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Infant skin care

Key learning points:

- ▶ Understand the unique needs of newborn skin
- ▶ Current evidence and opinion on best practice in infant skin care
- ▶ The role of the health visitor to advise and support new parents to make informed decisions

Skin care and how to prevent irritations, rashes and infections will be a significant concern for new parents. Health visitors can play an important role in offering advice and support. To do this they must have a good knowledge and understanding of the anatomy and physiology of skin in general, and know the differences between the skin of an infant and that of an adult. It is also vitally important that this advice and support is based on the best available evidence.

There are important differences between the infant and adult skin. The skin of a newborn is well developed to cope with extra-uterine life, but there are some differences to that of an adult. For example, an infant's skin is more delicate and therefore more prone to irritant and allergic reactions.¹

The key differences are described by Steen and Macdonald¹ as:

- Stratum corneum (epidermis) is thinner in infants.
- Protective lipid film is similar to that of an adult at birth, but changes after a few weeks.
- Secretion of sebum diminishes to be replaced by lipids of cellular origin.
- Ratio of skin surface to body weight is highest at birth and declines progressively during infancy.

A newborn's skin will undergo a number of changes during the first month of life as it adapts to an extra-uterine environment. During this time period the epidermis and dermis is further developed and there is a noticeable change in the baby's skin pH surface and desquamation of the skin.²

CLEANSING AND MOISTURISING A BABY'S SKIN

Over the last two decades, concerns have been voiced regarding the possible effects of bathing and using cleansers such as soaps, baby wash products and baby wipes.³⁻⁷ Therefore, this article is based on the opinion of experts in the field and recent research studies undertaken.

A baby does not routinely have to be bathed every day,⁸ although some parents will have a preference to do so and many will bathe their baby in the evening with the aim of relaxing and settling their baby for the night.¹ It has been reported that there are no adverse effects in bathing a healthy full-term baby with a body temperature above 36.5°C.⁹ However, a study involving the bathing of premature babies reported adverse physiological and behavioural effects and therefore routine bathing was not recommended.¹⁰

The use of a pH neutral cleanser and emollient application that is specially designed for a baby skin has been reported to have a good safety profile.¹¹ However, a fine balance between the

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cleansing of an infant's skin and the preservation of its homeostatic properties is required. Cleansers need to be extremely mild in their properties to prevent excessive removal of lipids from the stratum corneum, as these are essential to the surface ecosystem.¹

In addition, it has been highlighted that the chemical composition of water needs to be taken into consideration.¹² Water rich in calcium salts is more likely to be an irritant to an infant's skin. Being reared in a geographical area where hard water is supplied may increase the potential risk of skin irritation.

The National Institute of Health and Care Excellence (NICE) guidelines on postnatal care did not identify any research studies that specifically addressed general care of the skin of a full-term infant.¹³ Therefore, a grade D good practice point (GPP) was made on the experience of the guide development group (GDG). In view of the lack of research evidence, they recommended that parents should be advised that cleansing agents should not be added to a



baby's bath water nor should lotions or medicated wipes be used. However, should a cleansing agent be needed, a 'mild non-perfumed soap' can be suggested.

Due to a lack of research evidence to confirm or refute whether a cleansing agent should be added to an infant's bath water or not and also whether baby wipes are safe to use, two research studies have recently been undertaken by Lavender et al.¹⁴⁻¹⁵ The researchers compared Johnson's Baby Top-to-Toe wash against plain bath water on 307 newborn babies over a four-week period and found washing newborn babies in a specific baby wash was just as safe as using water alone in terms of maintaining healthy skin. The study found no difference in transepidermal water loss (TEWL), which indicates the amount of water that escapes from the skin. This research also reported that skin hydration was better in the wash agent group when compared to the water only group at the

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two-week time measurement point. The second study investigated whether Johnson's Baby Extra Sensitive Wipes were safe to use and found these to be equivalent to the use of water and cotton wool in terms of skin hydration. Mothers taking part in this study also reported nappy rash as being higher in the water and cotton wool group. These studies provide the strongest evidence to date. Health visitors can advise parents on the basis of this recent evidence, to support them to make informed choices.

CONCLUSION

Parents should be advised to never use cleansing products that

are specifically manufactured for adults, as many of these are not pH neutral and will not be mild enough for a sensitive baby's skin.

There is recent evidence to confirm that a baby wash product was safe to use and does not appear to affect an infant's skin barrier integrity, and that baby wipes were also safe to use. It is therefore sensible to use cleansers that have been specially designed for a baby's skin, are pH neutral and very mild to avoid irritant dermatitis and allergic dermatitis.

Ultimately, choices on how best to care for an infant's skin will be made by parents who will consider the best available evidence and expert opinion in order to make their decision on their personal preferences and beliefs.

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