Arden and Greater East Midlands
Commissioning Support Unit

Greater East Midlands Commissioning Support Unit in association with
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Lincolnshire Prescribing and Clinical Effectiveness Bulletin

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PRESCRIBING EMOLLIENTS FOR DRY SKIN CONDITIONS

Executive summary

- **There is no good evidence to support the use of one particular emollient over another. Choice is largely based on patient preference, site of application, history of allergies and the extent and severity of the condition. In the absence of comparative evidence supporting specific preferred products, prescribers should consider using a product of low acquisition cost first line. An emollients formulary is provided detailing the preferred choices.**
- **Treatment should be initiated with a light emollient, such as a lotion or a cream. Products should be tried in progressive order of greasiness (starting with the least greasy) to ensure that the patient is prescribed the most effective and most cosmetically acceptable product possible. Information is provided on the relative greasiness of the products and which ones can be used as soap substitutes.**
- **Choice of emollient should be based on how dry the skin is. The general rule is: the drier the skin, the greasier the emollient should be. Information is provided on suitability of emollient according to the severity of skin dryness. Very dry skin should be treated with an ointment; slightly dry skin requires a cream or a lotion.**
- **Emollients should be applied whenever the skin feels dry. This may be two to four times a day or even more frequently if required (i.e. every three hours). Emollient use should continue even after the skin condition has improved.**
- **Intensive use of emollients can reduce the need for topical corticosteroids.**
- **Adequate quantities of emollient should be prescribed to allow for liberal application as frequently as required. Guidance on recommended quantities to be prescribed is provided.**
- **People should be advised to wash and dry their hands before applying emollients to reduce the risk of introducing germs to the skin. Many emollients, particularly larger pack sizes, come in pump dispensers that can help to reduce contamination risk. Products in large tubs can readily become contaminated through frequent use; contamination can be minimised by decanting the required amount from the tub to a clean plate or bowl prior to application using a clean teaspoon or spatula.**
- **In order to maximise skin hydration, emollients should be applied immediately after bathing while water is still trapped in the skin. Prescribers are advised not to initiate any new patients on bath or shower emollients due to lack of**

evidence of effectiveness and preferred alternative strategies such as using emollients as soap substitutes or directly applying emollients after bathing. In addition, bath and shower emollients also markedly increase the risk of slipping and falling in the bath or shower, particularly in children and the elderly.

- **Antimicrobial products should only be used as an adjunct to emollient therapy when there is evidence of a high bacterial load. They are recommended for SHORT TERM USE ONLY.**
- **There is limited evidence to support the use of urea containing products. If required, they can be used for a short period only as an adjunct to emollient therapy for dry, thickened skin. The three lowest cost urea containing products are: *Balneum Cream*, *Balneum Plus Cream* and *Hydromol Intensive Cream*. Where a urea containing product is indicated, these products are recommended first line.**
- **Skin preparations contain seemingly inert substances, or excipients, used as vehicles and diluents for the active ingredient(s). Atopic and inflamed skin conditions are prone to irritation by excipients resulting infrequently in hypersensitivity and adverse reactions. It is important to check prior to prescribing whether the patient has any known sensitivities. Information on excipients found in products listed on the *Lincolnshire Joint Formulary* is tabulated below.**
- **The most commonly reported side effects associated with emollient use are a stinging or slight burning sensation on application. This is usually transient and could often be considered as a normal response to the application of an emollient. Some patients may require a sequential trial of a number of different emollients before finding one that they can tolerate.**
- **Aqueous cream may cause local skin reactions (e.g. stinging, burning, itching, and redness) when used as a leave-on emollient, particularly in children with atopic eczema. These reactions usually occur within 20 minutes of application and may be linked to the presence of excipients such as sodium lauryl sulphate (SLS). The MHRA have advised that, where skin irritation is associated with the use of aqueous cream, an alternative SLS free emollient should be prescribed. PACEF recommend that, where possible, SLS free emollients should be preferred. The ULHT Dermatology Service does not recommend aqueous cream either as a leave-on emollient or as a soap substitute.**

Emollients Formulary

Preferred products for first line use in those with mild dry skin

Drug	Indication(s)	Traffic Light and Joint Formulary Status
Aveeno Cream (1% colloidal oatmeal)	For endogenous and exogenous eczema, xeroderma, ichthyosis and senile pruritus (pruritus of the elderly) associated with dry skin	GREEN Possible first line choice for mild dryness. Included in the *Lincolnshire Joint Formulary.*
Aveeno Lotion (1% colloidal oatmeal)	For endogenous and exogenous eczema, xeroderma, ichthyosis and senile pruritus (pruritus of the elderly) associated with dry skin	GREEN Possible first line choice for mild dryness Included in the *Lincolnshire Joint Formulary.*
***Diprobase* cream** (liquid paraffin 6%, white soft paraffin (WSP) 15%, cetomacrogol 2.25%, cetostearyl alcohol 7.2%)	For dry skin conditions	GREEN Possible first line choice for mild skin conditions. .Included in the *Lincolnshire Joint Formulary.*
***E45* cream**	Ichthyosis, traumatic dermatitis, dry	GREEN

(WSP14.5%, hypoallergenic anhydrous lanolin 1%, light liquid paraffin 12.6%)	stages of eczema, dry psoriasis, dry skin conditions	Possible first line choice for mild skin conditions. .Included in the Lincolnshire Joint Formulary.
Hydromol Cream (sodium pyrrolidone carboxylate 2.5%)	For dry skin conditions	GREEN Possible first line choice for mild skin conditions Included in the Lincolnshire Joint Formulary

Preferred products containing an antimicrobial

Drug	Indication(s)	Traffic Light and Joint Formulary Status
Dermol Cream (liquid paraffin 10%, isopropyl myristate 10%, benzalkonium chloride 0.1% and chlorhexidine hydrochloride 0.1%).	For dry and pruritic skin conditions including eczema and dermatitis, Can be used as a soap substitute	GREEN First choice when a product for mild dryness is indicated where there is evidence of a high bacterial load. Recommended for short-term use only. Included in the *Lincolnshire Joint Formulary*
Dermol Lotion (liquid paraffin 2.5%, isopropyl myristate 2.5%, benzalkonium chloride 0.1% and chlorhexidine hydrochloride 0.1%)	For dry and pruritic skin conditions including eczema and dermatitis, Can be used as a soap substitute	GREEN First choice when a product for mild dryness is indicated where there is evidence of a high bacterial load. Recommended for short-term use only. Included in the *Lincolnshire Joint Formulary*

Preferred products for moderate dryness

Drug	Indication(s)	Traffic Light and Joint Formulary Status
Aquamax Cream (WSP 20%, liquid paraffin 8%)	Eczema, psoriasis and other dry skin conditions	GREEN Possible first line choice for moderate dryness. Included in the *Lincolnshire Joint Formulary.*
***Cetraben* cream** (WSP13.2%, light liquid paraffin 10.5%)	Dry skin conditions,eczema.	GREEN Possible first line choice for moderate dryness. Included in the *Lincolnshire Joint Formulary.*
Doublebase gel (isopropyl myristate 15%, liquid paraffin 15%)	Dry skin conditions	GREEN Possible first line choice for moderate dryness. Included in the *Lincolnshire Joint Formulary.*
Epaderm Cream (yellow soft paraffin , liquid paraffin, emulsifying wax)	Dry skin conditions	GREEN Possible first line choice for moderate dryness. Included in the Lincolnshire Joint Formulary.

Preferred products containing urea

Drug	Indication(s)	Traffic Light and Joint Formulary Status
Balneum Cream (5% urea)	Dry skin conditions	GREEN For short term use only for dry thickened skin in conjunction with another emollient. Included in the *Lincolnshire Joint Formulary.*

Balneum Plus Cream (5% urea)	Pruritis, eczema, dermatitis and scaling skin conditions.	GREEN For short term use only for dry thickened skin in conjunction with another emollient. Included in the *Lincolnshire Joint Formulary.*
***Hydromol Intensive* cream** (10% urea)	Dry skin and hyperkeratosis	GREEN For short term use only for dry thickened skin in conjunction with another emollient when higher strength urea product is indicated. Included in the *Lincolnshire Joint Formulary.*
Calmurid cream (10% urea)	Dry skin and hyperkeratosis	GREEN – second line Should be reserved for very hyperkeratotic lesions and for those intolerant to treatment with *Hydromol Intensive* crem. Included in the *Lincolnshire Joint Formulary.*

Preferred products for severe dry skin

Drug	Indication(s)	Traffic Light and Joint Formulary Status
Emulsifying ointment	Dry skin	GREEN Possible first line choice for severe dryness. Included in the *Lincolnshire Joint Formulary.*
Hydromol Ointment (YSP 30%, emulsifying wax 30%, liquid paraffin 40%)	Dry skin including eczema and as a soap substitute.	GREEN Possible first line choice for severe dryness. Included in the *Lincolnshire Joint Formulary.*
Diprobase Ointment (liquid paraffin 5%, WSP 95%)	Dry skin conditions	GREEN Possible first line choice for severe dryness. Included in the *Lincolnshire Joint Formulary.*
White soft paraffin/liquid paraffin 50:50	Dry skin conditions	GREEN Possible first line choice for severe dryness. Included in the *Lincolnshire Joint Formulary.*
Emollin spray (liquid paraffin 50%, WSP 50%)	Dry, scaly, sensitive or sore skin.	GREEN To be used for bullous skin conditions. Included in the *Lincolnshire Joint Formulary.*

Products listed on this *Formulary* should be preferred for initiation in new patients.

Introduction

Working in conjunction with local opinion leaders from ULH Dermatology Services, PACEF have developed the following guidance on the prescribing of emollients for dry skin conditions. A brief one page summary of the *Emollients Formulary* is provided as an Appendix to this *Bulletin*. The *Formulary* provides guidance on the selection of the most appropriate emollient based on the severity of the dryness of the skin. The main principles behind emollient use are detailed below:

Principles of emollient prescribing

Product selection

- There is no good evidence to support the use of one particular emollient over another. Choice is largely based on patient preference, site of application, history of allergies and the extent and severity of the condition. In the absence of comparative evidence supporting specific preferred products, consider using a product of low acquisition cost first line (see Formulary).
- Treatment should be initiated with a light emollient, such as a lotion or a cream. Products should be tried in progressive order of greasiness (starting with the least greasy) to ensure that the patient is prescribed the most effective and most cosmetically acceptable product possible. Information is provided on the relative greasiness of the products and which ones can be used as soap substitutes.

Different types of formulations

	Characteristics	**Examples**
Lotions	Water based. Spread easily; quickly absorbed; cooling. May be preferred for hairy areas. Not very effective at moisturising the skin.	*Aveeno Lotion* (colloidal oatmeal 1%)
Creams	Mixture of water and fat. Feel light and cool on the skin; well absorbed, generally acceptable. All creams contain preservatives that can cause skin sensitivity.	*Aveeno Cream* (colloidal oatmeal 1%) *Cetraben* cream (white soft paraffin 13.2%; light liquid paraffin 10.5%) *Hydromol Cream* (sodium pyrrolidone carboxylate 2.5%)
Ointments	Fat based. Greasy and occlusive, not always cosmetically acceptable. Usually no preservatives. Useful for very dry and thickened skin; not appropriate for weeping areas.	*Diprobase Ointment* (liquid paraffin 5%, white soft paraffin 95%) *Epaderm Ointment* (yellow soft paraffin 30%, liquid paraffin 40%, emulsifying wax 30%) Emulsifying Ointment
Soap substitutes	Ordinary soap can dry the skin. Soap substitutes are just as effective at skin cleansing, but are less drying. Apply to dry or wet skin; wash off in the shower or bath. May reduce the need for other emollients.	*Cetraben* cream (white soft paraffin 13.2%; light liquid paraffin 10.5%) *Hydromol Ointment* (yellow soft paraffin 30%, emulsifying wax 30%, liquid paraffin 40%) Emulsifying Ointment

Frequency of use

- Emollients should be applied whenever the skin feels dry. This may be two to four times a day or even more frequently if required (i.e. every three hours). Emollient use should continue even after the skin condition has improved.
- Intensive use of emollients can reduce the need for topical corticosteroids. As a guide, frequency of emollient use should exceed that for other prescribed topical therapies.
- If topical corticosteroids are prescribed concurrently, patients should be advised to apply their emollient at least 15-30 minutes before or after the topical steroid.

Quantities to be prescribed

- Adequate quantities of emollient should be prescribed to allow for liberal application as frequently as required.
- For generalised eczema, the recommended quantity is around 600gram/ week for an adult and 250-500g/week for a child.
- The table below provides a guide to suitable **weekly** quantities for specific areas of the body. Quantities assume that the product being applied twice daily.

Area affected	**Face**	**Both hands**	**Scalp**	**Both arms or legs**	**Trunk**	**Groin & genitalia**
Creams and ointments	15-30g	25-50g	50-100g	100-200g	400g	15-25g
Lotions	100ml	200ml	200ml	200ml	500ml	100ml

- Analysis of current Lincolnshire prescribing data for primary care reveals that the percentage of prescriptions for quantities of cream in excess of 500gram and lotions in excess of 100ml is low (between 2.5 and 9%). In general, this suggests that smaller quantities of emollients are being prescribed than current advice recommends.

Administration

- People should be advised to wash and dry their hands before applying emollients to reduce the risk of introducing germs to the skin.
- Many emollients, particularly larger pack sizes, come in pump dispensers that help to reduce the contamination risk. Products in large tubs can readily become contaminated through frequent use; contamination can be minimised by decanting the required amount from the tub to a clean plate or bowl prior to application using a clean teaspoon or spatula.
- Emollients should be applied gently in the direction of hair growth so that a visible sheen remains.
- In order to maximise skin hydration, emollients should be applied immediately after bathing while water is still trapped in the skin.

Use of antimicrobials

- Antimicrobial products should only be used as an adjunct to emollient therapy when there is evidence of a high bacterial load. They are recommended for SHORT-TERM USE ONLY. Examples include: *Dermol Lotion* (liquid paraffin 2.5%, isopropyl myristate 2.5%, benzalkonium chloride 0.1% and chlorhexidine hydrochloride 0.1%) and *Dermol Cream* (liquid paraffin 10%, isopropyl myristate 10%, benzalkonium chloride 0.1% and chlorhexidine hydrochloride 0.1%).

Urea containing products

- There is limited evidence to support the use of urea containing products. If required, they can be used for **a short period only** as an adjunct to emollient therapy for dry, thickened skin. Formulary approved urea containing products are tabulated below:

Product	Constituents	Pack size	Cost(£)
Balneum Cream	Urea 5%	50g 500g	£2.85 £9.97
Balneum Plus Cream	Lauromacrogols 3% Urea 5%	100g 500g	£3.29 £14.99

Calmurid Cream	Urea 10% Lactic acid 5%	100g 500g	£9.27 £35.70
Hydromol Intensive Cream	Urea 10%	30g 100g	£1.64 £4.37

- The three lowest cost urea containing products are: *Balneum Cream*, *Balneum Plus Cream* and *Hydromol Intensive Cream*. Where a urea containing product is indicated, these products are recommended first line.
- *Calmurid Cream* is reserved for second line use for very hyperkeratotic lesions and for those intolerant to *Hydromol Intensive Cream.*

Excipients

- Skin preparations contain seemingly inert substances that are used as vehicles and diluents for the active ingredient(s); these are known as excipients. Atopic and inflamed skin conditions are prone to irritation by excipients resulting infrequently in hypersensitivity and adverse reactions. The following excipients have been associated with sensitisation:

Beeswax	Edetic acid (EDTA)	N-3 chloroallyl hexamine chloride
Benzylalcohol	Ethylenediamine	Polysorbates
Butylated hydroxyanisole	Fragrances	Propylene glycol
Butylated hydroxytoluene	Hydroxybenzoate (parabens)	Sodium metabisulphite
Cetostearyl alcohol	Imidurea	Sorbic acid
Chlorocresol	Isopropyl palmitate	Woolfat and related substances

- The table below summarizes the excipients in emollients approved for use through the *Lincolnshire Joint Formulary*:

Product	Benzyl alcohol	Cetyl alcohol	Chlorocresol	Isopropyl palmitate	Parabens	Polysorbates	Propylene glycol	Lanolin
Products for use for mild dry skin								
Aveeno Cream	√	√		√				
Dermol Cream		√						
E45 Cream		√			√			√
Hydromol Cream		√			√			
Diprobase Cream		√	√					
Products for use for moderately dry skin								
Balneum Cream		√				√	√	
Balneum Plus Cream	√					√		
Calmurid Cream								
Cetraben Emollient Cream		√			√			
Doublebase Gel								
Epaderm Cream		√	√					
Hydromol Intensive Cream								
Products for use for severe dry skin								

Diprobase Ointment								
Emollin Spray								
Emulsifying ointment		√						
Epaderm Ointment		√						
Hydromol Ointment		√						
White soft paraffin/Liquid paraffin								

Reference: British National Formulary (September 2014-March 2015). Where no excipients are listed, none appear in the *BNF.*

- In general, emollients are considered to be safe with limited adverse effects. The most commonly reported side effects are stinging or a slight burning sensation on application. This is usually transient and could be considered to be a normal response to emollient application.
- Some patients will need to try a number of different emollients before finding one that they can tolerate.
- Where tolerability is an issue, many patients will respond better to an ointment formulation rather than a cream or lotion.
- Further information on excipients is available in the individual product summaries of product characteristics (SPCs) or the *British National Formulary* (*BNF*).

Specific cautions in use

Aqueous cream

The MHRA released a public assessment report on the risks and benefits of aqueous cream when used in children with eczema in March 2013. The review concluded that aqueous cream may cause local skin reactions (e.g. stinging, burning, itching, and redness) when used as a leave-on emollient, particularly in children with atopic eczema. These reactions usually occur within 20 minutes of application and may be linked to the presence of excipients such as sodium lauryl sulphate (SLS). Topical reactions are only likely to occur when aqueous cream is used as a leave on emollient due to the prolonged contact time. As soap substitutes are largely removed during the washing process, the incidence of local skin reactions with aqueous cream used as a soap substitute is much lower.

The MHRA have advised that, where skin irritation is associated with the use of aqueous cream, an alternative SLS free emollient should be prescribed. PACEF recommend that, where possible, SLS free emollients should be preferred. The ULHT Dermatology Service does not recommend aqueous cream either as a leave-on emollient or as a soap substitute.

Bath emollients

The ULH Dermatology Service advise that emollient bath additives should no longer be considered appropriate as standard total emollient therapy. The amount of emollient deposited on the skin during bathing or showering using a bath or shower emollient is likely to be far lower than that deposited from directly applied emollients *after* bathing or showering.

The *Drug and Therapeutic Bulletin* (*DTB*) reviewed the use of bath emollients in the management of eczema in 2007. The review identified a lack of published randomised controlled trials supporting the use of bath emollients in the treatment of atopic eczema and

emphasized the lack of consensus of clinical opinion that such therapy is effective. In the absence of clinical evidence and consensus opinion, the *DTB* concluded that alternative strategies focused on using emollients as soap substitutes or directly applying emollients after bathing were preferable and potentially more effective.

The *British Medical Journal* (*BMJ*) also published an article in 2009 questioning the role of bath emollients. Again, the lack of published evidence was highlighted as a problem. The article also pointed out that the quantity of emollient deposited on the skin from a bath emollient whilst bathing are likely to be far lower than that achieved with directly applied emollients. The authors conclude that, based on current evidence, bath emollients offer little or no benefit and that over-reliance on these products could lead to substandard emollient therapy.

There are also obvious safety issues to be considered. Bath and shower emollients coat the surface of the bath and shower creating a very greasy and slippery surface; this can markedly increase the risk of slipping and falling, particularly in children and the elderly. The current annual spend on bath and shower emollients across all four Lincolnshire CCGs is £137,463pa. In terms of volume, bath and shower emollients account for approximately a quarter to a third of all emollients prescribed.

References

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2. Wandsworth Clinical Commissioning Group: *Emollients* (December 2012_
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