Emollients and Soap Substitutes for Dry Skin Conditions

Emollients and Soap Substitutes
A leave-on emollient is a substance whose main action is to occlude the skin surface and to encourage the build up of water in the stratum corneum.1 Leave-on emollients soothe, soften and hydrate the skin and are suitable for patients of any age with a dry skin condition such as:
- Dry and scaling skin disorders such as eczema, contact dermatitis, psoriasis, ichthyosis.
- Dry skin conditions caused by exposure to drying products or extreme environmental conditions.
- Dry or itchy skin associated with aging.
A soap substitute is used instead of ordinary soap products and is non-irritant and non-drying to the skin.

Evidence and Rationale for Use
There is a lack of good quality clinical trials concerning the use of emollients but long-term experience supports their efficacy.2
The skin acts as a barrier to the external environment as well as providing protection for the internal environment. Dryness and inflammation of the skin can lead to loss of its barrier function thus making it more susceptible to allergens, irritants, pathogens, bacteria and further water loss.1 Emollients help restore the epidermal barrier by their occlusive effect thus reducing the likelihood of infection, irritation and inflammation. For emollients to be effective, patients should frequently apply appropriate amounts.
Emollients should form the basis of atopic eczema management and should always be used, even when the atopic eczema is clear.3

Benefits of Emollient Use
- Improve the hydration, suppleness and appearance of dry skin.2,4
- Restore skin barrier function thus reducing susceptibility to infection, irritants and allergens.4
- Regular use of suitable quantities of emollients will help prevent flare ups of eczema.4
- Appropriate use may reduce the need for topical corticosteroids in atopic eczema.3
- Improved well-being of the patient. Severe dryness and inflammation can be distressing for the patient and impact on their wellbeing and confidence.

Complications of Emollient Use
- Some formulations contain potential skin sensitisers5 such as lanolin, preservatives, fragrances and sodium lauryl sulphate. Ointments contain fewer potential irritants than creams and lotions.
- Risk of slippery skin and surfaces when using soap substitutes.
- Potential fire hazard with paraffin-based emollients in contact with dressings or clothing as they may be easily ignited by a naked flame.
- The use of ointments may exacerbate acne.
- The risk of folliculitis can be reduced if the patient applies the emollient in the direction of hair growth.

Patient Advice
Finding the right emollient - Patient response to emollients varies. The initial supply of emollient should be a small pack for the patient to try. If this suits them, a larger quantity can then be prescribed. If unsuitable, they should be encouraged to try another product.
Apply liberally and frequently
- Gently smooth the emollient onto the skin in the direction of hair growth. Do not rub in.
- The frequency of application may vary depending on the condition of the skin. For very dry skin, application every 2-3 hours would be considered normal. See current BNF for suitable quantities to prescribe.

Washing
- Avoid using soaps, detergents and bubble bath. Use a soap substitute instead.
- Gently dry the skin after washing and apply a leave-on emollient while the skin is moist.
- Take care if using emollients when bathing or showering as they may make the skin and surfaces slippery.

Fire hazard with paraffin-based emollients
- Emollient ointments in contact with dressings or clothing may be easily ignited by a naked flame, particularly when applied to large areas.
- Keep away from fire or flames and do not smoke when using these preparations.

Hygiene
- Don’t share your emollient products or towels with others as those with broken skin are more prone to pick up skin infections.
- Emollients in tubs should be removed with a clean spoon or spatula to reduce potential bacterial contamination.

Topical corticosteroids and emollients
- If using both, ensure the patient knows which is which. Corticosteroids should be applied sparingly often for limited periods; emollients should be applied frequently and liberally.

References
5. Monthly Index of Medical Specialties. August 2012
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### NHS Surrey Preferred Choices of Emollients

<table>
<thead>
<tr>
<th>Type of Emollient</th>
<th>Product name</th>
<th>Total Paraffin Content</th>
<th>Use*</th>
<th>500g Pack Cost**</th>
<th>Small Pack Cost*</th>
<th>NHS Surrey Recommendation</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very greasy ointment</td>
<td>50:50 Liquid &amp;White Soft Paraffin Ointment</td>
<td>100%</td>
<td>E</td>
<td>£6.09</td>
<td>£3.05 (250g)</td>
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<td></td>
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<tr>
<td>Greasy ointments</td>
<td>Emulsifying Ointment BP</td>
<td>70%</td>
<td>E S B</td>
<td>£2.43</td>
<td></td>
<td>When initiating an ointment, use Emulsifying ointment BP. (Zeroderm® ointment 2nd line)</td>
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<tr>
<td></td>
<td>Zeroderm® ointment</td>
<td>70%</td>
<td>E S B</td>
<td>£4.10</td>
<td>£2.41 (125g)</td>
<td>Zeroderm® ointment to replace Epaderm® ointment and Hydromol® ointment currently prescribed</td>
<td>Contains similar ingredients to Epaderm® ointment &amp; Hydromol® ointment</td>
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<tr>
<td>Rich cream</td>
<td>Zeroguent® cream + additional lipid emollient</td>
<td>12% +</td>
<td>E</td>
<td>£6.99</td>
<td>£2.33 (100g)</td>
<td>Zeroguent® cream to replace Unguentum M® cream</td>
<td>Contains similar ingredients to Unguentum M® cream</td>
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<tr>
<td>Creams</td>
<td>Aquamax® cream</td>
<td>28%</td>
<td>E S</td>
<td>£3.99</td>
<td>£1.89 (100g)</td>
<td>Aquamax® cream is a suitable alternative to Aqueous Cream BP as a leave-on emollient and/or a soap substitute</td>
<td>Dual purpose product (leave-on emollient and soap substitute). Higher paraffin content than Aqueous Cream BP.</td>
</tr>
<tr>
<td></td>
<td>Zerocream® cream</td>
<td>27.1%</td>
<td>E</td>
<td>£4.08 pump pack***</td>
<td>£1.17 (50g)</td>
<td>Zerocream® to replace E45® cream</td>
<td>Contains similar ingredients to E45® cream</td>
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<td></td>
<td>Cetraben® cream</td>
<td>23.7%</td>
<td>E</td>
<td>£5.99 pump pack***</td>
<td>£1.40 (50g)</td>
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<td></td>
<td>Zerobase® cream</td>
<td>21%</td>
<td>E</td>
<td>£5.26 pump pack***</td>
<td>£1.04 (50g)</td>
<td>Zerobase® cream to replace Diprobase® cream</td>
<td>Contains similar ingredients to Diprobase® cream</td>
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</tbody>
</table>

*E = emollient, S = soap substitute, B = bath additive  
**Basic NHS costs October 2012  
*** Pump pack residual volume is approximately 3% (since not possible to empty entire contents of pump pack). 

### Which Emollient?

There is considerable variation in patient response to a particular product, thus making it difficult to compare emollients or to predict how much an individual will benefit. The most important factor in selecting an emollient is to find one that the patient will use. The emollient of choice is the least expensive one that is effective, and which the patient finds acceptable and is prepared to use on a regular basis.

### 10 Factors to consider when selecting an emollient

- Patient preference – acceptability and tolerability to patient, ease of application, product consistency.
- Type of dry skin condition and past history.
- Previous products used and their efficacy and tolerability.
- Severity of dry skin condition: greasy ointments achieve better occlusion than cream-based emollients.
- Intended use of product - leave-on emollient, soap substitute or both; different emollients for different parts of the body (eg. greasier product for limbs, lighter product for face).
- Emollient or lipid content (fats, waxes, oils).
- Excipients that may be potential sensitisers.
- Safety issues – fire hazard with paraffin-based emollients; soap substitutes may make surfaces slippery.
- Cost.
- Container – product accessible to patient; can patient use a pump dispenser?

### Initiating an emollient cream - which one?

Aquamax® cream or Zerocream® should be considered first when initiating a patient on an emollient cream due to their paraffin (emollient) content and cost efficacy. Aquamax® cream can also be used as a soap substitute.

### Aqueous Cream BP

NHS Surrey no longer supports the use of Aqueous Cream BP as a leave-on emollient or soap substitute due to its poor emollient properties, tendency to cause irritant reactions and the availability of alternative products that are more cost effective. The basic NHS cost for 500g Aqueous Cream BP is £4.40 (October 2012). Aquamax® cream is a suitable alternative.