



ATOPIC ECZEMA/DERMATITIS

## AN INVESTIGATION OF THE SKIN BARRIER RESTORING EFFECTS OF A CREAM CONTAINING CERAMIDES IN A MULTI VESICULAR EMULSION IN PEOPLE WITH DRY, ECZEMA-PRONE, SKIN: THE RESTORE STUDY PHASE 1

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**Introduction:** Emollient therapy is traditionally used to soothe and soften the skin. However, despite a paucity of evidence, emollients are increasingly considered an important approach to ameliorating the skin barrier defect exhibited by people with a dry skin condition, like atopic dermatitis (AD).

**Objective:** To investigate the effects of an emollient cream and lotion designed specifically to support skin barrier restoration compared to a panel of traditional emollients. The test emollients contain physiological lipids, including ceramides, triglycerides and cholesterol, important for skin barrier formation. They have been developed with a controlled-release technology to deliver skin humectants over a 24-hour period to prolong skin hydration.

**Materials and Methods:** A single open application test in 22 people with visually dry skin, prone to AD (established based on a recent history), was conducted, wherein skin hydration and dryness were determined on the lower legs before and at set timepoints after a single application of the test cream, the test lotion, and 3 reference emollients. A no treatment control was included.

**Results:** Skin hydration was negatively correlated with visual skin dryness (Spearman  $r$  0.6151). Only the test cream and lotion significantly improved visual skin dryness and skin hydration for 24 hours following application. Whilst all emollients initially ameliorated visual dryness, only the test cream and lotion significantly improved hydration levels (by  $14.1 \pm 1.6$  and  $16.7 \pm 1.7$  capacitance units respectively 3 hours post-application).

**Conclusions:** The test cream and lotion impart significantly higher levels of hydration compared to 3 emollients tested currently available for prescription in the UK, and were





associated with longer lasting relief from dryness. The test emollients are therefore highly suited for the management of dry skin, especially in circumstances where frequent application is difficult to achieve. Further investigation is currently underway to establish the effects of longer treatment durations on skin barrier condition.

