

Clinical and Medical Engineering Live

Mini Review ISSN: 2997-612X

Integrative Approaches to Healthier Skin: Traditional and Non-Traditional Discussions Ella Pure and The Root Brands

Christina Rahm*, M.S., Ph.D., Ed.D.

USA

Corresponding Author: Christina Rahm, M.S., Ph.D., Ed.D. USA.

1. Introduction

People are constantly seeking better and more efficient means of making their skin healthier. Healthy skin is smooth with no breaks in the surface and it is warm and not moist, dry, wrinkled, or flaky. Healthy skin is an illustration of a healthy body, and therefore, there are internal and external factors that impact the skin's well-being. This paper will elaborate on integrative approaches to healthier skin by examining biohacking methods used by human beings to optimize people's mental and physical potential. There are numerous skincare products that aim to promote healthy skin by mitigating negative impacts like inflammation and redness and also mitigating aging symptoms by eliminating fine lines and wrinkles. To achieve these benefits, these products incorporate various ingredients with varying health benefits, thereby integrating them to achieve the desired outcome, such as smooth, soft, moist, and acne-free skin. Obtaining the desired skin and optimum skin health is crucial in improving an individual's self-esteem and confidence towards leading a happy and healthy life where they are comfortable in their skin, thus rendering skincare a fundamental endeavor with numerous health benefits.

Biohacking is a word used to refer to specific tricks and tips used for improving the human body's ability to operate optimally. These strategies can be used to improve the health of the skin through specific activities like facelifts [1]. Facelift, or skin tightening, is aimed at making the skin appear younger in the face by removing wrinkled skin that often occurs due to aging. Biohacking is important because taking care of the body ensures that it serves people better and looks better, which provides both physical and psychological benefits in boosting productivity and overall satisfaction in life [1]. Besides, the skin, precisely the human face, has much attention afforded to it, and ensuring that it is healthy and dazzling promotes positive emotions and feelings, which aid in boosting overall human health by eliminating negative psychological effects like stress, which can impair their quality of life. Therefore, devising a practical skincare routine is essential since the skin is essential, just like any other body part.

Facelift eradicates sagging skin, making it appear healthier and more presentable. Era facelift is a natural face mist generated with innovative technology and trade secrets consisting of a patent-pending formula. The foundation of this product includes minerals, vitamins, and amino acids formulated to generate skin nourishment and antioxidant-rich hydration. The micronutrient important in this product is amino acids, which play a crucial role in enabling the skin to obtain youth-boosting moisture so that it is hydrated, toned, and softer [2].

This approach is tailored towards evening out skin complexion and brightening its appearance. The era facelift procedure is needle-free and helps people regain their confidence by rejuvenating their skin. Sagging skin is inevitable, primarily due to aging. Therefore, the ingredients used in this approach are all healthy and have benefits for the human body. This product comes in two forms - green and white tea with fruit extracts. Era facelift has benefits like soothing the skin and establishing a dewy impact, moisturizing and softening dehydrated and dry skin, generating a calming impact over the skin, aiding the appearance of wrinkles and fine lines, and facilitating the appearance of the skin tone and discoloration [3]. With this product, it is explicit that one can regain their desired skin tone and appearance by mitigating aging skin, which occurs as one advance in age. Ingredients like fruit extracts have been proven to generate numerous health benefits both inside and outside the body, particularly in promoting the growth of healthier and newer cells, hydrating and eliminating the effects of dryness, suppressing the effects of aging, and reducing reddish skin pigmentation [4].

Another product for promoting healthier skin is the Ella Pure Reno, which is a unique integration of phytoplankton and hyaluronic acid. Phytoplankton is highly nutritious and obtained from the sea, while hyaluronic acid is a great antiaging moisturizer created to lift the skin and make it appear firm and smooth [5]. This product also promotes skin cellular growth, thus fostering the skin to regain its youth growth and helping people restore their confidence and self-esteem. Its ingredients include coconut oil, deionized water, citric acid, glycerin, and stearic acid, alongside others [6]. The fact that this product promotes cellular growth shows that its impact supersedes the outside of the body but also promotes internal well-being, thereby enabling people to optimize their health and live their best lives.

Skincare products have been found to be essential healthcare products that need to be certified to affirm their presumed

Volume - 2 Issue - 3

health impacts. Some of them claim to achieve specific roles, yet they do not hereby deceive consumers into purchasing them [7]. Moreover, other healthcare products tend to use harmful ingredients that exhibit health ramifications both internally and externally. As a result, it is crucial to examine the health impacts of the ingredients used in making skincare products like era facelifts [8]. People have to know the origin of some of the ingredients, such as green tea extract, are obtained from. Green tea is obtained from buds and leaves of the tea plant Camellia sinensis. Green tea has beneficial health impacts that have been proven scientifically, such as minimizing signs of aging like wrinkling and suppressing oily skin through minimizing excess sebum [6].

Therefore, understanding the impacts of such ingredients in skincare products can go a long way in achieving the desired outcomes. White tea is another essential ingredient for skincare products with important benefits like reducing inflammation, minimizing hyperpigmentation, moisturizing skin to eliminate dry skin. Studies show that applying both green and white tea to the skin helps protect it against the detrimental impacts of ultraviolet rays [9]. Vitamin B3 (Niacinamide) is another important ingredient with myriads od health benefits, such as improving the hydration of the skin, reinforcing the skin against irritants, and suppressing signs of aging. Studies show that niacinamide is a water-soluble nutrient with important skin benefits, specifically in slowing down the aging process. Vitamin B3 clearly suppresses aging by reducing signs like wrinkles, fine lines, red blotchiness, hyperpigmented spots, and skin yellowing [10].

It is also explicit that many skincare products incorporate betaine (amino acids) into their products due to their presumed health impacts in promoting healthier skin [11]. Betaine facilitates hydration of the skin, soothes the skin, reduces inflammatory impacts, and also promotes anti-aging. Research also shows that betaine helps suppress irritation from products like detergents [12]. Therefore, using this ingredient is essential in furthering the overall well-being and health of the skin. Ideally, numerous skincare products integrate aloe vera into their products due to its many benefits in promoting healthy skin. Aloe vera promotes the overall healing process for wounds, treats inflammatory forms of acne, and aids in minimizing chronic health conditions like eczema, psoriasis, and dermatitis [13]. Aloe vera is also one of the oldest used medicinal plants globally, specifically because of its strong anti-inflammatory impacts. Research shows that aloe vera is largely used in the prevention and healing of skin wounds. Its prevention and healing abilities have rendered it highly sought in managing health conditions like burn wounds, ulcers, cracked nipples, genital herpes, postoperative wounds, and skin ulcers [13].

Lavender extract is another instrumental ingredient used in skincare products due to its substantial benefits to the skin. It helps in lessening acne, evening out skin tone, reducing wrinkles, healing minor scrapes, cuts, or rashes rapidly, and suppressing redness through calming and soothing the skin [14]. Studies rank lavender highly in healing cuts, burns, and

skin conditions, making it an instrumental ingredient to use when creating a skincare product [15]. Applying lavender oil on the skin promotes the healing process by a great percentage, especially when dealing with psoriasis, hereby showing that it can be used topically without any worries for potential health ramifications. It is explicit that almost all ingredients used in skincare products are plant extracts rather than chemicals, depicting their health impacts and lack of negative impacts on the skin. For instance, lemon fruit or peel extract is largely used in skin care products because it contains vitamin C, which has antioxidant content [16]. Particularly, lemon fruit is important in gently exfoliating the skin, safeguarding the skin from free radicals, lightening and evening the skin tone, aiding in suppressing chronic skin inflammation and minimizing the appearance of aging spots.

Era Facelift also incorporates arginine, an amino acid, as its key ingredient. Arginine is primarily used in skincare and cosmetics because it aids the body in building protein, which is crucial in promoting healthy skin. This ingredient has both internal and external impacts on the body, making it a regular concept for research [17]. Arginine is essential in improving the skin's health by minimizing the appearance of fine lines and wrinkles; it safeguards the skin from free radicals, keeps the skin plump, firm, and smooth, improves the skin's hydration levels and potentially supports the production of collagen [18]. Like glycine, arginine also aids in suppressing protein losses by boosting their levels, which furthers the healing of wounds, particularly after trauma [19]. Glycine is also an amino acid that occurs naturally in the human body and is normally used as a buffering agent. Glycine is crucial in building glutathione, which is a crucial antioxidant for the body cells. Glycine is crucial in fostering collagen production, promoting moisture retention, facilitating visible signs of aging, and improving skin repair and regeneration. Glutamic acid, also an amino acid, is essential in forming proteins that occur in animals and plants [20]. As a result, glutamic acid plays crucial roles like increasing skin thickness, fading dark spots, preventing acne, evening out skin tone, reducing fine lines, exfoliating skin, and upholding the pH value of the skin.

Other amino acids that are essential in promoting healthy skin are lysine HCL and Threonine. Lysine HCL is an amino acid salt, and it plays a crucial role in ensuring that the body is healthy by promoting collagen formation, reducing acne, and hydrating the body by helping in promoting a balanced water transport through the skin [21]. Threonine is a crucial amino acid due to its role in personal care and cosmetics since it is capable of maintaining balance, fostering growth through protein, ensuring that the skin is tight and firm, and facilitating elastin and collagen production [22].

Studies show that integrative approaches to healthier skin identify the fact that the skin is part of a whole body system and that its overall health is impacted by an individual's general welfare, including stress levels and nutrition [23]. Therefore, manufacturers integrate varying ingredients based on their health impacts towards resolving the underlying issues that weaken the health of the skin [24]. Furthermore skincare products do not only include ingredients that are not

typically consumed by individuals but also some ingredients that are highly prevalent because of their health impacts. For instance, phytic acid is normally found in beans, which are largely consumed in normal diets [25]. It is also contained in nuts and seeds, which contain antioxidants that promote the health of the skin. Phytic acid is important in brightening the skin after inflammatory lesions, clearing and shrinking pores to suppress acne, and it also fights aging, thus promoting youthful skin. Similarly, Mandelic acid is also an example of alpha hydroxy acid, like phytic acid, with numerous health benefits in promoting healthier skin [26]. It helps in creating cell turnover, eliminating wrinkles and fine lines, boosting the appearance of uneven skin, and exfoliating the skin, and it also has antibacterial properties that help prevent infections.

Citric acid is the other ingredient used in skincare products is, which acts as an exfoliating agent. It has many potential health benefits, such as helping in unclogging pores to minimize acne, exfoliating the skin to eliminate dead cells, aiding in evening skin tone, and ensuring that the skin is smooth, soft, and bright. Citric acid is also vital in suppressing the occurrence of wrinkles and fine lines [27]. Another ingredient with similar functions is passion fruit extract, which incorporates Vitamins A and C, copper, fatty acids, calcium, magnesium, phosphorus, and carotenoids, which are crucial for healthy skin. Passionfruit extract promotes a plump and smooth skin and also minimizes the appearance of fine lines and wrinkles, skin soothing, hydrating, and moisturizing the skin and soothing and calming irritated or itchy skin.

Sage leaf extract and rosemary leaf extracts are also fundamental in formulating skincare products for fostering the creation of healthier skin. Sage leaf is a herb that is rich in vitamin A and calcium, which are crucial for typical cell regeneration [28]. Sage is highly therapeutic, particularly because of its volatile oil in its astringent, anti-septic, and relaxing purposes, which include promoting blood circulation, stimulating cell renewal, and suppressing the onset of facial wrinkles [6]. Sage leaf extract illustrates beneficial roles that extend to the inside of the human body since it promotes blood circulation. Additionally, it also minimizes redness, mitigates skin conditions like acne, and regulates the production of sebum [29]. On the other hand, rosemary leaf extract is also an important oil obtained from the rosemary plant, and it has been harvested for numerous years due to its ability to fight bacteria and serve as an antioxidant and antiinflammatory agent. Specifically, rosemary leaf extract serves to fight acne, smooth out fine lines, eradicate under-eye bags, tighten skin tone, eliminate skin inflammation, and mitigate severe conditions like dermatitis, eczema, and psoriasis [28]. This ingredient is also important in deodorizing naturally and smoothing out fine lines and wrinkles.

Other fruit-based ingredients are pineapple extract and grapefruit extract, which also play unique roles in promoting healthy skin. Pineapple extract contains skin soothing, antioxidating, and exfoliating properties that stem from its vitamin C. Pineapple extract also contains naturally occurring glycolic acid anti-inflammatory enzyme bromelain, which also

plays fundamental roles in promoting the roles highlighted above [28]. This ingredient also has other beneficial roles like mitigating damaging free radicals, slowing aging, calming the skin due to inflammation, fostering collagen production, aiding in mitigating serious sunburn and sunspots, safeguarding the skin against UV damage, and intensifying the wound healing process [28]. On the other hand, grapefruit extract contains numerous minerals and vitamins like beta-carotene, which play a crucial role in nourishing the skin and protecting it by achieving the following benefits: reducing the appearance of wrinkles, increasing skin moisture, suppressing skin melanin, introducing skin radiance, and functions effectively for acne and oilyprone skin complexions [6]. Both ingredients play crucial roles in promoting healthier skin, depicting their uniqueness and enabling people to obtain their desired skin type by suppressing all unappealing qualities.

Raspberry and cranberry extracts are also fundamental ingredients with outstanding health benefits in improving the overall well-being of the skin. The raspberry extract is beneficial for its botanical actives, which foster essential roles like aiding in lightening skin tone and evening out complexion, hydrating and moisturizing the skin, alleviating direct photodamage, energizing the skin, and providing direct anti-inflammatory benefits [30]. In contrast, cranberry extract has more robust antioxidant and collagen-promoting qualities and also plays a vital role in reducing inflammation of the skin alongside other antibacterial roles in safeguarding the health of the skin [31]. These benefits include soothing irritated skin, minimizing redness, suppressing acne-causing bacteria, clearing out pores, and safeguarding against detrimental environmental stressors that may harm the skin. Both raspberry and cranberry extracts play distinct yet vital roles in promoting the well-being of the skin by promoting its health and suppressing negative impacts.

As depicted above, there are numerous skincare products that aim to achieve distinct skin care goals, such as eradicating acne, moisturizing the skin, and slowing aging symptoms by eliminating fine lines and wrinkles, amongst other skin qualities. However, there are distinct ingredients that play varying roles in improving the skin's health based on their components. As a result, manufacturers integrate varying ingredients in their products based on the skin goals they desire to afford their consumers. As a result, it is crucial to understand the ingredients incorporated in the desired skincare product to determine whether they are suited for one's face and skin. However, healthy skin is typical, and it is characterized by aspects like softness, no breaks in the surface, warmth, and neither dryness and flakiness nor wrinkles and moisturization.

Moreover, it is fundamental to note that healthy skin is an illustration of a healthy body, thereby depicting that the health of the skin stems from the health of the overall body. Therefore, it is crucial to integrate skincare with overall body health. This literature review has established that healthy skin requires Vitamin A, Cand E, healthy oils, healthy fats, and amino acids. As a result, it is fundamental to seek products with ingredients rich with these components to ensure that

Volume - 2 Issue - 3

the skin is well taken care of to promote its general health.

References

- 1. Arora, R., Aggarwal, G., Dhingra, G. A., Nagpal, M. (2019). Herbal active ingredients used in skin cosmetics. *Asian J. Pharm. Clin. Res*, *12*(9), 7-15.
- 2. Cooper, I. D., Kyriakidou, Y., Petagine, L., Edwards, K., Elliott, B. T. et al (2023). Bio-hacking better health—Leveraging metabolic biochemistry to maximise healthspan. *Antioxidants*, *12*(9), 1749.
- 3. Bouslimani, A., da Silva, R., Kosciolek, T., Janssen, S., Callewaert, C., et al. (2019). The impact of skin care products on skin chemistry and microbiome dynamics. *BMC biology*, *17*, 1-20.
- 4. Puebla-Barragan, S., Reid, G. (2021). Probiotics in cosmetic and personal care products: trends and challenges. *Molecules*, 26(5), 1249.
- 5. Silva, S., Ferreira, M., Oliveira, A. S., Magalhães, C., Sousa, M. E., et al. (2019). Evolution of the use of antioxidants in anti-ageing cosmetics. *International Journal of Cosmetic Science*, 41(4), 378-386.
- 6. Guzmán, E., Lucia, A. (2021). Essential oils and their individual components in cosmetic products. *Cosmetics*, 8(4), 114.
- Rousel, J., Nădăban, A., Saghari, M., Pagan, L., Zhuparris, A., et al. (2024). Lesional skin of seborrheic dermatitis patients is characterized by skin barrier dysfunction and correlating alterations in the stratum corneum ceramide composition. *Experimental dermatology*, 33(1), e14952.
- 8. Michalak, M. (2022). Plant-derived antioxidants: Significance in skin health and the ageing process. *International journal of molecular sciences*, 23(2), 585.
- 9. Carvalho, M. J., Oliveira, A. L., Pedrosa, S. S., Pintado, M., Madureira, A. R. (2021). Potential of sugarcane extracts as cosmetic and skincare ingredients. *Industrial Crops and Products*, *169*, 113625.
- 10. Faria-Silva, C., Ascenso, A., Costa, A. M., Marto, J., Carvalheiro, M., et al. (2020). Feeding the skin: A new trend in food and cosmetics convergence. *Trends in Food Science Technology*, 95, 21-32.
- 11. Salvioni, L., Morelli, L., Ochoa, E., Labra, M., Fiandra, L., et al. (2021). The emerging role of nanotechnology in skincare. *Advances in colloid and interface science, 293*, 102437.
- 12. Reilly, D. M., Lozano, J. (2021). Skin collagen through the lifestages: Importance for skin health and beauty. *undefined*, 8, N-A.
- 13. Dsouza, L., Ghate, V. M., Lewis, S. A. (2020). Derma rollers in therapy: the transition from cosmetics to transdermal drug delivery. *Biomedical Microdevices*, *22*, 1-11.
- 14. Phasha, V., Senabe, J., Ndzotoyi, P., Okole, B., Fouche, G., et al. (2022). Review on the use of kojic acid—A skinlightening ingredient. *Cosmetics*, 9(3), 64.
- 15. Draelos, Z. D. (2021). Revisiting the skin health and beauty pyramid: a clinically based guide to selecting topical skincare products. *J Drugs Dermatol*, *20*(6), 695-699.
- 16. Ferreira, M. S., Magalhães, M. C., Oliveira, R., Sousa-Lobo, J. M., Almeida, I. F. et al (2021). Trends in the use

- of botanicals in anti-aging cosmetics. *Molecules, 26*(12), 3584.
- 17. Lukić, M., Pantelić, I., Savić, S. D. (2021). Towards optimal pH of the skin and topical formulations: From the current state of the art to tailored products. *Cosmetics*, 8(3), 69.
- 18. Kurek-Górecka, A., Górecki, M., Rzepecka-Stojko, A., Balwierz, R., Stojko, J. et al (2020). Bee products in dermatology and skin care. *Mo lecules*, *25*(3), 556.
- 19. Aguirre-Cruz, G., León-López, A., Cruz-Gómez, V., Jiménez-Alvarado, R., Aguirre-Álvarez, G. et al (2020). Collagen hydrolysates for skin protection: Oral administration and topical formulation. *Antioxidants*, *9*(2), 181.
- 20. Kouassi, M. C., Grisel, M., Gore, E. (2022). Multifunctional active ingredient-based delivery systems for skincare formulations: A review. Colloids and Surfaces B: *Biointerfaces*, 112676.
- 21. Dini, I., Laneri, S. (2021). The new challenge of green cosmetics: Natural food ingredients for cosmetic formulations. *Molecules*, 26(13), 3921.
- 22. Roux, P. F., Oddos, T., Stamatas, G. (2022). Deciphering the role of skin surface microbiome in skin health: An integrative multiomics approach reveals three distinct metabolite—microbe clusters. *Journal of Investigative Dermatology*, 142(2), 469-479.
- 23. Sfriso, R., Egert, M., Gempeler, M., Voegeli, R., Campiche, R. et al (2020). Revealing the secret life of skin, with the microbiome, you never walk alone. *International journal of cosmetic science*, *42*(2), 116-126.
- 24. Chaiyana, W., Charoensup, W., Sriyab, S., Punyoyai, C., Neimkhum, W. (2021). Herbal extracts are potential antioxidant, anti-aging, anti-inflammatory, and whitening cosmeceutical ingredients. *Chemistry Biodiversity, 18*(7), e2100245.
- 25. Kalasariya, H. S., Yadav, V. K., Yadav, K. K., Tirth, V., Algahtani, A., et al. (2021). Seaweed-based molecules and their potential biological activities: An ecosustainable cosmetics. Molecules, 26(17), 5313.
- 26. Juncan, A. M., Moisă, D. G., Santini, A., Morgovan, C., Rus, L. L., et al. (2021). Advantages of hyaluronic acid and its combination with other bioactive ingredients in cosmeceuticals. *Molecules*, *26*(15), 4429.
- 27. Ahmed, I. A., Mikail, M. A., Zamakshshari, N., Abdullah, A. S. H. (2020). Natural anti-aging skincare: role and potential. *Biogerontology*, *21*, 293-310.
- 28. Hoang, H. T., Moon, J. Y., Lee, Y. C. (2021). Natural antioxidants from plant extracts in skincare cosmetics: Recent applications, challenges, and perspectives. *Cosmetics*, 8(4), 106.
- 29. Kim, B., Cho, H. E., Moon, S. H., Ahn, H. J., Bae, S., et al. (2020). Transdermal delivery systems in cosmetics. *Biomedical Dermatology*, pp. 4, 1–12.
- Singh, S., Pandey, S. K., Vishwakarma, N. (2020). Functional nanomaterials for the cosmetics industry. In Handbook of functionalized nanomaterials for industrial applications (pp. 717–730). Elsevier.
- 31. Wan, P., Chen, J. (2020). A calm, dispassionate look at skin microbiota in atopic dermatitis: an integrative literature review. *Dermatology and therapy*, *10*, 53-61.

Volume - 2 Issue - 3