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Nutrition and Foods for Skin Health

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ABSTRACT

Various medicinally uses of the natural foods as well as edibility of them caused attraction a huge attention for several pharmacological activities include antioxidants, antibiotics and antineoplastic activity. Aging is a major risk factor in the change of convert skin structure and function might also directly affect skin appearance. Age-related disorders in the skin health are a consequence of the accumulation of cellular damage and reduced activity of protective stress response pathways leading to low-grade systemic inflammation and oxidative stress. There is increasing evidence that consumption of a variety of phenolic compounds present in natural foods may lower the risk of serious health disorders because of their antioxidant activity, amongst other mechanisms. This mini review reports the importance of the natural foods and nutritional status in the maintenance of healthy skin in human.

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Introduction

Aging is a major risk factor in the change of convert skin structure and function might also directly affect skin appearance. The weaknesses in nutritional status that convert skin structure and function might also directly affect skin appearance. Thus, it needs to investigation the effects of micronutrients and various natural agents that are important for skin health. Most important risk factors in aging process of skin are malnutrition, sun and smoking cigarettes(1-5). That is why just taking good care of our skin is not enough to remain young and beautiful. So, we can't deny the role of a balanced diet, plenty of water, sufficient sleep, exercise, positive thinking, and attitude in the healthy skin.1-5 Natural foods and their bioactive compounds such as phenolics have attracted researchers' interest for a long time because of several biological and pharmacological properties, such as antimicrobial, antioxidant, among others. In these days, various investigations have been concerned with some nutritional products due to their antioxidant potential to prevent or treat different diseases (1-5). Many plant extracts are used in food and pharmaceutical industries because of their health promoting and nutraceutical effects. There is increasing evidence that consumption of a variety of phenolic compounds present in natural foods may lower the risk of serious health disorders because of their antioxidant activity, amongst other mechanisms (6). Due to safety and other limitation surrounding the use of synthetic antioxidants, natural antioxidants obtained from edible sources, by-products and co-products are alternative sources of interest (6). Delivery of isolated phenolics as dietary supplements or functional food ingredients for health promotion and disease risk reduction may also be helpful in improving the efficacy of such natural nutritional agents.

The complementary treatment and traditional medicines to care a variety of conditions have been growing all over the World and attention to their potential is increasing, Some plants have been mostly used from ancient times in medicine, cosmetics and for preserving and improving the

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flavor of foods (7,8). Herbal medicines are mostly used in the all World. According to the estimation by the World Health Organization, about 80% of people on the globe are still dependent on traditional herb based medications due to their low cost, easy accessibility and likely negligible side effects in comparison to allopathic medicines (9-10). Plants naturally are a rich source of secondary metabolites and therapeutic nutrients. Especially, the phenolic compounds are the major group of plant secondary metabolites with antioxidant effects. These components are well known for various beneficial properties.on human health (9-10). Furthermore, some researhers have implied that some plant oils such as lavender oil could be used as an alternative to povidone-iodine which is an antiseptic and used for surgical and skin wounds (7,11). They have also reported no side effects associated with lavender oil treatment. Wounds are described as physical injuries with skin break or aperture, resulting in abnormal skin functioning and anatomy. Wound healing effects of several plants have been studied and among them, lavender is a promising one for treatment of skin disorders. It has been reported that the topical application of lavender oil effectively stimulated wound contraction. This effect might related to its biomolecules such as linalool and linalyl acetate (7,11).

It has been showed that the variety in the antioxidant effects of plant extracts can be due to the qualitative and quantitative compositions of the phenolic components and nutrients. Moreover natural foods and matters are considered as a basic source of medicaments and, hence, they are often used by pharmaceutical industries. This condition has led towards increased global demand for medicinal plants in the modern area of natural medicine, leading to exploration and exploitation of new plant and food sources for their medicinal and nutritional properties (12,13).

Nutritional status has a basic function in the maintenance of healthy skin. Macronutrients such as carbohydrates, proteins, and lipids and micronutrients such as vitamins and nutritionally essential minerals work together to maintain the barrier functions of skin. Skin occurs a physical and chemical barrier between the outside environment and the inside tissues of the body. Structurally, skin is comprised of two main layers, the epidermis and the dermis. The epidermis, the upper layer, is responsible for many of the barrier functions of skin. The dermis is the structural and nutritive support network underneath the epidermis. Since each layer has its own special structure and role, the nutritive requirements of each should be considered separately (4,14,15).

The main food as fuel for skin cells is glucose. Abnormal glucose handling drastically affects skin structure and appearance. Some of the function of nutrition in skin health focuses on the effects of deficiency, since the structural components of the skin are supported by various of nutritive factors, such as small peptides, minerals, and vitamins. The skin is also constantly exposed to high concentrations of oxygen, UV light, and oxidizing chemicals, highlighting a function for antioxidant vitamins in skin function. Moreover, nutritional additives of the skin is important for inflammatory response during wound healing. Amino acids are essential for the production of both dermal and epidermal structures, producing the extracellular matrix proteins and enzymes needed for the synthesis of the epidermal barrier. The amino acid requirements of skin are poorly understood. Specialized major lipids required for the improving of the stratum corneum, such as sterols and ceramides, are synthesized in the epidermis from amino acids, carbohydrates, and phospholipids (2-4,16).

The review article focuses on nutrition, natural foods and many other pharmacological agents that are important for human skin health. The role of some natural foods and agents on skin health is a relatively new field of researching, as associations between diet and skin conditions are only now starting to emerge. Also, topical treatments of these agents have only nowadays been considered to be reasonable additives to oral nutrients. Changes in the appearance of skin were associated with poor nutrition long before any biochemical relationships had been discovered such as skin discoloration, abnormal hair growth, and poor wound healing associated with the vitamin C deficiency diseases. Other works would soon find skin abnormalities in vitamin deficiency diseases such as pellagra, ariboflavinosis, etc. that could be releated with an appropriate diet (4,17,18). Thus, many natural compounds had been initially obtained for their effect on skin health.

Conclusion

Natural foods and nutritive factors in caring of skin disorders related to aging and oxidative stress have major functions. Due to increasing using of medicinal natural agents, studying of these agents is of paramount importance in the human health. The role of biotechnology in using of medicinal plants and foods in the pharmacological researching is highly significant. In this regards, the improvement of the medicinal plants and foods in the human skin health has been payed attention.

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