

Omega-6/Omega-3 fatty acid balance and skin elasticity.

The study was performed by BioActive Foods in cooperation with Zinzino.

Our skin is under constant exposure, both external (UV, pollution etc) and internal (nutritional). Skin elasticity is a parameter indicating ageing effects of the skin. It is desired to have good skin elasticity, which means a skin that can protect the body against various exposures and look smooth, young and glowing.

Fatty acids are important for many functions of the skin. They act as building blocks in the skin cells, they lubricate the skin, and they protect the skin from irradiation. Polyunsaturated fatty acids are also precursors for “local hormones” and signaling molecules such as eicosanoids.

The study

In this study 50 female voluntaries were divided into two groups; one group consumed 2 table spoons of BalanceOil daily, while the other group functioned as a control group, meaning that they followed their daily diet without any intake of omega-3 supplements. BalanceTest was used to measure the participant's fatty acid profile in whole blood at 0, 30, 60 and 200 days. The elasticity of the skin was measured with a scientific device, Cutometer MPA 580 (Courage + Khazaka electronic GmbH) at day 0, 30, 60 and 200 in the area below the eye.

In the group that consumed BalanceOil daily, the Omega-6/Omega-3 fatty acid balance normalized from an average of 15:1 to 4.8:1 in 60 days, while the marine omega-3 (EPA and DHA) levels increased to 6.4 % in the blood. For the skin elasticity, the statistical analysis showed a significant improvement ($p < 0.05$) in skin elasticity in the test group compared to the control group after 60 days of consuming 2 tbsp of BalanceOil daily. The general improvement in skin elasticity from day 0 to day 60 showed to be around 12 % for the test group.

A smaller group of the female participants from the test group continued the study after day 60, and had their fatty acid profile and skin elasticity measured after intake of 0.15 ml BalanceOil x body weight, 200 days after the start of the study. Results from day 200 showed that the Omega-6/Omega-3 fatty acid balance stabilized at around 3:1 for the participants. The general improvement in skin elasticity from day 0 to day 200 for the group of women who continued the participation showed to be around 22 %.

The result

The study showed that the Omega-6/Omega-3 fatty acid balance was normalized after intake of BalanceOil for more than 60 days, in addition the EPA and DHA values in blood increased. Daily intake of BalanceOil improved the skin elasticity.

Scientific studies show that the long chained fatty acids EPA and DHA affects the membrane fluidity of the cells, in addition EPA and DHA are precursors to signaling molecules that can increase the blood flow to the skin, increasing the production of collagen and elastin which is important for the elasticity of the skin. Aging, smoking, exposure to UV radiation or a poor diet affects skin aging. Skin aging can be thought of as a weakening of the skin, where the skin gets thinner, dryer, have a longer healing time and it gets less elastic. So skin elasticity is an important component for anti-aging of the skin.

In this study BalanceOil was used. However, BalanceShake, in addition to BalanceOil, also contains vitamins, minerals and beta 1,3/1,6 glucans, components which all are scientifically documented to positively affect the skin. A daily dosage of Balance-Shake is recommended!

