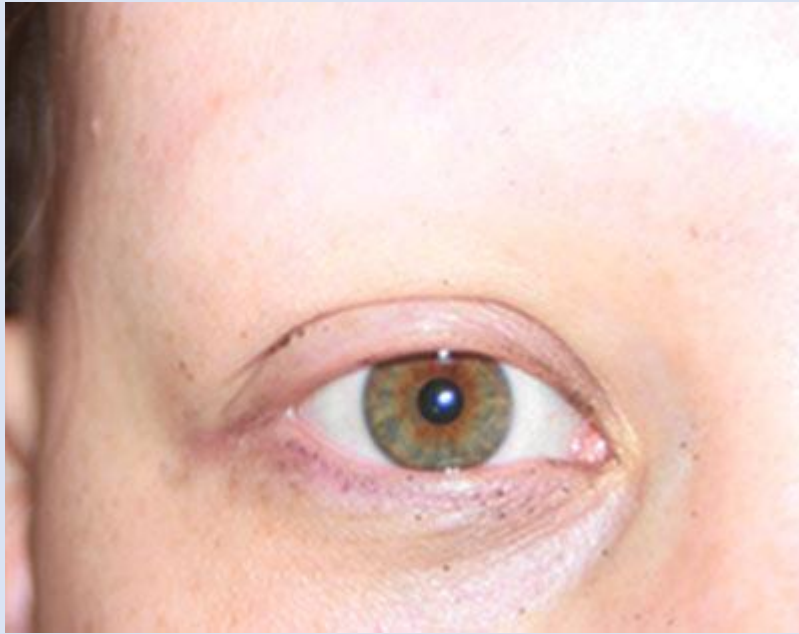
Bimatoprost vs Minoxidil in eyebrow enhancement

Suwanchatchai et al 2012

- Randomised double-blind comparative study of 27 patients
- Randomly assigned bimatoprost 0.03% on one eyebrow and minoxidil 3% on the contralateral eyebrow once daily for 16 weeks.
- At 16 weeks, both treatments showed significant increase in hair diameter ($p < 0.001$)
- No significant differences between the two treatments

Suwanchatchai W. Efficacy and safety of bimatoprost 0.03% versus minoxidil 3% in enhancement of eyebrows: a randomized, double-blind, split-face comparative study. J Dermatol. 2012 Oct;39(10):865-6

Semi Permanent Make Up



Scalp Micropigmentation



- TrendCo
- Karen Betts



WIGS

- Inui (Japan) 2017 QOL rating scale for wig use
Wig use improved all types of hair loss
- [BMJ Open](#). 2017; 7(4) A mixed methods survey of social anxiety, anxiety, depression and wig use in alopecia

[Kerry Montgomery](#),¹ [Caroline White](#),² and [Andrew Thompson](#)¹


338 survey to AUK members

Higher depression anxiety and social anxiety when not wearing wig

Overall, 46% of participants reported that wearing a wig had a positive impact on their everyday life with negative experiences related to fears of the wig being noticed.

TRENDCO, CLIP HAIR

Human vs Acrylic



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before and after IntralaceTM



before and after IntralaceTM



before and after Medi ConnectionsTM

See more examples of women using [the Intralace SystemTM](#) and [Medi ConnectionsTM](#)

NUTRACEUTICALS

- Viviscal® 'Marine Extract' tablet
Amazon 3.9 / 5 (312)

- Pantogar Capsule containing vitamin B1, B5, L-cystine, keratin, and yeast
Amazon 3.7 /5 star (38)

Viviscal®

Ablon 2015

- Double-blind placebo controlled study in women with self-perceived thinning hair
- 30 women given Viviscal®, 30 women given placebo twice daily for 90 days
- Number of terminal hairs within 4cm² target area were significantly higher Viviscal® patients compared with placebo (P<0.0001)
- Viviscal® patients had significantly less hair shedding (P=0.002), higher total Self-Assessment (P=0.006) and Quality of Life Questionnaires (P=0.035) scores

Ablon G et al. 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. Dermatol Res Pract. 2015;2015:841570.

Pantogar®

Bergner 1999

- Larger multicentre observational study of 1,194 patients with diffuse hair loss and 642 patients with nail growth disorders
- After 3-6 months of use, the therapeutic effect on hair loss and nail growth was assessed as good/very good by doctors and patients in 87-90% of cases
- Pantogar® reduced the number of hairs falling out daily to a normal level (80-100 hairs)

Bergner, T. Diffuses Effluvium, Haarstrukturschäden und Nagelwachstumsstörungen erfolgreich therapiert. Der deutsche Dermatologe, 1999. 47(11): p. 881-884.

IN PRACTICE

- Viviscal /Pantogar for 3-6 months for telogen effluvium
- In patients with poor nutritional status
- Sample of 1- my hairdresser!!!



THANK YOU!



1. HAIR CARE PRODUCTS

SHAMPOOS

Caffeine

Antidandruff shampoos

Volume




CAFFEINE



Clinical and Laboratory Investigations

Differential effects of caffeine on hair shaft elongation, matrix and outer root sheath keratinocyte proliferation, and transforming growth factor- β 2/insulin-like growth factor-1-mediated regulation of the hair cycle in male and female human hair follicles *in vitro*

T.W. Fischer , E. Herczeg-Lisztes, W. Funk, D. Zillikens, T. B  r  , R. Paus

First published: 16 May 2014 | <https://doi.org/10.1111/bjd.13114> | Cited by: 14

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Conflicts of interest This study was performed in part with support by a basic research grant from Dr. Kurt Wolff GmbH, Bielefeld.

 PDF  TOOLS  SHARE



Alpecin Caffeine Shampoo

Sisto et al Double-blind RCT of 66 AGA patients

- caffeine shampoo vs placebo shampoo
- 6 months caffeine -higher treatment satisfaction (84.8% vs 36%) fewer shed hairs when combing

Bussoletti et al similar study showing similar results in shedding reduction. No sample size

Dhurat et al Open-label RCT of 210 men with AGA

- Topical caffeine vs 5% minoxidil
- 6 months no difference in anagen counts both groups, both reduction in shed hairs
- 3 months greater satisfaction with minoxidil , no difference at 6 months

Sisto T et al. Efficacy of a cosmetic caffeine shampoo in androgenetic alopecia management. J Appl Cosmetol 2012; 31: 57–66.

Bussoletti C et al. Efficacy of a cosmetic phyto-caffeine shampoo in female androgenetic alopecia. G Ital Dermatol Venereol. 2018 Mar 6. doi: 10.23736/S0392-0488

Dhurat R et al. An Open-Label Randomized Multicenter Study Assessing the Noninferiority of a Caffeine-Based Topical Liquid 0.2% versus Minoxidil 5% Solution in Male Androgenetic Alopecia. Skin Pharmacol Physiol. 2017;30(6):298-305

NEWS >

Alpecin Shampoo ad gets ASA in a lather over caffeine claims

By **Sam Bradley** · 27 March 2018 00:00am



German shampoo brand Alpecin has had a bad hair day at the hands of the **Advertising Standards Authority** (ASA), after a complaint from a professional trichologist that the company could not back up its hair restoration claims.

The campaign, a regional press ad which used Alpecin's familiar promise that the product provides 'German engineering for your hair', was banned after the ASA found that the company could not provide proof that its product helped to reduce the rate of hair loss.

Alpecin, which said that its marketing followed the guidelines of both the **Committee of Advertising Practice** (CAP) and the Medicine and Healthcare products Regulatory Agency (MHRA), claimed that it ensured that claims made for its products implied only cosmetic effects, and that the firm had carried out eight separate studies into the product's benefits.

Despite these assurances, the campaign contained the statement: 'Shampoo is too small a word for it. Alpecin provides caffeine to your hair, so it can actually help to reduce hair loss.' The ad prompted a

ANTIYEAST/ANTIDANDRUFF

Malassezia and the Microbiome

POTENTIATED ZINC PYRITHIONE (ZPT) SHAMPOO

Improves scalp health
Reduces hair shedding



Trüeb RM, Henry JP, Davis MG, Schwartz JR. Scalp condition impacts hair growth and retention via oxidative stress. Int J Trichol 2018;6 262-270.

ANTIYEAST/ANTIDANDRUFF

CICLOPIROXOLAMINE + ZPT SHAMPOO

Study of 40 consumers presented at WHRC 2019

Rebalances scalp microbiome



IN PRACTICE

- Poor scalp health under recognised contributor
- Ketoconazole or ZPT shampoos for all types of hair loss
- “Get it good, keep it good”
- H and S may be better tolerated

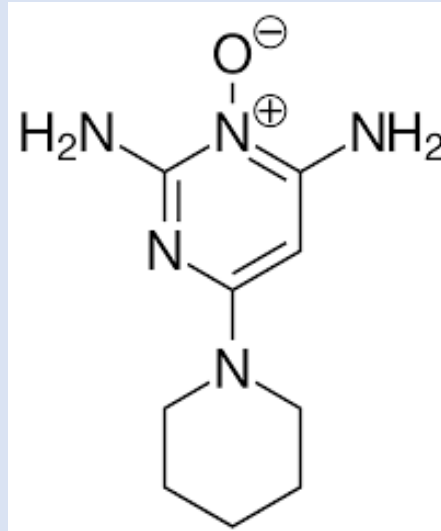


2. HAIR GROWTH STIMULANTS

- All work by prolonging anagen phase
- Minoxidil
- Natural remedies
- Bimatoprost
- Nanogen Hair Growth Serum
- Stemoxidine

MINOXIDIL

- Antihypertensive
- Topical in 1988 as Rogaine
- 2% solution, 5% foam
- Non proprietary /compounded preparations eg PK, Belgravia, Nioxin
- £30 per month
- Pro-drug converted to minoxidil sulfate via sulfotransferase enzymes
- Efficacy dependent on sulfotransferase activity in hair follicles



McCoy J et al. Doppler laser imaging predicts response to topical minoxidil in the treatment of female pattern hair loss. J Biol Regul Homeost Agents. 2016 Jan-Mar;30(1):131-4.

Pattern Hair Loss-Minoxidil in men

Hillmann et al 2015

- 24-week double-blind, randomized, placebo-controlled study in men with moderate androgenetic alopecia (AGA)
- 33 men given minoxidil, 34 given placebo foam
- At 24 weeks, significant increase in frontotemporal and vertex counts

Hillmann K et al. Single-Centre, Randomized, Double-Blind, Placebo-Controlled Clinical Trial to Investigate the Efficacy and Safety of Minoxidil Topical Foam in Frontotemporal and Vertex Androgenetic Alopecia in Men. *Skin Pharmacol Physiol*. 2015;28(5):236-44

Pattern Hair Loss-Minoxidil in women

Bergfeld et al 2016

- Phase III, randomized, double-blind, vehicle-controlled, parallel-group, international multicenter trial in 404 women with female pattern hair loss given either minoxidil or placebo foam
- At 24 weeks, minoxidil resulted in greater hair growth than (9.1cm² more) placebo foam ($p<0.0001$).
- Improvement in scalp coverage reported by subject self-assessment and expert panel review (both $p<0.0001$)
- Low incidence of scalp itching + facial hypertrichosis

Bergfeld W et al. A Phase III, Multicenter, Parallel-Design Clinical Trial to Compare the Efficacy and Safety of 5% Minoxidil Foam Versus Vehicle in Women With Female Pattern Hair Loss. *J Drugs Dermatol*. 2016 Jul 1;15(7):874-81.

Minoxidil and beard

Ingprasert et al 2016

- 16-week randomized, double-masked, placebo-controlled study for beard enhancement in 46 men given either 3% minoxidil or placebo
- At 16 weeks, minoxidil group showed significant mean change in hair count compared with placebo ($p < 0.001$) but no significant change in hair diameter
- Patient self-assessment was significantly superior in minoxidil group ($p = 0.013$)

Ingprasert S et al. Efficacy and safety of minoxidil 3% lotion for beard enhancement: A randomized, double-masked, placebo-controlled study. J Dermatol. 2016 Aug;43(8):968-9

CTE-oral minoxidil

Perera et al 2017

- Retrospective study on 36 women with chronic telogen effluvium taking once daily oral 0.25-2.5mg minoxidil
- At both 6 months and 12 months there was a significant reduction in

Notable side effect	Prevalence (individuals)
Transient subsiding postural dizziness	2
Ankle oedema	1
Facial hypertrichosis	13

- Limitations – no standardised dose, lack of placebo

Perera E et al. Treatment of chronic telogen effluvium with oral minoxidil: A retrospective study. *F1000Res*. 2017 Sep 6;6:1650.

Rosemary Oil – a cheaper alternative to minoxidil?



Panahi et al 2015

- Randomized comparative trial of AGA patients
- 50 people given rosemary oil, 50 people given minoxidil 2% for 6 months
- 6 months, BOTH groups showed significant and equal increase in hair count compared with baseline ($p < 0.05$)
- less scalp itching in rosemary oil group ($p < 0.05$)

Panahi Y et al. Rosemary oil vs minoxidil 2% for the treatment of androgenetic alopecia: a randomized comparative trial. *Skinmed*. 2015 Jan-Feb;13(1):15-21.

Onion Juice



Sharquie et al 2002

- Single blind placebo-controlled trial of 62 patients with AA
- crude onion juice vs tap water topically twice daily for 2 months
- crude onion juice group had significantly greater hair re-growth than tap water ($p < 0.0001$)
- Limitations: not double-blind and did not provide detailed information on how they determined “hair re-growth”

Sharquie KE et al. Onion juice (*Allium cepa* L.), a new topical treatment for alopecia areata. J Dermatol. 2002 Jun;29(6):343-6.

IN PRACTICE

- Minoxidil 5 % foam at night
 - Paradoxical effluvium
 - 12 months-reduce to 3 x week
 - Oral Minoxidil 1mg od both sexes
-
- Hypertrichosis, itch, oedema



Nanogen Hair Growth Factor Serum

- VEGF
- No published studies only select consumer experiences published on website
- *“In consumer trials, 88% of the women who tried it saw noticeable hair thickening within a month, and further clinical trials showed that Nanogen improved hair growth 237% more than the previous best treatment, which was used as a control” – Alice Hart Davis*

<http://www.alicehartdavis.com/blog/index.php/nanoge>



Stemoxydine

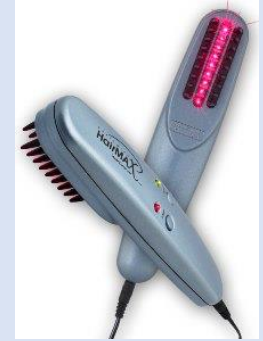
Inhibits Hypoxia induced Transcription Factor 1Alpha
Increase levels of PG E2 and F2

Serum –Densifique and Serum Jeunesse

Shampoos



HairMax®Laser



JIMINEZ

- Multi-centre double-blind RCT of patients with female/male pattern hair loss
- 279 patients randomized to receive either lasercomb or sham device in 4 trials
- At 26 weeks, the mean terminal hair count increased significantly in all trials with lasercomb compared with sham device (all $p < 0.05$)
- Higher % of lasercomb patients reported overall improvement in condition, and in thickness and fullness of hair in self-assessment

Jimenez et al. Efficacy and Safety of a Low-level Laser Device in the Treatment of Male and Female Pattern Hair Loss: A Multicenter, Randomized, Sham Device-controlled, Double-blind Study. Am J Clin Dermatol. DOI 10.1007/s40257-013-0060-6

3.NUTRACEUTICALS

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Amazon 3.9 / 5 (312)

- Pantogar Capsule containing vitamin B1, B5, L-cystine, keratin, and yeast
Amazon 3.7 /5 star (38)

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IN PRACTICE

- Viviscal /Pantogar for 3-6 months for telogen effluvium
- In patients with poor nutritional status
- Sample of 1- my hairdresser!!!



4.CAMOUFLAGE

- Fibers
- Mascara and brows
- Micropigmentation
- Wigs

COLOUR - 2 Methoxymethyl PPD / ME PPD

PPD

6% allergic to PPD

Most 'PPD Free' products contain
toluene diamine sulfate

High cross reactivity

Purple Henna /Renassiance

2 MEPPD

Reaction less severe

Colour performance equivalent

Low risk of initial contact sensitisation



In Practice

- I recommend Minoxidil 5% foam once at night for PHL
- AA ?
- risk of telogen effluvium
- Step down if s/e
- Allow 1 year before assessing efficacy
- Oral minoxidil according to patient preference/CTE
- Nanogen HGS if cannot tolerate minoxidil
- Bimatoprost for Brows and lashes AA/FFA
- Hair Max 3x week 20 mins PHL

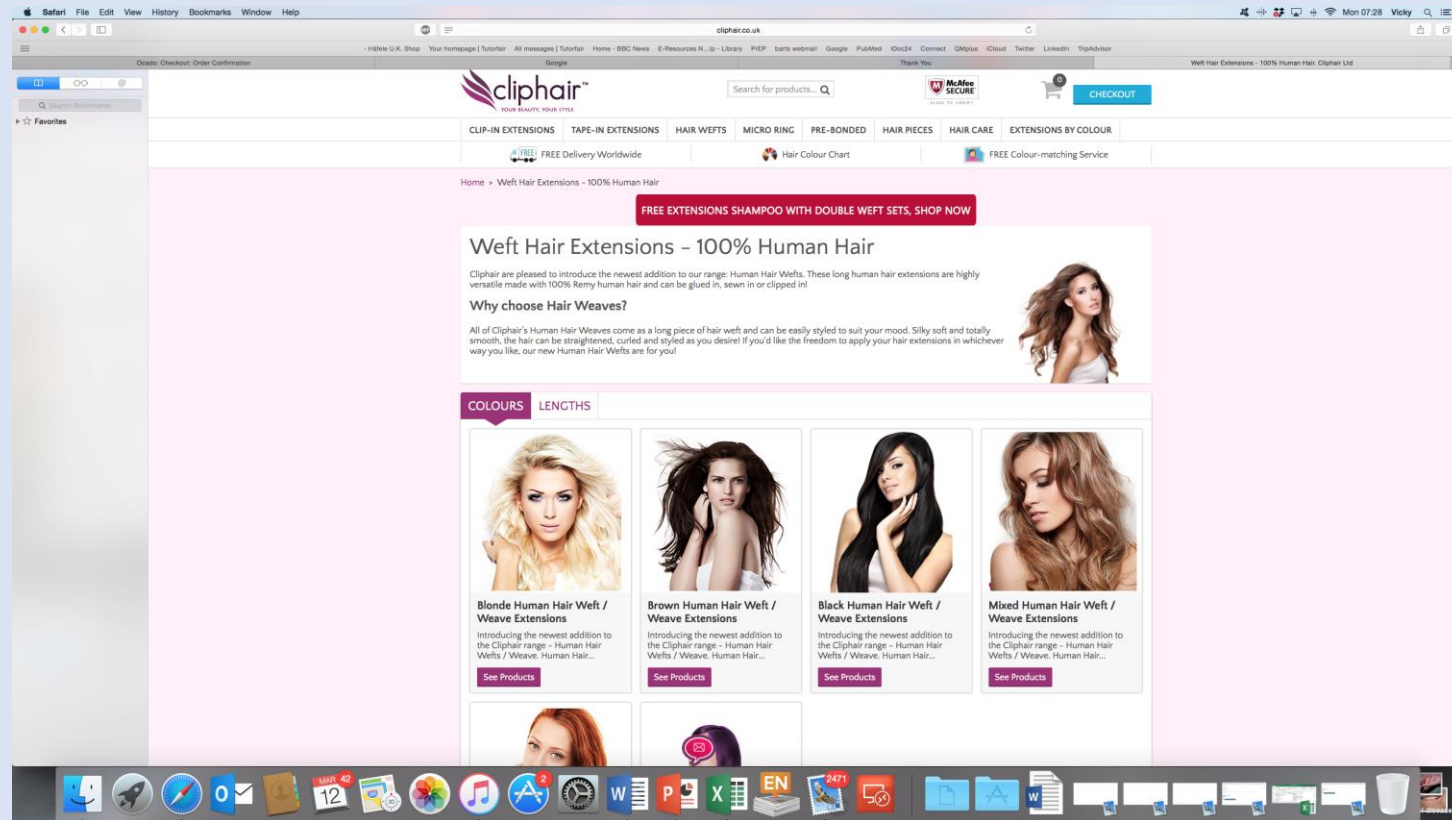
In Practice

- Emphasise need for healthy balanced diet
- Natural zinc sources such as nuts, shellfish
- Use Viviscal/Pantogar if poor nutritional status

Limitations of study

- No control group
- Minoxidil dosage used was 2%, normally 5% is used so this may have limited efficacy
- Cannot make a fair comparison between minoxidil and rosemary oil, however study still shows significant changes in growth using rosemary oil

Cliphair.co.uk



Nioxin

- Nioxin Hair Regrowth Treatment contains 2% Minoxidil
- Other nioxin products contain sunscreen B complex, melanin
- 3-step cleanse-condition-scalp lotion regimen
- £33
- Amazon 4.3/5 (670)



Nutritional Supplementation

- Biotin
- Selenium
- Zinc

Biotin (Vitamin B7)

- congenital or acquired biotin deficiency

Patel

- Systematic review conducted of all case reports and RCTs focusing on biotin supplementation
- 18 case reports were identified – all patients with underlying pathology of poor hair growth showed clinical improvement after biotin treatment
- Limitations: case reports, mostly in children
-

Patel DP et al. A Review of the Use of Biotin for Hair Loss. Skin Appendage Disord. 2017 Aug;3(3):166-169.

Biotin

- Study evaluated the frequency of biotin deficiency in healthy patients complaining of hair loss.
- Out of 541 women, 38% had low biotin levels, however 11% were later to have a cause for their deficiency, and 35% had seborrheic dermatitis, suggesting a multifactorial cause for their hair loss

Trüeb RM. Serum Biotin Levels in Women Complaining of Hair Loss. Int J Trichology. 2016 Apr-Jun;8(2):73-7

Safety of biotin

- Supplementation of biotin can exceed the recommended daily intake
- High biotin intake can interfere and lead to false laboratory test results
- US FDA found that biotin supplements taken by a patient led to a false negative troponin result, resulting in a missed MI and subsequent death

U.S. Food and Drug Administration (FDA). The FDA warns that biotin may interfere with lab tests: FDA safety communication. Washington, DC: FDA, U.S. Department of Health and Human Services; 2017. Updated 28 Nov 2017. <https://www.fda.gov/medicaldevices/safety/alertsandnotices/ucm586505.htm>. Accessed 7th March 2018.

Selenium

- Similar problem to biotin
- Retrospective study of 6 infants with alopecia secondary to selenium deficiency
- All given selenium supplementation of roughly similar dose
- Alopecia improved in all infants, however no information of how this outcome was measured and whether it was significant

Masumoto K et al. Clinical features of selenium deficiency in infants receiving long-term nutritional support. Nutrition. 2007 Nov-Dec;23(11-12):782-7.

Safety of selenium

- Liquid dietary supplement contained 200 times the labelled selenium concentration
- Median dose consumed was 41,749 microg/day (recommended dietary intake is 55 microg/day)
- Of 201 patients, 72% reported hair loss

MacFarquhar JK et al. Acute selenium toxicity associated with a dietary supplement. Arch Intern Med. 2010 Feb 8;170(3):256-61

Zinc

- Only one double-blind, placebo-controlled trial on zinc supplementation in 42 AA patients who were not zinc deficient
- Patients matched into pairs for duration of AA, history of atopy, disease extent, age and sex. One from each pair received 220mg zinc sulphate, other received placebo for 3 months
- No significant improvement in the extent/activity of AA in those taking zinc compared with placebo either by objective or subjective assessment.
- Zinc levels in hair increased significantly in zinc patients

Ead RD. Oral zinc sulphate in alopecia areata-a double blind trial. Br J Dermatol. 1981;104(4):483–4.

Zinc

- Other research shows same problem as other nutrient supplementation
- Research is carried out commonly in patients with an underlying zinc deficiency
- For example, a cohort study of 44 AA patients had their zinc levels checked. 15 of them had low serum zinc levels and were enrolled in the study
- These patients were given 50mg zinc gluconate once daily for 12 weeks and therapeutic efficacy evaluated through extent of vellus and terminal hair regrowth
- At 12 weeks, therapeutic efficacy of the zinc group was not significant ($p=0.439$)

Park H et al. The therapeutic effect and the changed serum zinc level after zinc supplementation in alopecia areata patients who had a low serum zinc level. Ann Dermatol. 2009 May;21(2):142-6

Natural Products

- Rosemary Oil
- Caffeine
- Garlic
- Onion Juice

In Practice

- Discuss findings if patients keen to explore natural approach
- ?'natural'DPCP