HUGGIES® HEALTHCARE™ FOR PROFESSIONALS

Celebrating 5 Years of Trusted Partnership

Diapering for Healthy Skin and Development

Huggies® celebrates 5 years of partnership in the NICU

Studies have shown that a diaper change can be a stressful event for an infant, simply because they are being disturbed during this process. This can be exacerbated by the presence of skin irritation in the diapered area which can contribute to baby's discomfort. Checking for signs of irritation at every diaper change, employing good skin care practices and selecting complementary diapers and wipes specifically designed to help maintain healthy diapered skin is essential to help support healthy development and champion sleep. This is especially true when caring for infants in the NICU.

Minimizing the occurrence of dermatitis in the diapered area can help foster the physical and developmental growth of premature infants. To achieve this, it is important to help maintain a healthy skin barrier (the outermost layer of the skin). A healthy skin barrier is characterized by its highly organized structure and a slightly acidic surface pH (average healthy infant skin pH 5-5.5), together they provide protection from the external environment.

Although the skin barrier starts to develop during the second trimester, structural integrity at birth is correlated to gestational age and maturation continues throughout the first year of life. Below 34 weeks of gestational age, the skin barrier is considered underdeveloped. Compared to full-term infant skin, preterm infant skin has a thinner dermis with less structural proteins and a thinner epidermis with a compromised skin barrier (Figure 1). Because of this, premature infants are more susceptible to abrasion, penetration of irritants and infection.

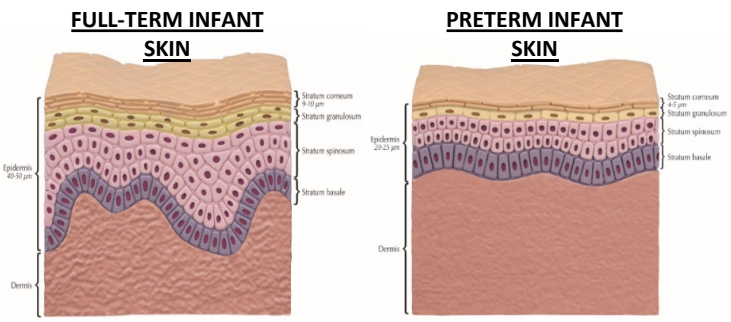

Figure 1: Full-Term and Preterm Infant Skin

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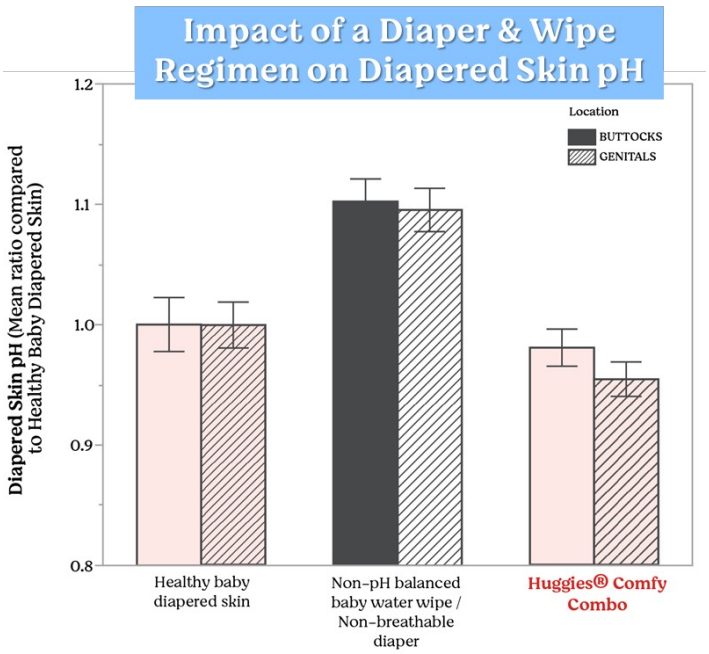
When caring for premature infant skin, it is essential to ensure gentle contact and minimize prolonged exposure to excess skin moisture to prevent further damage to the already compromised skin barrier. It is also important to maintain a balanced skin pH to promote healthy skin barrier function and provide protection from skin irritating fecal enzymes. For this reason, it is critically important to select a diapers and wipes combination that is specifically designed to help maintain healthy diapered skin and can help foster the developmental growth of this vulnerable population. Product design for premature infants needs to be comprehensive, from helping to protect against the top two causes of diaper dermatitis (excess moisture and skin irritating fecal enzymes) to also considering the fragility of premature skin to prevent further damage to the skin barrier and delaying its maturation.

Huggies® leveraged partnerships with healthcare experts like neonatal therapists and NICU nurses and combined their insights with scientific evidence provided by skin scientists to develop diapering products tailored to the needs of premature infants. This partnership enabled Huggies® to be the first to introduce a wipe designed specifically for use on babies in the NICU and a diaper designed to help promote healthy growth and development for low-birth weight babies. This year, Huggies® is celebrating 5 years of this trusted partnership in the NICU.

The Huggies® Little Snugglers® Nano and Micro preemie diapers were specifically designed for low-birth weight infants; materials and design components were carefully selected considering this vulnerable population. They feature a soft, flexible, narrow pad that conforms to baby's body to help deliver appropriate positioning and keep baby comfortable. They also have a fastening system that allows for fastening tabs to overlap, stretch, and attach anywhere on the diaper's outer cover, for a truly adjustable, gentle fit. In addition, they are made with a super absorbent material that quickly pulls in fluid and locks it away, helping keep delicate skin clean, dry, and healthy.

As a complementary product, Huggies® Natural Care® Extra Sensitive baby wipes were developed for fragile and delicate skin and are made of an absorbent, proprietary plant-based basesheet with a lotion-based cleansing system. They are designed to complement healthy skin pH and to help wipe away fecal enzymes from skin. A low pH is important to help support healthy skin barrier integrity and help against fecal enzymes that are irritating to skin. Huggies® Natural Care® Extra Sensitive baby wipes contain emollients that help reduce friction between the wipe and delicate baby skin and have been clinically proven to be more gentle than cloth and water on compromised skin.

It is important to keep in mind that not all products are designed with infant skin health in mind. In fact, we have recently demonstrated in a clinical setting that a diapering regimen comprised of Huggies® Little Snugglers® diapers and Natural Care® Sensitive wipes can complement the healthy pH of baby skin* (*data on file). On the other hand, a regimen featuring a non-breathable diaper in combination with a baby wipe that is not buffered to complement healthy baby skin pH was found to significantly increase baby's skin pH over time. A higher skin pH does not support the healthy state of the protective barrier of the skin and, it has been demonstrated to increase the susceptibility to diaper dermatitis.



When caring for infant skin, especially premature infant skin, it is important to under-stand all the factors that can contribute to skin irritation and potentially result in diaper dermatitis, as well as being selective about the diapering products that you use.

It is essential to choose diapering products that consider the fragility of premature skin and work together to create an optimal environment for skin health.

Huggies® Comfy Combo:
Designed to help maintain clean, dry skin and clinically proven to complement healthy skin pH

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Dr. Karien J. Rodriguez currently leads the Life Sciences team in the Corporate Research Organization at Kimberly-Clark Corporation. Dr. Rodriguez has a PhD in Biomedical Engineering specializing in biomaterials, tissue engineering and skin health, she has been conducting skin health research for over 10 years, has authored multiple scientific publications and her accomplishments have been recognized by Great Minds in STEM-Hispanic Engineer National Achievement Awards Corporation and more recently by the College of Engineering at the University of Wisconsin-Madison with an Early Career Achievement Award.