



Maintaining Baby Skin Integrity, Naturally!

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The functions of the skin essentially remain the same at all phases of life - it offers a barrier and photo protection, thermoregulation, immune surveillance, hormonal synthesis, insensible fluid loss prevention, and sensory perception¹

However, there are several important structural differences between the skin of babies and adults. Infants are born with a developing epidermal barrier that is more permeable and more reactive to the environment through the first 2 years of their lives. The infant skin barrier does not fully mature until at least 1 year of age, meaning the distribution and transport of water through the superficial layers of the skin creates a need for protection of infant skin².

In a study published in the Journal of Investigative Dermatology, Professor Corke states

"Since the 1940s our genes have not changed but there have been substantial changes in our environment. One of these is the exposure of babies to harsh soaps and other detergents that directly interact with changes in several genes, leading to the breakdown of the skin barrier.

This allows the penetration of allergens that interact with the immune system and trigger flares of atopic eczema. These babies are born with a defective skin barrier, which means that their skin can be sensitised – made prone to an allergic reaction – much more easily if the 'wrong' treatments are used."

Washing baby's skin with water alone provides insufficient cleansing and removal of unwanted material such as faecal enzymes, urine components and other water-insoluble skin surface impurities. Water that has high mineral content can impair skin barrier functions while not adequately cleaning the skin.

And not all cleansers are made equal. Many contain ingredients known to cause dryness or irritation, which leads to itchiness and scratching. Soap has a significant disrupting effect on the skin's barrier function due to the drying effects it has on skin, increase in skin's pH and the decrease in skin hydration, so it is best avoided³. Other surfactants commonly used, like sodium lauryl sulfate, are known to be highly irritating⁴

Emollients play an important part of skin care to help maintain barrier function and have an intrinsic anti-inflammatory action. The main therapeutic outcome of applying emollients is to help replace water lost from the skin thus restoring the epidermal barrier. Emollients also help to lubricate the skin, reduce scaling and seal the stratum corneum⁵.

The application of an effective emollient regimen will lessen the amount of topical corticosteroid required to reduce an inflammatory response⁶.

The Australasian Society of Clinical Immunology and Allergy recommend the regular application of moisturisers (especially after bathing) to replace the oil content of the skin.



Good nutrition also plays a vital role in skin health, and external support for skin structure and integrity must, in turn, be supported by the best possible nutrient intake of the building blocks required to maintain skin strength. A sensible balance of good fats, carbohydrates and protein will ensure a valuable partnership in skin wellness.

The use of natural and organic cleansers, specifically tailored for infant skin, is a good alternative for less aggressive but effective cleansing and most contain natural emollients. Moisturisers containing natural emollients, that have been scientifically verified, are also a good addition to baby's daily skincare routine.

Wheat germ oil supplies B vitamins, calcium, fibre, protein and vitamin E. Importantly, vitamin E is a powerful antioxidant that protects skin cells from ultra-violet light and environmental stress. The vitamin E in wheat germ oil promotes skin cell formation, as well as providing nourishment and protection against inflammation.

Avocado oil is high in mono-unsaturated fats and in vitamin E. Like olive oil, it is one of the few vegetable oils not derived from seeds. It is pressed from the fleshy pulp surrounding the avocado pit. It is absorbed easily, and is full of beneficial fatty acids and vitamins. It contains more than 20% essential unsaturated fatty acids, along with vitamin A, vitamin B, vitamin C, vitamin E, proteins, lecithin and potassium. These fatty acids are palmitic, palmitoleic, stearic, oleic, linoleic and linolenic. Plant sterols in this oil help to soften the skin and impart superior moisture⁷.



Evening primrose oil has a long and safe history in skin conditions. Fatty acids comprise 14% of evening primrose oil, and the combined activity of saturated, poly-unsaturated, mono-unsaturated and omega-3s contribute to alleviate dry skin. A study from 2007 shows that evening primrose oil increases skin moisture by 14%, and reduces trans-epidermal water loss by 10%. These effects occurred after four weeks of treatment, and were attributed to the gamma-linoleic acid content of evening primrose oil⁸.

A peer review professional journal article also concluded that gamma-linoleic acid strengthens the physiological skin barrier function, improves the biomechanical properties and smooths the surface profile of irritated skin.

Further extensive research over many years has justified the use of evening primrose oil in atopic dermatitis. Bearing in mind the ongoing discovery of detrimental effects of so many new emollients, as well as those which we have trusted in the past, the safety and efficiency profile of these natural oils is a testament to their use in history. We are fortunate to be able to continue using them⁹.

Natural and organic skin care products are now more readily available and may be a suitable option for those with chemical sensitivities or families who are living a more sustainable, eco-friendly lifestyle.

Parents will come to you seeking advice for their baby skin care questions. It would be a great asset for you to having information on the selection and application of suitable natural skin care ingredients and products, particularly with eczema on the rise, and with more parents opting for natural alternatives due to concerns they have about using unnecessary chemicals on baby's skin.

For more information about GAIA Natural Baby please call 03 9703 1707.

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