

Barrier Enhancement for Eczema Prevention (BEEP) research study

The Barrier Enhancement for Eczema Prevention (BEEP) research study is looking at whether emollients used from birth can prevent or delay the onset of eczema in high risk babies. It is being led by Professor Hywel Williams of the University of Nottingham. The pilot study is due to start in the Autumn and will take place mainly around the East Midlands. This pilot study will show whether parents find it acceptable to use the barrier enhancement intervention (emollients) and whether it is feasible to run a large clinical trial to determine whether barrier enhancement is effective in preventing eczema. This subsequent trial will be rolled out to other areas of the UK and other countries.

The rising prevalence of eczema, associated patient morbidity, health care costs and potential toxicities of current eczema treatments means that a way to delay or prevent the onset of eczema would have a positive impact on public health. Despite much research into potential ways of preventing eczema such as duration of breastfeeding, food allergen avoidance by the mother, avoidance of house dust mite exposure and probiotic supplements, none of these have been proven to be consistently effective for the prevention of eczema. Barrier protection with emollients is a widely used first-line **treatment** for mild eczema and can have a dramatic steroid sparing effect when added to the treatment regimen for patients with moderate to severe disease. However, there are no studies looking at whether emollients can **prevent** eczema developing. If proven to be effective, this strategy could be an easy and low-cost approach to reduce the burden of eczema and potentially modify the development of associated allergic diseases such as food allergy and asthma.

For this pilot study, women in their last trimester of pregnancy with a family history of either eczema, asthma or hay-fever will be invited to take part (babies born into families with eczema, asthma or hay-fever have a much higher risk of developing eczema). Families will then be randomly allocated to either the barrier enhancement group or the control group. The barrier enhancement group will apply an emollient twice a day to the entire baby's skin from birth to six months and will also use a soap substitute during this period. The control group will continue to treat their baby's skin as they normally would. After six months, babies in both groups will be examined to see whether they have developed eczema. To avoid bias in the results, this will be done by a doctor or nurse who isn't aware whether the family were in the barrier enhancement or the control group. A saliva sample will be taken from the baby to test for changes to the filaggrin gene, which has been implicated in the development of eczema. After taking part, families will be asked about their participation in the study to help us design the main clinical trial in a way that is as acceptable as possible to families.

To find out more about the BEEP study, contact Joanne Chalmers on 0115 8232435 or by email joanne.chalmers@nottingham.ac.uk

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