METAMETRICS LABORATORY

DERMA NUTRIENT TEST

Uncover micronutrient imbalances that cause skin problems.

Why You Need Derma Nutrient Testing

Nutrients in Skin Health

Macronutrients and micronutrients work together to maintain the protectiveness of skin in the face of everyday challenges.[1] Continuous exposure to internal and external influences, partnered with poor nutritional status, alters skin condition and function leading to photoaging, inflammation, immune dysfunction, and other disorders.[2]

Numerous clinical trials and studies show that nutrients offer protection, influence cutaneous immune response, and provide therapeutic action in maintaining skin health and managing skin disorders.

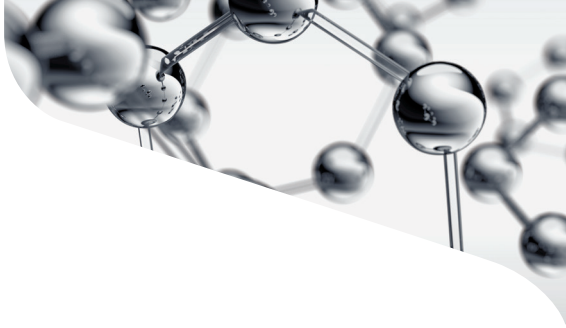
The Impact of Derma Nutrient Testing

How does one obtain the exact essential nutrients needed to keep the skin healthy? People with healthy eating habits can have nutritional deficiencies due to biochemical individuality, genetic predisposition, absorption and metabolism, age, disease, and medications.

The Derma Nutrient Test identifies micronutrient deficiencies and toxicities for a more comprehensive and targeted plan to address skin health concerns.

- ✓ Measures the level of 12 vitamins, minerals, and antioxidants essential to healthy skin
- ✓ Examines essential fatty acids (omega-3 and -6) critical for cell membrane structure and function
- ✓ Reveals micronutrient imbalances that can help delay skin manifestations of aging and address dermatologic conditions like rashes, hypopigmentation, and falling hair
- ✓ Provides clinically actionable information that enables clinicians to develop targeted and comprehensive plans to address skin conditions

Healthy, beautiful skin is a sign that it is getting all the nutrients needed, while hypersensitive skin, thinning skin, cracking nails, hair issues, and other dermatological ailments are possible signs of nutritional deficiency.



DERMA NUTRIENT TEST

Micronutrients Tested:

Vitamin C is a powerful antioxidant that helps reduce oxidative stress to the body. It is also involved in the synthesis of collagen (an important protein in making skin supple) and is often used to treat photoaging and hyperpigmentation. Vitamin C has anti-inflammatory effects that can help manage dermatological issues such as rosacea and acne vulgaris while promoting wound healing and preventing hyperpigmentation. Early signs of vitamin C deficiency include a thickening of the stratum corneum and spots of small subcutaneous bleeding which, if unaddressed, can impair wound healing.[1]

Vitamin E is an integral part of the skin's antioxidant defense that primarily protects against UV radiation, free radicals, and reactive oxygen species that hasten skin aging. Dry, pale skin and hair loss are just some of the manifestations of vitamin E deficiency. In some cases, the deficiency can cause peripheral neuropathy, myopathy, retinopathy, and impairment of immune responses. However, toxic levels of vitamin E can manifest in symptoms like nausea, diarrhea, blurred vision, rashes, and bruising or bleeding. Measuring alpha-tocopherol—vitamin E's most abundant and biologically active form—is the most direct method to diagnose vitamin E deficiency or toxicity.

Vitamin A (retinol) is converted to retinaldehyde (RAL) and then to retinoic acid (RA) in the skin. RA modulates gene expression and influences cellular processes in both the epidermis and dermis, thereby exerting potent effects on skin health. It is needed to support all of the epithelial (skin) cells and is a powerful aid in fighting skin cancer. Vitamin A reduces lines and wrinkles by producing more collagen, which is responsible for keeping the skin looking young.[3] Vitmain A deficiency can lead to poor complexion and wound healing.[1]

Vitamin D is essential for normal cell growth, wound healing, and maintaining the protective function of the skin. Vitamin D deficiency is associated with a long list of cutaneous disorders, such as skin cancer, psoriasis, and ichthyosis. A deficiency can also cause autoimmune skin disorders, such as vitiligo, blistering disorders, scleroderma, and systemic lupus erythematosus, as well as atopic dermatitis, acne, hair loss, infections, and photodermatoses.[4]

Coenzyme Q10 (CoQ10) is a coenzyme naturally synthesized within the body to perform important functions, such as supplying energy to cells, transporting electrons, and regulating blood pressure levels. CoQ10 acts as a powerful antioxidant by reducing free radical damage from UV rays, and it helps decrease wrinkles and increase skin smoothness. CoQ10 levels decrease with age, and medication such as statin can hasten its depletion.

Essential Fatty Acids (omega-3 and omega-6 ratio) and polyunsaturated fatty acids (PUFAs) play a critical role in normal skin function, appearance, moisture content, elasticity, and healing. It manages cortisol overexposure to maintain skin suppleness and prevent wrinkles. Omega-3 aids the immune response by impairing the activation of T-cells and lowering the number of epidermal immune cells involved in antigen presentation and hypersensitive contact response. The omega-6 PUFAs, particularly linoleic acid, is important in keeping the structural integrity and protective function of the skin. Essential fatty acid deficiency (EFAD) is characterized by hyperproliferation of the epidermis, dermatitis, and increased transepidermal water loss (TEWL).[1]

This nutrient panel also tests for vitamin K, calcium, selenium, chromium, manganese, magnesium, and zinc.

1 Oregon State University Micronutrient Information Center, Skin Health;
http://lpi.oregonstate.edu/mic/health-disease/skin-health

2 Nutritional skin care: health effects of micronutrients and fatty acids
Esther Boelsma Henk FJ Hendriks Len Roza
The American Journal of Clinical Nutrition, Volume 73, Issue 5, 1 May 2001, Pages 853–864,
https://doi.org/10.1093/ajcn/73.5.853

3 Role of Micronutrients in Skin Health and Function
Kyungho Park*
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4428712/

4 Vitamin D and the skin: Focus on a complex relationship: A review
Wedad Z. Mostafa and Rehab A. Hegazy
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4642156/

TEST INFORMATION

Specimen : 25 ml. whole blood
Result TAT : 7 working days
Method : LC-MS/MS, ICP-MS, GC, HPLC, Microassay

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