



Emollient creams and bath oils do not prevent atopic eczema

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Emollient creams and bath oils do not prevent atopic eczema in infants. Emollients are nevertheless important for those who suffer from eczema.

Atopic eczema is a chronic skin disease that affects approximately one in five children in Norway (1). Children with atopic eczema have a higher risk of developing other allergies, such as food allergies, asthma and allergic rhinitis (2). Researchers all over the world have tried to find interventions that will prevent the development of eczema. Such primary preventive measures must be distinguished from secondary prevention which aims to prevent a worsening of atopic eczema.

In 2014, two small-scale studies conducted in Japan (3) and in the US and Great Britain (4) found that daily application of an emollient from early infancy had reduced the incidence of atopic eczema by 30–50 % by the time the children were between six and twelve months old. Each of these studies included approximately one hundred children with an elevated risk of atopic eczema based on the incidence of allergies among the parents. The results from these studies kindled a hope that moisturising treatments could have a primary preventive effect against atopic eczema and thereby prevent the development of other allergic diseases. For such an effect to be documented, large-scale randomised studies were

required.

To date, the two largest studies conducted to investigate whether emollient creams or bath oils can prevent atopic eczema if applied from infancy involved a total of nearly 4,000 children: the Norwegian-Swedish study *Preventing atopic dermatitis and allergies in children* (PreventADALL) (5) and the British study *Barrier enhancement for eczema prevention* (BEEP) (6). In the PreventADALL study, all pregnant women in Oslo, Østfold and Stockholm received an invitation to take part in connection with their ultrasound examination in the 18th week of pregnancy. The study involved almost 2,700 women recruited between December 2014 and October 2016. Nearly 2,400 of these women's children were randomised into four more or less even groups immediately after birth: 1) skin intervention involving oil baths of the body and cream for the face at least four days a week from the age of two weeks to nine months, 2) food intervention involving early introduction of foods flavoured with peanut (butter), milk, wheat and egg at an age between three and four months old, 3) both interventions or 4) no intervention (control group) (5). In accordance with national guidelines, all the mothers were encouraged to breast feed. The BEEP study was conducted on children with a high risk of developing atopic eczema and the women were recruited at a late stage in pregnancy. The nearly 1,400 neonates that were included in the study were randomised for daily use of emollient or control from the time of inclusion (6).

Neither the PreventADALL study nor the BEEP study found a reduced incidence of atopic eczema

Neither the PreventADALL study, conducted at the age of twelve months (7), nor the BEEP study, conducted at the age of twenty-four months (8), found a reduced incidence of atopic eczema in children who were regularly bathed with bath oil or who received daily applications of emollient cream. The lack of preventive effect did not depend on whether the interventions were carried out according to the protocol, or if the children had an elevated risk of developing atopic eczema.

These results were unexpected, and many were disappointed. The findings were so clear that the authors of an accompanying editorial concluded that there is no reason to recommend emollient creams or bath oils for week-old infants in order to prevent atopic eczema (9). Studies with more sophisticated emollient formulations are currently being conducted to investigate whether these may reduce the incidence of atopic eczema.

The results were unexpected and many were disappointed

Neither the PreventADALL study nor the BEEP study investigated the effect of emollient creams or bath oils as part of a treatment for atopic eczema.

Emollients form a very important part of the treatment for atopic eczema. The current European guidelines recommend daily all-over-body application of between 250 and 500 grammes of emollient per week (10). This applies for the treatment of active eczema but is also a measure to prevent further flare-ups as this may reduce the need for local steroids (11).

The non-existence of a primary preventive effect from emollient creams and bath oils must not be confused with a non-effectiveness of emollient creams and bath oils in treating established atopic eczema. Emollients are still the cornerstone of the treatment for atopic eczema, with the objective being to keep patients free of eczema to the greatest extent possible.

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