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## Baby's Skin

by

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### Abstract

A neonate's skin serves many important roles, but is fragile and requires special care. The childbirth educator may be called on to give sound, evidence based advice to caregivers who have concerns about their baby's skin. This article reviews the basics in newborn skin care with qualified recommendations on skin imperfections. Neonatal skin alterations are reviewed and include erythema toxicum neonatorum, milia, sebaceous glands, baby acne, and cradle cap. Babies are also affected by too much moisture which can result in drool rashes, heat rashes, and diaper rashes. These rashes are common and treatable with proficient guidance. Other skin concerns are presented such as skin discolorations. Childbirth educators play an important role in providing this much needed education and reassurances.

### **Baby skin: Tender, smooth as silk, soft, delicate, fragile, clean and fresh**

The very thought of the way baby skin feels, and smells, evokes strong emotional feelings. Some descriptive words include that baby skin is tender, smooth as silk, soft, delicate, fragile, clean, and fresh. Yet a baby's skin is much more than the emotional bonding that we associate with it. As the largest organ of the body, skin plays important roles of protection from injury or infection as well as regulating body temperature and fluid balance. As a newborn, these roles are especially important during the transition from a fluid filled intrauterine environment to extrauterine earthly life. This article will review some basic physiology of newborn skin and address some common occurrences with an aim to provide practical advice, and reassurances, that childbirth educators may share with their clients.

#### **Brand New Skin**

Newborns are often covered by a greasy, yellow-white substance, called *vernix caseosa*. This film covering the skin develops during that last trimester (Singh & Archana, 2008; Visscher, Adam, Brink, & Odio, 2015). This is a collection of oily and waxy secretions, flakes of skin cells, and fine hair called lanugo and may cover the entire skin or be concentrated in the skin folds. This coating is an important protection against infection and helps maintain hydration and pH balance. Traditionally, it is washed away or wiped off of the newborn; However, current practice is trending toward leaving it alone as it provides many benefits to the newborn (Singh & Archana, 2008; Visscher et al., 2015). Typically, this coating only lasts a few days and then transitions to that moderately dry, baby soft skin we associate with newborns (Eichenfield, Frieden, Zaenglein, & Mathes, 2014).

There are other differences in neonatal skin and the skin of children or adults. The epidermis, that is the outer layer of skin, is thinner, especially in premature infants. This makes it

easier for water loss to occur. In addition, this immature layer of skin is very fragile and easily damaged. Care should be taken to avoid friction in areas such as the neck or groin. Adhesive strips should be avoided as they can strip a top layer of epidermis off when removed. The immaturity of the skin makes it more susceptible to infection such as *Candida*, a yeast infection (Eichenfield et al., 2014)

## **Skin Care**

### **Bathing**

The goal of bathing is to preserve skin health by removing pathogenic bacteria. However, there are things to consider. The initial bathing may lead to hypothermia and respiratory distress, and should be delayed two to four hours to allow temperature and vital signs to stabilize. Sponge bathing may be accomplished with a moistened cotton ball or cloth.

Future bathing may be done by immersion. There are some reported benefits that this type of bath is soothing and may promote sleep. Best practice suggests that the water should be high enough to cover the infant's entire body to decrease heat loss. The water should be tested for correct temperature, approximately 100.4 degrees Fahrenheit, to prevent burns. Caregivers should be cautioned that second degree burns have occurred in infants when the water was only tested by touch (Eichenfield et al., 2014). A mild wash product designed for baby's skin should be used with a reminder to avoid any product not specifically designed for baby's skin. The baby should be gently towel dried and the head covered immediately after the bath.

### **Topical applications**

Another topic of discussion that every child birth educator should have with the baby's caregivers is about products used for topical application. As previously mentioned, an infant's skin is immature and therefore may absorb anything applied to it. Therefore, careful

consideration should be given to even the most innocent of treatments. An example is the use of massage or other oils. Although generally accepted as natural, and therefore safe, this may not always be true. Both positive and negative effects have been identified with massage oils and additional research is needed. Even the most common oils, such as olive oil, may have a detrimental effect on skin integrity. At this time, mineral oil is considered safe and effective. (Eichenfield et al., 2014)

Sage advice includes that no over the counter medicated creams or ointments should be applied unless ordered by the pediatrician or health care provider. Topical anti-inflammatories such as corticosteroids or diphenhydramine can be absorbed and cause toxicity in an infant. This includes preparations that protect from sun exposure. The safety for infants under 6 months of age has not been established and the best practice for infants is to protect the skin with appropriate clothing and avoid the sun. If sun avoidance is not possible, a zinc oxide based formula for infants may be appropriate.

Yet one more general advice for infant caregivers is the protection of any product from contamination. Any cream or ointment can be contaminated from prior use, act as a reservoir and grow bacteria, and then be transferred to the infant. Creams in a jar are easily contaminated by the hands of the person applying it. Tubes are less easily contaminated, though avoiding touching the application tip is needed.

### **Normal Skin Alterations and What to Do About Them**

#### **Erythema toxicum neonatorum**

This common skin condition affects a majority of newborns (O'Connor, McLaughlin, & Ham, 2008) and may be present at birth or present in a couple of days. These small bumps are surrounded by reddened areas can appear anywhere on the body. No treatment is needed,

however, any newborn rash combined with irritability, lethargy, or temperature instability should be referred for further consideration (O'Connor et al., 2008)

### **Milia**

Milia affects about half of all newborn babies (Watkins, 2016). These are small, pearly white bumps and may or may not be surrounded by some redness. They are actually small keratin-filled epidermoid cysts (Watkins, 2016). They are benign and do not require any treatment as they usually resolve spontaneously in a few weeks. Advice to clients is to not attempt to pick, poke, or squeeze these bumps as that may cause a secondary infection or tissue damage.

### **Sebaceous Glands**

Sebaceous glands produce sebum, the oily or waxy matter that lubricates and waterproofs the skin. These glands are active before birth and are well formed and active during the neonatal period. They are often associated with hair follicles and most prominent on the scalp and nose, forehead, and cheeks (Eichenfield et al., 2014). This active production of sebum may lead to a common finding of neonatal acne. Sebum levels sharply decline over the first year of life and many of these related issues resolve spontaneously (Eichenfield et al., 2014)

### **Baby Acne.**

Neonatal or baby acne is a common condition of newborns and may present as small, red bumps on the face, chest, scalp, and back. These bumps actually resemble a smaller version of adult acne and are a response to maternal androgens still in their system. The acne rarely occurs at birth and usually does not appear until the baby is between two and four weeks old (Que, Whitaker-Worth, & Chang, 2016). Generally, it will clear up only to return for several weeks and it can last until three to six months.

Although seeing any imperfections in baby's skin tends to cause alarm, this is not serious. Treatment is simply keeping it clean with mild soap and water. Do not apply oils or lotions as this may make it worse. Do not squeeze the bumps as this cause infection deeper in the skin.

### **Cradle Cap.**

This skin condition, formally known as Infantile seborrheic dermatitis, and consists of oily yellow scaling rash that occurs on the scalp. Occasionally there is a patchy red appearance caused by inflammation (Victoire, Magin, Coughlan, & van Driel, 2014). Although the cause is not completely understood, it is believed that circulating maternal hormones cause old skin cells to stick to the scalp (New Zealand Dermatological Society, 2012). The rash can begin within the first few weeks and last several weeks. While we know we should be very careful of the scalp and cranial soft spots, the treatment includes a gentle but thorough scrub. Prevention of cradle cap includes shampooing the hair and using a soft infant brush. This will help clear any buildup of oil and prevent the scales from forming. Be sure to rinse the scalp well after shampooing.

If the crustiness is severe, try applying some mineral oil to the scalp one hour before bath and shampoo. This softens the scales so that the shampoo and mechanical action of the soft brush loosen them. The use of olive oil and some other oils have raised concerns about absorption and mineral oil is preferred.

Once the rash clears use a mild infant shampoo once a week. If it does not clear up in two weeks, return to the pediatrician for further evaluation. In some instances, the pediatrician may prescribe anti-inflammatories, such as a mild topical hydrocortisone cream or an antifungal shampoo (Sasseville, 2015). Again, caution is recommended, and clients should not try over the counter preparations without their physician guidance. If the condition persists past 12 months of



age, a pediatrician should be consulted regarding potential other diagnosis (New Zealand Dermatological Society, 2012).

## **Moisture**

### **Too Much Moisture: Drool Rash**

Overexposure to moisture can cause skin damage ( Voegeli,2013 ). This can occur due to exposure to a variety of body fluids including saliva (Gray et al, 2011). A splotchy pink area on the chin or cheeks may be caused by too much moisture from saliva. In fact, it is sometimes referred to as drool rash. Drooling or spitting up frequently are the cause. The use of pacifiers that hold the drool against the skin increase the likelihood of this type of skin condition.

Treatment is simple; protect the skin from the irritating liquid. Wash the baby's face with water after feedings and apply a skin barrier such as Vaseline.

### **Moist Areas and Heat Rash**

This rash, which consists of prickly pink bumps and splotchy areas, occurs in areas where moisture and friction occur and obstruct sweat glands (Watkins, 2016). This could be the baby's back if they spend time in a car seat or baby carrier. Or it may even occur in areas where baby's skin touches your skin.

Changing the baby's position during feedings will help prevent prolonged contact in any one area. Another option is applying cornstarch to the baby's body, particularly the abdomen or back. Be careful not to get the powder near the face as babies can choke on it.

### **Diaper Rash a.k.a Nappy Rash**

One of the most common skin irritations in newborns is diaper rash, or nappy rash. As the name implies, the condition is located in the area covered by a diaper. Urine and feces are both very irritating to the skin and combined with the friction of the diaper can cause the skin to

become both inflamed and even develop blisters. Prevention includes careful cleaning and frequent diaper changes; however, inevitably every baby has a diaper rash at some point. This may be especially problematic during a bout of diarrhea (Watkins, 2016).

Many diaper wipes leave a residue that actually increases the incidence of diaper rash. A wet washcloth or soft paper towel may be used as a substitute to disposables. Leaving the skin exposed to air is also helpful, though this may prove impractical. Common sense approaches include changing diapers frequently and using a barrier cream or diaper cream.

A diaper rash that includes redness with bumps may indicate a yeast infection of the skin. Avoiding diaper wipes and keeping the skin dry as described above applies to this type rash as well. However, an antifungal cream may be needed (NHS Choices, 2015b). Talk to your pediatrician to see if this type treatment is needed. If it is indicated, apply as ordered (usually three times a day) for seven days. After applying, a barrier cream, or diaper cream may be applied over it. If there is bleeding or no improvement in three to four days, contact your pediatrician.

### **Not Enough Moisture: Dry, Flaky Skin**

Dry, flaky skin can occur in several areas including the face or diaper area. It may be most apparent behind the knees and elbows. A gentle emollient or mineral oil may be used to moisturize the skin. Dry, flaky skin should clear up within three days. If it continues despite moisturizing, or if it gets worse, contact your pediatrician. A one percent cortisone cream or other prescription medication may be needed. Remember, topical medications are absorbed and the use of any should only be done with your pediatrician's recommendation.

### **Skin Discolorations**

Benign skin lesions that are pigmented or vascular and are apparent at birth are called birthmarks (Templet & Lemoine, 2017). Most do not cause any concern and will resolve on their own. A few of the most common follow.

*Congenital derma melanosis*, also known as Mongolian spots, is common especially in Asian, African American, and Hispanic neonates. These discolorations appear as a faint brown to gray-blue color and may be mistaken for a bruise. They fade with time and do not require any treatment except reassuring parents that it is nothing to be concerned about. Another typically benign skin discoloration is *Nevus simplex*, also known as stork bites, salmon patches, and angel kisses (Templet & Lemoine, 2017). These blush colored birthmarks occur on the eyelids, forehead, neck, and cheeks and tend to resolve spontaneously within 18 months.

Small raised red lesions caused by blood vessel abnormalities are called *Strawberry hemangiomas*. These may be present at birth or they may develop in the first few months after birth (McLaughlin, O'Connor, & Ham, 2008). If the lesion is superficial, little or no treatment is required, and resolution occurs between five and 10 years of age (Templet & Lemoine, 2017). If a quicker resolution is desired for cosmetic reasons, topical corticosteroids or a pulse laser treatment may be options. If the lesions appear darker, a referral to a vascular anomalies specialist should be considered as it may be a condition known as cavernous hemangioma (Templet & Lemoine, 2017).

### **Summary**

A newborn's skin serves many important roles and it is imperative that caregivers receive sound, evidence based advice rather than rely on well-intended, but potentially harmful tradition. In addition, as the most visible part of a baby's body, parents and caregivers are often concerned about skin imperfections. Childbirth educators play an important role in providing this much

needed education and reassurances. This article provides not only basic care guidelines but explains some of the more common skin alterations seen in the newborn and infant for the childbirth educator to share with their clients.

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## Pictures

Erythema Toxicum Neonatorum



Milia



Sebaceous Glands



Baby Acne



Cradle Cap





Drool Rash



Heat Rash



Diaper rash



Mongolian spots

