

BEAUTY MAXIMISING NUTRITION

AN IN-DEPTH EXPLORATION OF THE CONNECTION BETWEEN NUTRITION AND BEAUTY.

We groom, we style, we primp, we dress to impress.

We all want to look good to feel good. But it's not only about what goes on the outside that counts because there are diet and lifestyle choices that can dramatically affect our aesthetic features like body size, hair, skin, and nails.

While we cannot evaluate the health of our internal tissues with the naked eye, our hair, nails and skin can clue us into the overall health of our bodies because they noticeably reflect our nutritional status. Tissues in the body are all made of the molecules and nutrients that come from the foods we consume so when we eat healthily or poorly it shows.

Our health is only partially determined by genetics, meaning most of it is within our own control. To look our best, and feel our best, we need to ensure that we are doing everything within our control to nourish and protect our cells through proper nutrition and a healthy lifestyle.



Your health is partially determined by genetics, but is mostly within your control.

This issue of *News You Can Use* is an in-depth exploration of the connection between nutrition and beauty, highlighting the latest research about what we can all be doing to keep us

looking our best from the inside, out.

BEAUTY-ROBBING MISTAKES TO AVOID

Unbalanced Nutrition

Cells rely on adequate nourishment in order to accomplish their metabolic processes to maintain homeostasis. If our nutrient levels are low, they will sometimes divert nutrients to the processes necessary to sustain life at the expense of our external features like our hair or nails. Thus, it does not take long for inadequate nutrient intake to have a negative impact on our appearance. **Balanced nutrition allows the body to produce healthy and strong cells to replace damaged, worn-out cells** and tissues that are no longer able to function properly. This is part of the body's natural renewing process and occurs constantly without our noticing. However, when the nutritional supply is inadequate, the renewal process is diminished.^{1,2}

The best way to ensure that our cells have the rich supply of nutrients they need is to eat a nutrient dense diet rich in whole grains, fresh fruits and vegetables, lean protein, and healthy fats, every day, without exceeding recommended kilojoule intakes. The addition of a multivitamin with minerals has also been shown to help bridge the

nutritional gap on days when we may not eat what we need. In fact, a 2011 study of 8,860 American adults found that mineral-containing supplements helped men meet calcium and magnesium requirements and women meet iron requirements, which would not have been met from the diet alone.³ And another study published in 2012 found a similar result in American



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Tips to look your best everyday:

- 
Get enough sleep
- 
Quit smoking
- 
Drink water to stay hydrated
- 
Eat a balanced diet
- 
Get regular physical activity



children and teens (ages 9-18), who were able to meet requirements of magnesium, phosphorous, and vitamins A, C, and E with the use of supplements.⁴

Poor Blood Flow

The cells in our body are constantly involved in metabolic processes to maintain homeostasis; they grow, divide, and fulfil key functions that keep us alive and fit. Poor blood flow can prevent nutrients from being delivered to the cell, which is one reason why it is important to quit smoking if you do. Smoking causes damage to the arteries as well as restricts blood flow to cells.⁵ Conversely, daily physical activity will improve blood flow throughout the body, and the same nutrients associated with cardiovascular health will also improve blood flow to the cells responsible for our appearance.

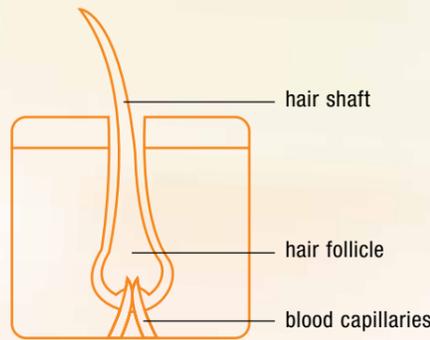


See product chart on page 7 for specific benefits of ingredients in Pro Vitality+.

#2595 • Pro Vitality+, 30 sachets

THE SECRET – TO SHINY, FULL HAIR

Hair is one of the fastest growing tissues of the body, second only to bone marrow.⁶ It is made of two parts: the **follicle**, which is under the skin and anchors the hair to the scalp; and the **shaft**, which is the strand above the scalp and is composed primarily of a protein called keratin. Keratin is produced by the follicle cells, and thus the key to healthy hair is to ensure the follicle cells are adequately nourished.⁷ Because the cells divide frequently (every 23 to 72 hours), they require adequate blood flow and a good supply of nutrients to feed the growth and development of these cells. Healthy hair is a general sign of good health, while dry, brittle hair could indicate a nutritional deficiency.

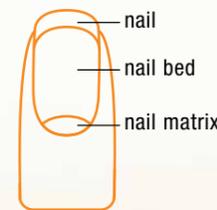


For women in particular, approximately 30% of hair loss before the age of 50 can be attributed to nutritional causes.⁷

No single nutrient is responsible for the health of the hair. Like every other cell or tissue in our bodies, all essential nutrients play a role. However, a 2013 review published in the *Journal of Dermatologic Clinics* highlights some key nutrients.¹ If you're experiencing issues with your hair, it may help to evaluate whether your food choices supply adequate amounts of nutrients. See the chart on following page.

THE SECRET – TO SHINY, STRONG NAILS

Nails are similar to hair in that they are both made from the same protein, keratin. Thus the nutritional recommendations for healthy hair apply to nails as well. The nail grows from the cells in the nail matrix at an average rate of 0.1 mm per day or 2-3 mm per month. Because new nail tissue is constantly being produced, nails are a good indicator of health and provide clues about our diet. **Brittle nails that grow slowly are usually indicative of inadequate blood flow or low nutrient levels.²** What's recommended for shiny, strong nails?



Check to see if you're getting enough of these nutrients in your food every day. See the chart on following page.

ARE YOU GETTING ENOUGH OF THESE NUTRIENTS IN YOUR DAILY DIET?

| NeoLife Product | Nutrient | Good For Skin Because... | Good For Hair Because... | Good For Nails Because... |
|---|---------------------------------|--|--|--|
| Chelated Cal-Mag (with Vitamin D) | Calcium | Helps to regulate cell turnover rate. In fact, a study published in <i>Journal of Investigative Dermatology</i> from Japan in 2003, found that a lack of adequate calcium in the skin is one reason that the elderly have thinner and more fragile skin than younger adults. ⁸ | | Contrary to popular belief, it only makes up 0.2% of the nail plate by weight and thus is likely not responsible for nail hardness. However, supplementation for one year was still shown in a clinical trial to improve nail quality in both pre- and postmenopausal women. ²¹ |
| | Vitamin D | Vitamin D plays an integral role in skin protection and rejuvenation by contributing to skin cell growth, repair, and metabolism. It optimises the skin's immune system and helps destroy free radicals that can cause premature ageing. ⁹ | A study conducted by researchers at Cairo University found that low levels of iron and vitamin D were associated with hair loss in women, and that the loss worsened as levels dropped. The researchers speculate that vitamin D may be involved in regulating genes that promote normal hair follicle growth. ²⁰ |  |
| Carotenoid Complex, (Also found in Pro Vitality+) | Carotenoids | Studies have shown that dietary carotenoids appear to contribute measurably and significantly to normal human skin colour, and have also been shown to provide additional protection from the sun. ¹⁰ | | Preliminary evidence suggests that carotenoids may repair and renew nails separated from the nail bed (a condition known as onycholysis) by playing a role in protection of the nail bed from sunlight, cell differentiation, and keratinisation. ²² |
| Salmon Oil Plus, (Also found in Pro Vitality+) | Omega-3 Fatty Acids | In a study published in <i>The Journal of Clinical and Aesthetic Dermatology</i> in 2008, omega-3 fatty acids were found to reduce rosacea, those red blotchy patches on your skin and inflamed capillaries on your face. ¹¹ | 3% of the hair shaft is made of these fatty acids. It is an important constituent of cell membranes and the natural oils that condition the scalp and hair. ¹ | |
| NeoLifeShake, NeoLifeBar, Nutrishake | Protein | Collagen, the most abundant protein in the skin, along with elastin, is responsible for warding off wrinkles and fine lines. ¹² | The main constituent of hair fibres. Inadequate protein intake can lead to hair loss, impaired hair growth or brittle, weak hair. ¹ | Key building block for the keratin in nails. Weak, flexible nails can signal a protein deficiency. ² |
| Vitamin B Co Sustained Release | Vitamin B ₃ , Niacin | Although deficiencies are rare, pellagra, the disease of late stage niacin deficiency, causes a variety of skin symptoms such as dermatitis and a dark, scaly rash. ¹³ | Involved in energy metabolism and promotes hair growth. ¹ | |
| | Biotin | A biotin deficiency forms toxicities throughout the nervous system, which will manifest itself on the skin's surface, leading to a variety of skin problems including rashes, acne, psoriasis, dermatitis and overall itchiness. ¹⁴ | A co factor for energy metabolism by mitochondria. It plays a significant role in protein synthesis and hair growth. ¹ | In one study published in <i>Cutis Journal</i> in 1993, supplementation caused a 25% increase in nail thickness of the nail plate in patients diagnosed with brittle nails, over a course of 6 to 15 months. ²³ |
| All-C, Vitamin C | Vitamin C | Because of its antioxidant properties and its importance in collagen synthesis, taking vitamin C can enhance the effectiveness of sunscreens applied to your skin. It also helps to repair damaged skin and, in some cases, reduces the appearance of wrinkles. ¹⁵ | Essential for collagen synthesis and linking keratin fibres together to help maintain the integrity of the hair. It also plays a role in blood circulation. ¹ | |
| Pro Vitality+ | Copper | Beneficial for ageing skin because copper repairs and maintains connective tissue in the skin, heart and arteries. Deficiency can lead to premature ageing. ¹⁶ | Essential for keratin fibre strength. ¹ | |
| | Iron | Iron is useful for proper functioning of antioxidants and also helps to activate vitamins in the B group. A deficiency of this vitamin can cause pale and dry skin. ¹⁷ | Involved in keratin production. Deficiencies can lead to anaemia, which decrease oxygen delivery to cells. With less oxygen going to the hair follicles, hair loss can sometimes occur. ¹ | Ensures oxygen is delivered to the nail bed. Low levels are associated with brittle nails. Severe deficiency can cause nails to appear thin, curve inward, and grow with raised ridges. ² |
| | Selenium | Selenium is a critical component of enzymes, which are necessary to form the antioxidants that protect against cellular damage from the free radicals that cause inflammation, ageing, and that may promote skin cancer. In fact, many scientists support the theory that selenium in the diet is protective against skin cancer. ¹⁸ | Involved in hormone and enzyme activity. Abnormal loss of hair colour may suggest low levels of selenium. ¹ | |
| | Zinc | Zinc is responsible for specific aspects of cellular metabolism functions, including protein synthesis, cell division and cellular repair. It also helps to maintain the integrity of skin membranes. ¹⁹ Research shows that people with acne have lower levels of zinc than people with clear skin, and that supplementing with zinc can reduce acne by 50%. ¹⁹ | Promotes cell division and tissue growth and repair. ¹ | Deficiency can lead to poor nail growth. ² |
| | Other Minerals | | | All essential minerals are an important part of the nail plate's composition. ² |



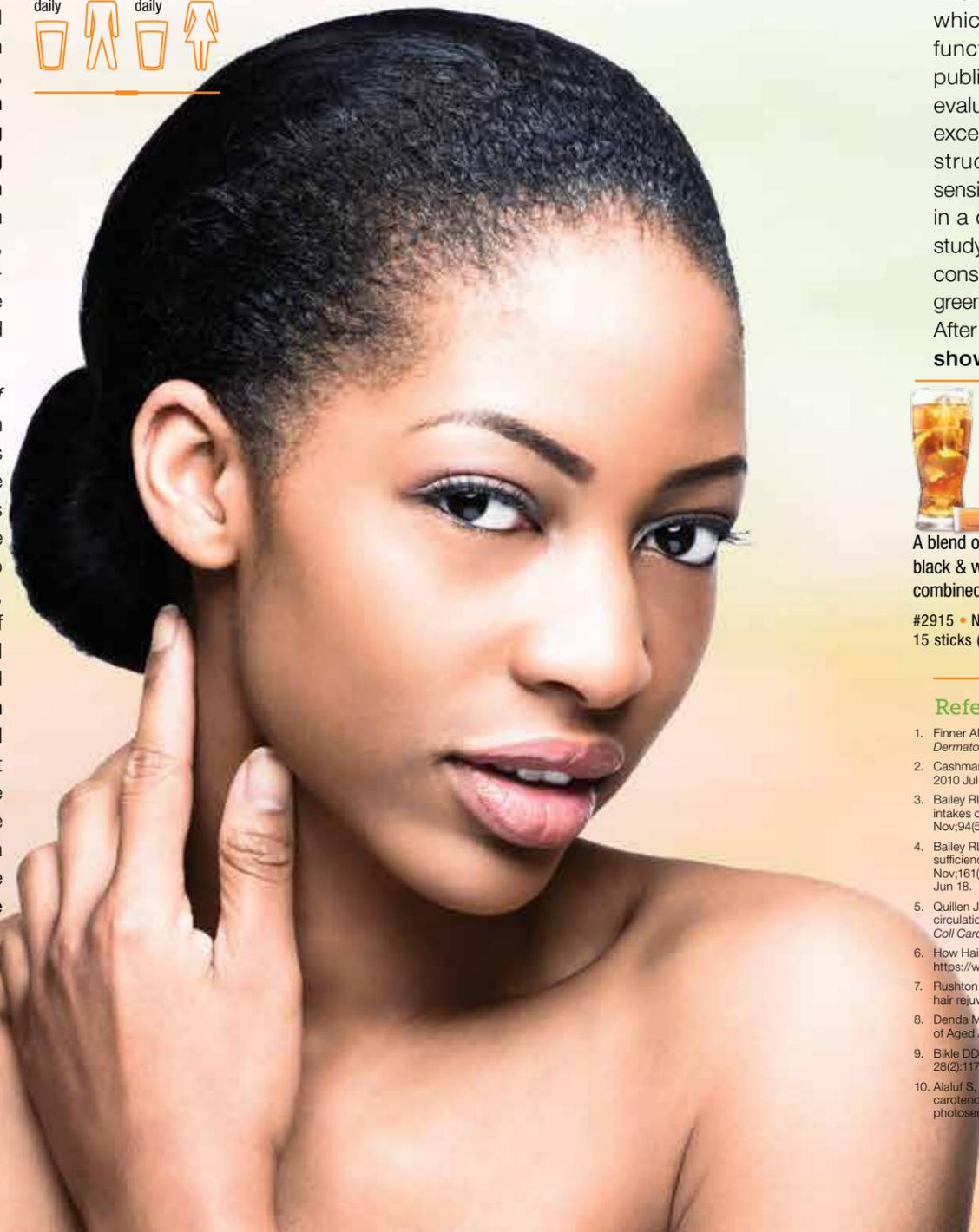
THE SECRET – TO CLEAR, GLOWING SKIN

The skin is one of the largest organs of the body and will quickly reflect poor diet and lifestyle choices. Adequate hydration, getting enough sleep, regular physical activity, and managing stress are all lifestyle factors that can impact the appearance of our skin. However, the theme should be apparent now; balanced nutrition for the whole body is the foundation for smooth, soft, supple skin. **Complete, whole food nutrients help preserve skin health by protecting against UV light, preventing dry skin, maintaining skin strength and elasticity, and supporting wound repair, in addition to providing the structural components of skin cells.** In particular, foods rich in antioxidants and essential fatty acids, such as fruits, vegetables, and omega-3 rich fish, have been shown to be significantly associated with improved skin quality.^{9,11,24}

Research published in the *Journal of the American College of Nutrition* in 2001 found that the right food choices could also make an impact on the appearance of wrinkles on the skin. This study assessed the diet and skin of more than 200 older European adults who were living in areas of high sun exposure, as part of the International Union of Nutritional Sciences' (IUNS) "Food Habits in Later Life" project, and found that **those who consumed more fish and vegetables in their lifetime had fewer wrinkles.** The authors suggest that high intakes of these foods may be protective against sun damage because of their antioxidant protection. In addition, inflammation can damage collagen in the skin. **And because**

How much water should you be getting?

The Institute of Medicine recommends that the average healthy adult man should consume approximately 3.7 litres, and women should consume the equivalent of 2.7 litres – that is 11-15 glasses of water from all sources a day.



omega-3 fatty acids play an important role in controlling inflammation, this can also help explain why consumers of fish may have fewer wrinkles than consumers of red meat and processed foods.²⁵ This is definitely something to chew on the next time you sit down to a meal.

COLOUR ME GORGEOUS

Flavonoids, a nutrient found in colourful fruits, vegetables, and teas, have anti-inflammatory and antioxidant effects, which are beneficial for the barrier function of the skin. A 2011 study published in the *Journal of Nutrition* evaluated the effect of green tea, an excellent source of flavanols, on skin structure, texture, circulation, and sensitivity to UV exposure, in 60 women in a double-blind, placebo-controlled study. Participants were randomised to consume either a beverage containing green tea flavanols or a control beverage. After the 12-week trial period, results showed green tea flavanols were



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protective against harmful UV radiation & helped improve overall skin quality of women, including skin elasticity, roughness, scaling, density and hydration. Researchers attribute improvements in skin structure to the



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flavanol-mediated increases in blood flow to the skin, which is important for supplying nutrients and oxygen to the cells. They found that cutaneous blood flow increased by 29% over the course of the trial.²⁶ **Regular consumption of tea flavanols may be the key to youthful-looking skin!**

THE TRUTH ABOUT ACNE!

Acne is one of the most common dermatological conditions for young adults worldwide,²⁷ and can be frustrating to manage. While the connection between nutrition and diet is still not fully understood, some evidence suggests that cutting back on empty kilojoules and sweets may help.

Research published in the *American Journal of Clinical Nutrition* suggests that limiting intakes of high-glycaemic foods like white bread, crackers, sweets, and soda may reduce break-outs in young adults. In this randomised controlled trial, 43 male acne patients ages 15-25 followed either a low-glycaemic load diet or a carbohydrate-dense diet for 12 weeks, and had their acne assessed each month. **By the end**

of the study, the low-glycaemic load group experienced more significant decreases in acne than the control group, as well as improved insulin sensitivity. These findings led researchers to speculate that the spike in blood sugar may increase the hormones that stimulate excess oil production, which can then trigger acne.²⁸ While this study was small, it is one of many that support the role of diet in managing acne. A 2013 paper published in the *Journal of the Academy of Nutrition and Dietetics* reviewed 27 studies on this topic and concluded that the evidence for low-glycaemic load diets is the most convincing factor for establishing the relationship between diet and acne.²⁹ So if you are frequently having break-outs, this study suggests that it may be time to evaluate your diet. As the saying goes, **"Let food be thy medicine and medicine be thy food"**– Hippocrates.



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