

Nappy rash (Napkin dermatitis)

Nappy rash is a generic term that describes skin rashes in the nappy area. Nappy rash is usually caused by irritation of the delicate skin due to contact with chemicals in urine and faeces. Nappy rash can also be caused, or further inflamed, by a fungal infection, bacterial infection or a condition known as Seborroic Dermatitis.

Nappy rash is a very common condition, affecting 25 percent of babies by the age of four weeks and accounting for 20 percent of dermatology consultations in childhood¹.

Causes of nappy rash:

1. Irritant dermatitis

Nappy rash occurs most commonly because a baby's skin comes into prolonged contact with urine and faeces. Not all urine and faeces can be absorbed by a nappy, away from a baby's delicate skin. When a soiled nappy is not changed promptly, the stale urine and faeces can release the chemical ammonia.

Ammonia effectively burns the skin, causing irritant dermatitis and making the delicate skin sore and inflamed. Micro-organisms in faeces also break down the chemicals in urine, thus increasing the alkalinity and making the rash worse¹.

A survey in Avon found that nappy rash occurred more commonly in babies who had been ill, those who had had frequent bowel actions, and those who had been started on cereals².

The study did not conclude that babies wearing disposable nappies were significantly any less likely to get nappy rash than babies wearing reusable cotton nappies. Irritant dermatitis can still occur, even when the nappy (disposable or reusable) is changed frequently.

2. Dietary effects

Studies show that breast fed babies have a lower incidence of nappy rash, perhaps because their faeces are less acidic. According to a study by Atherton and Mills in 2004, babies whose diet is undergoing change (for example, from breast milk to formula, or when introducing solids) are more likely to develop nappy rash².

3. Another illness

Babies tend to develop nappy rash more often after treatment with antibiotics, as this may affect the balance of intestinal microflora. Nappy rash is also more likely after having diarrhoea, perhaps due to raised levels of enzymes in the faeces².

4. Fungal infection

The fungus *Candida* (which causes thrush) can also infect inflamed skin, particularly if the baby's skin remains warm and damp for long periods of time. Sometimes the baby's rash can begin as irritant dermatitis, and can then be complicated by a fungal infection³.

5. Allergic dermatitis

Nappy rash may also be caused by an allergic reaction to a particular substance, leading to irritation and inflammation of the skin. Common allergens that may affect a baby's skin include fragrances, preservatives, detergents, oils and powders³.

6. Underlying conditions

Occasionally, nappy rash may be caused by an underlying condition³, such as:

- Eczema, which causes dry, sore skin
- Seborrheic Dermatitis, which causes red, scaly skin
- Psoriasis, which causes a rash with red scales and a defined border
- Bacterial infection, which can cause a bright red, painful rash that may need treatment with antibiotics
- Zinc deficiency, common in premature babies, which causes a rash in the nappy area, mouth and hands.

Signs and symptoms of nappy rash

Nappy rash causes the nappy area to look red and sore, particularly between the buttocks and around the genitals, but also sometimes spreading down the legs or up to the abdomen.

At first, the rash may appear just as red areas on the baby's skin, which may be hot to the touch. In more severe cases, there may be spots, pimples or blisters⁴.

A nappy rash caused by irritants is characterised by joined patches of red, scaly skin. However, the skin folds may not be affected because the skin doesn't come into contact with the irritants.

A *Candida* rash may be even more inflamed and the rash may include darker red spots around the nappy area⁵.

Nappy rash can obviously be very uncomfortable for the baby, who may show sudden signs of distress when filling its nappy, as the fresh urine or faeces further irritates the sore or broken skin.

Preventing nappy rash

- Keep the nappy area as clean and dry as possible, by checking and changing nappies regularly
- When possible, allow the baby to spend some time without a nappy on each day, so that fresh (but warm) air can get to the skin
- Change the nappy as soon as it has been soiled, to avoid irritation of the skin
- Clean the nappy area thoroughly from front to back using only water, or baby wipes formulated for sensitive skin (alcohol and fragrance free)
- Before replacing the nappy, ensure the baby's skin is completely dry by patting gently (not rubbing) with a muslin cloth or towel
- Avoid using talcum powder directly on the baby's bottom, as this may irritate the skin
- At every nappy change, use a thin layer of ointment to protect the baby's skin from the causes of nappy rash⁶.

Treatment of nappy rash

A protective ointment forms a first defence against nappy rash, while also providing the most effective treatment to soothe soreness, heal the skin and protect the skin against further irritants or infection.

Ointments containing Pro-Vitamin B5 are known to help gentle skin recovery.

Treating candida nappy rash

If there is a bright-red, moist rash with white or red spots, this may be due to a Candida infection⁴. In this case, a special anti-fungal cream will be needed and is available from a pharmacist or on prescription from your GP.

An anti-fungal cream should be applied two to three times a day and should continue to be used for seven to 10 days after the rash has healed to ensure that the Candida infection has gone⁴.

Treating severe nappy rash

If the rash is persistent or worsens, despite treatment with an ointment, a mild steroid cream such as hydrocortisone can be used to reduce the inflammation of severe irritant dermatitis⁴.

Apply a very thin layer of steroid cream once a day (and before using an ointment) until the rash has healed. A steroid cream or ointment should not

be used for more than a week, so if a nappy rash doesn't improve with treatment during this time, get advice from your GP.

Sometimes skin that is already inflamed with nappy rash then becomes infected with bacteria. If the rash becomes worse, despite treatment, a bacterial infection may be the cause. In this case, consult your GP for advice as antibiotics may be required to clear the infection.

Treatment tips

- Change the nappy frequently, even if it doesn't feel wet
- Leave the nappy off for as long as possible every day
- Avoid soaps or fragranced wipes when cleaning the skin
- Ensure skin is completely dry before putting on a new nappy
- Apply an ointment at each nappy change
- Change the nappy as soon as possible after wetting or soiling
- Try switching nappies and cleansing products to fragrance-free, anti-allergen alternatives

When to seek medical advice:

- If nappy rash persists after three or four days, you may need to try an anti-fungal or steroid cream, so ask your GP or pharmacist for advice
- If the rash continues to spread beyond the nappy area
- If the rash has pus, blisters or is weepy
- If there is thrush infection elsewhere, such as the baby's mouth or mother's nipples

Myth busting

1. Cotton nappies cause more nappy rash

Babies wearing disposables are no less likely to get nappy rash than those wearing cotton nappies. As long as the nappy is changed frequently, the type of nappy used bears no relation to the cause of nappy rash².

2. Nappy rash is down to negligence

Although nappy rash is often caused by the skin's exposure to urine and faeces, it is not necessarily a sign of parental negligence. Baby's skin is very delicate and can still be irritated by ammonia, and by other external irritants or allergens, even with the best possible skincare routine.

Sources:

1. <http://www.bbc.co.uk/health/conditions/nappyrash2.shtml>
2. Suddaby EC, Barnett S, Facticeau L. Skin breakdown in acute care pediatrics. *Pediatric Nursing*. 2005;31:132-138, 148.
3. *Getting to the bottom of nappy rash*. ALSPAC Survey Team. Avon Longitudinal Study of Pregnancy and Childhood.
4. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/Browsable/DH_5289438
5. <http://www.patient.co.uk/showdoc/23068793/>

A wide range of women's health resources are available at www.healthywomen.org.uk

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