In association with:

Nottingham University Hospitals WHS

Atopic eczema and infections information for carers

This leaflet tells you more about the infections that can happen in eczema and what you can do about them

1. General infections (Chicken pox, measles, etc)

Although some children's eczema seems to get worse after a viral infection, many others seem to improve. At the moment, there is no proof to suggest that any particular infection will make your child's eczema worse or better, and the flare ups and clear periods after infections are probably due to the changeable nature of the eczema. Sometimes it can be difficult to tell whether a skin rash is due to the virus or is a flare of eczema. Generally, eczema treatment can be carried on as normal during an infection, but with chicken pox it is best to stay off steroid creams until the spots have all come out.

Vaccinations

Vaccinations do not generally have any effect on eczema, and should be given as normal, except in the following circumstances:

Children with egg allergy can safely have the MMR and nasal flu vaccinations (Fluenz Tetra). Inactivated (injected) influenza vaccines that are egg free can be used safely in individuals with egg allergy, in primary care. The exception is for children who have previously required admission to an intensive care unit for severe anaphylaxis to egg; these children should be referred to a specialist for immunisation in hospital.

Children on immunosupressants CANNOT have the nasal flu vaccination – they need the injectable jab type. For any vaccinations you should discuss with your GP/nurse explaining your child's specific circumstances. More information here.

2. Secondary skin infections ie skin infections that occur on top of eczema

These are infections that occur where the eczema is. Two types of secondary infection are important in eczema – bacterial and viral.

a) **Bacterial** The most common secondary bacterial infection in eczema is due to a germ called Staphylococcus aureus, which we will call "Staph" for short. The infection affects eczema by making

Written by Professor Hywel Williams, Dr Jane Ravenscroft, Nurse Consultant Sandra Lawton, Dr Jothsana Srinivasan, Dr Ting Seng Tang and parents on behalf of the Nottingham Support Group for Carers of Children with Eczema

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products that irritate the skin and that also trigger the immune system to make more inflammation. Even when your child's eczema is clear, Staph is often found on normal looking skin. This is because Staph likes the dry skin found in people who have eczema. As secondary infection of the skin is one of the most common reasons for eczema getting worse in young children, it is helpful if you learn to recognise it so you can act early to stop it making your child's eczema worse.

What does secondary bacterial infection in eczema look like?

The eczema becomes very red, it may weep a lot and produce golden, dry crusts. Sometimes, you may see blisters filled with yellowish white, cloudy pus. Some of the pictures <u>here</u> are of infected eczema.

What should I do about secondary bacterial infection if I think it is present?

Most mild infections will get better simply by treating the underlying skin inflammation with topical corticosteroids. This is because infections thrive on poorly controlled inflamed skin. But if the infection is spreading and your child is unwell, take your child to your GP. Your GP may prescribe a one week course of an antibiotic called flucloxacillin (or erythromycin or clarithromycin if your child is allergic to penicillin). Sometimes, an antibiotic on the skin such as mupirocin (Bactroban) ointment or fusidic acid (Fucidin) cream can be used three times a day for 5 days for skin infection in a smaller area of the body (they should not be used long term). Steroid/antibiotic combinations have not been shown to be helpful. If infection is a common problem, skin swabs should be taken to check what bacteria is causing the problem and is an indication to refer to a specialist.

What can I do to reduce the chances of my child's skin being infected in the future?

The most important thing is to keep on top of the skin inflammation and not let your child's skin dry out. Treating the skin inflammation properly with a topical corticosteroid is also an important part of making your child's skin less likely to get infected. Dry, inflamed skin makes a good home for Staph. Regular use of an emollient may help to keep infection by Staph at bay. Always use a spoon or a spatula when getting some emollient from a big pot as fingers in the pot can spread infection. Pump dispensers are useful. Always apply you emollient in the direction of your hairs to avoid the hair follicles from getting clogged up and infected. Although it is a big temptation, do not share emollients between family members.

Sometimes, antiseptic baths, washes or bath oils such as triclosan, chlorhexidine are used, in appropriate dilutions, to decrease bacterial load in children who have recurrent infected atopic eczema but only under instruction from your doctor. Long-term use of these antiseptic washes or bath oils should be avoided. If infection is frequent your child and other family members may need a swab taking from their nose to see if the staph bacteria is being carried there.

b) Viral

Cold sore virus

Sometimes, the cold sore virus (herpes simplex) can spread quickly on a patch of eczema. Usually, this happens on the face.

What does the cold sore virus (herpes simplex) in eczema look like?

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Early on, you will see a few small, sore blisters filled with clear fluid surrounded by a bright red patch on the surface of the skin. Within 1-2 days (or earlier if the child scratches the skin), these blisters break quickly to leave a lot of small round, sometimes crusty, breaks in the skin surface. This is called eczema herpeticum. This area may become very sore and your child may feel poorly.

What should I do about cold sore virus in eczema if I think it is present?

If you suspect your child has herpes infection you should take your child to see their doctor on the same day as it can spread quickly. If the problem is due to herpes simplex virus, then the condition is treated by a 5 day course of medicine called aciclovir. Secondary infection with herpes simplex virus is far less common than secondary infection with Staph. If you have a cold sore on your lips, you should avoid kissing your child until the cold sore is healed.

• Enterovirus (hand, foot and mouth) infection

Hand, foot and mouth infection (HFM) is common in children. If your child has eczema, HFM infection can spread outside the typical areas to affect larger areas of the face, arms and legs. The child usually has a temperature and feels a bit unwell before the rash appears. It can be difficult to tell the difference between this infection and herpes simplex so aciclovir is sometimes given, but it is not necessary as this infection settles in a few days without treatment. Viral Swabs can be taken to confirm the diagnosis.

Molluscum and viral warts

Molluscum and viral warts are common in all children but may spread more easily in children with eczema because of scratching. Please see our leaflets on Molluscum and Warts for more information.

Further reading

Molluscum contagiosum and Using duct tape to clear viral warts http://www.nottinghameczema.org.uk/nsgcce/information/index.aspx

The microbiome in patients with atopic dermatitis

https://www.jacionline.org/article/S0091-6749(18)31664-6/abstract

Antibiotics for eczema that looks infected may be unnecessary in some cases

https://discover.dc.nihr.ac.uk/portal/article/4000504/antibiotics-for-eczema-that-looks-infected-may-be-unnecessary-in-some-cases

Interventions to reduce Staphylococcus aureus in the management of eczema

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Eczema herpeticum http://www.bad.org.uk/shared/get-file.ashx?id=197&itemtype=document

Antiseptic Baths (Bleach Bath) for the treatment of eczema

http://www.nottinghameczema.org.uk/documents/antisepticbath36abthjuly17.pdf

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