

## Shampoos and scalp preparations for psoriasis of the scalp and seborrhoeic dermatitis

This bulletin focuses on shampoos and scalp preparations for the treatment of psoriasis of the scalp and seborrhoeic dermatitis. The annual spend on shampoos and scalp preparations across England is over £12.3 million (ePACT May to July 2015) QIPP projects in this area are aimed at both reviewing the appropriate use and duration of treatment.

Support materials (briefing, algorithm, data collection form for topical corticosteroids (in shampoos and scalp preparations) and patient invite letter) is available at <https://www.prescqipp.info/resources/viewcategory/436-shampoos-and-scalp-preparations>

Cost effective branded preparations are stated if more than one preparation is available or the preparation contains multiple ingredients.

### Recommendations

#### Psoriasis of the scalp

- Ensure that a potent topical steroid is only used for up to four weeks.<sup>1</sup> A topical steroid should only be prescribed as acute treatment. It should not be added to repeat prescribing lists. Betacap® (betamethasone 0.1% w/w) scalp application is the least expensive preparation based on cost/ml.
- Consider a different formulation of the potent corticosteroid if poor response to initial steroid treatment.<sup>1</sup>
- Consider topical agents to remove adherent scale (for example, agents containing salicylic acid, emollients and oils) before application of the potent corticosteroid.<sup>1</sup>
- Dovobet® (calcipotriol 50 micrograms and 0.5mg betamethasone) gel and vitamin D preparations are third line agents.<sup>1</sup> See PrescQIPP bulletin 90. Available at <http://www.prescqipp.info/resources/viewcategory/326-dovobet-in-psoriasis>
- A very potent corticosteroid, e.g. Dermovate® (clobetasol 0.05%) scalp application or Etrivex® (clobetasol 500 microgram/g) shampoo should only be applied up to twice daily for two weeks in adults only if less potent treatments (for up to eight weeks) do not control scalp psoriasis.<sup>1</sup>
- Consider coal tar preparations applied once or twice daily as an alternative to very potent corticosteroids, e.g. Exorex (coal tar solution 5% v/w.) lotion or Psoriderm® (Distilled Coal Tar 2.5% w/v; Lecithin 0.3% w/v) scalp application.<sup>1</sup>
- Do not offer coal tar-based shampoos alone, e.g. Alphosyl 2 in 1®(alcoholic extract of coal tar 5% w/w), or Capasal® (salicylic Acid 0.5% w/w; Coconut Oil 1.0% w/w; Distilled Coal Tar 1.0% w/w) for the treatment of severe scalp psoriasis.<sup>1</sup> Shampoos containing tar extracts may be considered as part of a self care ongoing management plan.<sup>2</sup> Ensure that shampoos are left in contact with the scalp for the correct time periods.
- Evidence of the effect of complementary and alternative topical therapies in psoriasis is lacking and these preparations should not be prescribed.<sup>1</sup>
- Educate the patient about their condition and ensure adherence to treatment forms a crucial part of management.<sup>1</sup>

### Seborrhoeic dermatitis of the scalp and beard

- Seborrhoeic dermatitis can be managed with self-care using therapies that are available to purchase over the counter, e.g. medicated shampoos as well as ketoconazole shampoo and selenium sulphide shampoo.
- Ketoconazole 2% shampoo should be the first line treatment for adolescents and adults. Selenium sulphide shampoo may be used as an alternative.<sup>3</sup>
- For severe itching of the scalp consider co-prescribing four weeks of treatment with a potent topical corticosteroid scalp application such as Betacap® scalp application.<sup>3</sup>

### Shampoos and scalp preparations for cosmetic use

- There is very limited published evidence that medicated shampoos such as zinc pyrithione (e.g. Head and Shoulders®), coal tar (e.g. Neutrogena® T/gel shampoo, Exorex® hair and body shampoo) or salicylic acid are effective for treating seborrhoeic dermatitis.<sup>3</sup> If a patient wishes to use these products, they should be purchased as part of self care .

## Psoriasis of scalp: Background

Psoriasis is defined as '*a chronic, inflammatory, multi system disease with predominantly skin and joint manifestations*'. It is characterized by scaly skin lesions, which can be in the form of patches, papules, or plaques. Itch is often a feature.

Chronic plaque psoriasis (including scalp psoriasis, flexural psoriasis, and facial psoriasis) is the most common form, affecting 80–90% of people with psoriasis.<sup>4</sup> An estimated 2% of the UK population has psoriasis, of which 50% to 90% have scalp involvement at some stage of their condition.<sup>5</sup> Patients consider scalp psoriasis to be the most difficult aspect of their disease, which can lead to loss of self-esteem, social stigmatization, and even depression.<sup>5</sup> Challenges in managing scalp psoriasis include choosing an appropriate treatment option, difficulties of applying topical treatments and deciding how to treat severe disease.<sup>6</sup> Lack of treatment adherence is well recognised as an important issue in the management of psoriasis.<sup>7</sup> Moreover, there is a lack of good-quality evidence on which to base treatment decisions.<sup>6</sup>

For further information on the impact and severity of psoriasis please see Dovobet bulletin 90: <http://www.prescqipp.info/resources/viewcategory/326-dovobet-in-psoriasis>

## Clinical evidence and treatment options for psoriasis of the scalp

The recommendations regarding the choice and sequencing of treatments are based on evidence from a clinical and cost effectiveness analysis of topical treatments used to treat scalp psoriasis conducted by the National Institute for Health and Care Excellence (NICE) Clinical Guideline 153 (CG153).<sup>1</sup>

Throughout treatment, adherence needs to be ensured. Prescribers need to reinforce management strategies:

- Discuss the advantages and disadvantages of each topical treatment, as well as the variety of formulations available. In general lotions, solutions or gels are suitable for the scalp or hair-bearing areas.
- When prescribing, take into account patient preference, cosmetic acceptability, practical aspects of application, as well as the site(s) and extent of psoriasis to be treated. Practitioners can explain to patients that the major goals of treatment are to relieve the itching and reduce the scaling.
- Check compliance and ask about the presence of any adverse effects or any other issues to ascertain if there might be a reason for treatment failure.
- Give general advice and support regarding the correct use and application of topical treatments as well as general information about psoriasis. With scalp preparations, particularly shampoos, ensure that the preparation is left on the scalp for the correct contact time.

- Review the person within four weeks after treatment has started and regularly thereafter, as required. Use clinical judgment if earlier or more frequent reviews are required. At each review appointment:
  - » Reassess the severity of psoriasis.
  - » Reassess the impact of psoriasis.
  - » Stop prescribing treatments no longer required or those that have been used for the maximum duration for the current treatment cycle.
  - » Ask about how the treatment is being tolerated, adverse effects to treatments, and if there are any issues around compliance.

Psoriasis virtual communities can provide education, as well as psychological and social support.<sup>5</sup> A list of support groups and patient information leaflets can be found in appendix 1.

NICE recommendations for the topical treatment of psoriasis affecting the scalp have been categorised into drug groups as listed below. These topical treatments options are also summarised in the treatment algorithm, attachment 1.

### Potent corticosteroids

- Potent corticosteroids should be applied once daily for up to four weeks as initial treatment for people with scalp psoriasis.<sup>1</sup> Betacap® scalp application is the least expensive preparation based on cost/ml. People may continue to use shampoos containing salicylic acid or tar to help soften or release the scales (see coal tar preparations below). Consider non steroid based products (coal tar, vitamin D/vitamin D analogues) as needed as part of a self-care management plan to maintain control after this period (see below).
- Whilst initial treatment with potent or very potent corticosteroids is likely to be most cost effective (i.e. the very potent corticosteroid clobetasol propionate was significantly more effective than placebo (SMD=-1.57, 95% CI -1.81 to -1.34; 4 RCTs, n=788)), the NICE guideline development group (GDG) was concerned that very potent corticosteroids were an aggressive initial strategy because they have a higher risk of causing corticosteroid adverse effects. For this reason the GDG recommended potent corticosteroids as initial treatment.<sup>1</sup>
- Repeat prescriptions for topical corticosteroids should be carefully reviewed and supervised. This is in order to identify any adverse effects, and to avoid the use of corticosteroids on widespread psoriasis where the risks of destabilizing the disease becomes important. **Prescribe as acute treatment only.**<sup>8</sup>
- Give advice on the adverse effects of topical corticosteroids and how these can be minimized. Local adverse effects are more common than systemic adverse effects. They are more commonly seen on the face, in skin folds, and in areas that are treated over the long term. Adverse effects include skin atrophy, telangiectasia, stretch marks, acne, folliculitis, purpura, exacerbation of pre-existing or coexistent dermatoses, e.g. rosacea, perioral dermatitis, and tinea infections or contact dermatitis. Systemic adverse effects are rare but include adrenal suppression that can result in symptoms of Cushing's syndrome and (in children) growth retardation. They are more likely to occur when potent or very potent topical corticosteroids are used over a large surface area for a prolonged period (or when they are used under occlusion).<sup>8</sup>
- Some people respond quickly to treatment with a topical corticosteroid. They should be advised that once the skin is clear or nearly clear they can stop using topical corticosteroids (this may be well before their follow-up appointment).<sup>8</sup>
- Show people with scalp psoriasis (and their families or carers where appropriate) how to safely apply corticosteroid topical treatment.<sup>8</sup> The approximate amount that should be applied for each area of the body is usually described as the 'number of finger tip units'. Three finger tip units (one finger tip unit is 500mg) is sufficient to treat the scalp.<sup>8</sup> The BNF states that 15-30g of cream or ointment is suitable for an adult scalp for a single daily application for two weeks. Scalp solutions need to be left on the scalp.<sup>9</sup>

- NICE recommends referring children and young people with any type of psoriasis to a specialist at presentation. Potent corticosteroids should be used only according to UK marketing authorisation, which was limited to those over one year of age at the time of publication of NICE CG153. The BNF for children states that it may be reasonable to prescribe a mild topical corticosteroid (such as betamethasone or fluocinonide) for a short period (2-4 weeks) for psoriasis of scalp although this may be limited by licensing indications for age.<sup>10</sup>
- NICE recommends that children and young people with psoriasis who are using corticosteroids of any potency (either as monotherapy or in combined preparations) should be offered a review at least annually to assess for the presence of steroid atrophy and other adverse effects.<sup>1</sup>
- If treatment with a potent corticosteroid does not result in clearance, near clearance or satisfactory control of scalp psoriasis after four weeks it is important to check compliance and ask about the presence of any adverse effects or any other issues to ascertain if there is a reason for treatment failure. Consider offering (both adults and children/young people):
  - » A different formulation of the potent corticosteroid, e.g. a shampoo or mousse such as Betnovate® scalp application or Betamousse®, and/or
  - » Topical agents to remove adherent scale, e.g. agents containing salicylic acid, emollients and oils such as olive oil, coconut oil, arachis oil, before application of the potent corticosteroid.<sup>1</sup> Note that arachis oil (ground nut oil, peanut oil) is best avoided in children under 5 years.<sup>10</sup>

### Dovobet® gel and vitamin D analogues

See PresQIPP bulletin 90 available at <http://www.prescqipp.info/resources/viewcategory/326-dovobet-in-psoriasis>

Dovobet gel or vitamin D analogues are recommended if the response to treatment with a potent corticosteroid for scalp psoriasis remains unsatisfactory after a further four weeks of treatment.

- Dovobet® gel should only be applied once daily for up to four weeks.
- Vitamin D or a vitamin D analogue should be applied once daily (only in those who are intolerant or cannot use steroids and with mild to moderate scalp psoriasis). Of note is that for psoriasis of the trunk, limbs and scalp, the rate of local adverse events (such as burning or irritation) was significantly higher with calcipotriol than betamethasone dipropionate (random-effects risk difference=0.07, 95% CI 0.04 to 0.09; 3 RCTs, n=1739). Also in scalp psoriasis, vitamin D is less effective than corticosteroids e.g. calcipotriol was significantly less effective than either betamethasone dipropionate (SMD=0.48, 95% CI 0.32 to 0.64; 2 RCTs, n=1676) or betamethasone valerate (SMD=0.37; 95% CI 0.20 to 0.55; 2 RCTs, n=510).<sup>1</sup>

### Very potent corticosteroids

- These are a fourth line option if continuous treatment with either Dovobet® gel applied once daily or vitamin D/vitamin D analogue applied once daily for up to eight weeks does not result in clearance, near clearance or satisfactory control of scalp psoriasis.
- Use in adults and apply up to twice daily for two weeks only.<sup>1</sup>
- Very potent corticosteroids are likely to be most cost effective after unsuccessful trials of potent corticosteroids and vitamin D preparations.<sup>1</sup>
- Ensure contact with scalp is in line with directions, e.g. Etrivex® is a shampoo that needs to be massaged onto the scalp and left on for 15 minutes before washing off.<sup>9</sup>

### Coal-tar preparations

- These are also a fourth line option if continuous treatment with either Dovobet® gel applied once daily or vitamin D/vitamin D analogue applied once daily for up to eight weeks does not result in clearance, near clearance or satisfactory control of scalp psoriasis in adults and children/young people.<sup>1</sup>

- **Do not offer coal tar-based shampoos alone Polytar®, Alphosyl 2:1®, or Capasal® for the treatment of severe scalp psoriasis.**<sup>1</sup>
- NICE found that coal-tar based shampoos were only slightly more effective than placebo or vehicle scalp solution and were far less effective than other topical treatments. In the cost effectiveness model this meant that more people ended up failing treatment in primary care and being referred for specialist consultations and treatments, thus making the true costs to the NHS of treatment with coal tar shampoos much higher than the acquisition cost alone. The GDG were aware that coal-tar based shampoos are regularly prescribed in primary care for treatment of scalp psoriasis and agreed that based on the evidence of clinical and cost-effectiveness trials, they are not optimal for the treatment of scalp psoriasis. In order to ensure more efficient use of NHS resources, they considered it important to discourage GPs from using this treatment.<sup>8</sup>
- Expert opinion from the Scottish Intercollegiate Guidelines Network (SIGN) guideline on diagnosis and management of psoriasis and psoriatic arthritis in adults recommends the overnight application of coal tar preparations.<sup>11</sup> The BNF also recommends that preparations combining coal tar with salicylic acid should be left on for at least an hour, often more conveniently overnight, before washing off.<sup>9</sup>
- Expert opinion in narrative reviews suggests that although good-quality evidence is lacking, coal tar shampoos have a role in the treatment of scalp psoriasis (particularly for reducing itch) and have been used extensively for this purpose.<sup>12</sup>
- Factors limiting the use of coal tar include its messiness, offensive smell, and the potential to stain.<sup>12</sup>
- The Primary Care Dermatology Society recommend tar based shampoos for long term management. For patients that are not keen on the smell of tar based preparations, an alternative such as Dermalax® (benzalkonium chloride 0.5%w/w) shampoo may be considered.<sup>2</sup>

### Complementary and alternative therapy

Evidence of the effect of complementary and alternative topical therapies in psoriasis is lacking. In a Cochrane review, the authors identified studies of 26 other treatments versus placebo (n=1450). Around half of the treatments (including, for example, aloe vera cream, fish oil, herbal skin care products, and Mahonia Aquifolium) performed significantly better than placebo. However, none of the studies assessed the same treatment therefore pooled analysis was not possible, and the authors stated that findings should be interpreted with caution. Treatments found not to be significantly better than placebo included topical caffeine, emollient lotion of Dead Sea salts, kukui nut oil, oleum horwathiensis, and tar.

- Limitations of the evidence concluded that only 47 studies (27%) clearly reported randomisation methods, and only 15 trials (9%) adequately concealed treatment allocation.
- A wide range of psoriasis severity was observed in the included trials, and reliability of data in the review depends on the ability of the assessment tools used by the studies to measure psoriasis across the spectrum of severity.
- Using a combined end point may have introduced bias into the pooled analyses.
- Some requests for unpublished data were unsuccessful (success was more likely for recently published studies or trials of products still under patent).<sup>1,13</sup>

### Seborrhoeic dermatitis of the face and beard: Background

Seborrhoeic dermatitis is a common inflammation of the skin occurring in areas rich in sebaceous glands (e.g. the scalp, nasolabial folds, ears, eyebrows, and chest). It is usually characterized by red, flaky, greasy areas of skin. It usually presents as erythematous plaques or patches that can vary from mild dandruff of the scalp to dense, diffuse, adherent scale. Dandruff is thought to be the precursor of seborrhoeic dermatitis.<sup>3,14</sup> Seborrhoeic dermatitis can mimic psoriasis, but it tends to be more diffuse, less scaly and has a more waxy texture. It can also spread down the forehead, and involve the nasolabial folds and eyebrows.<sup>5</sup>

Seborrhoeic dermatitis in infants most commonly affects the scalp and is often known as 'cradle cap'.<sup>3</sup> In neonates and infants, cradle cap can be treated by massaging coconut oil or olive oil into the scalp; a bland emollient such as emulsifying ointment can be rubbed onto the affected area once or twice daily before bathing and a mild shampoo used.<sup>10</sup>

The cause of seborrhoeic dermatitis is unknown, but many factors (including the *Malassezia* yeast) have been linked to its development. It is not caused by a lack of cleanliness or excessive dry skin, and it is not transmissible.<sup>3</sup>

Seborrhoeic dermatitis can be managed with self-care using therapies that are available to purchase over the counter.

## Clinical evidence and treatment options for seborrhoeic dermatitis

### Infants

Infantile seborrhoeic dermatitis usually clears within a few weeks, even without treatment, and relapses are uncommon (persistence of symptoms may suggest an alternative diagnosis or immunodeficiency).

- Management of seborrhoeic dermatitis in infants involves advising simple measures such as regular washing of the scalp with baby shampoo and gentle brushing to loosen scales.
- If these are not effective, an imidazole cream or shampoo should be used until symptoms resolve. If symptoms persist longer than four weeks with treatment, specialist advice should be sought.
- Topical corticosteroids are not usually advised.<sup>3</sup>

### Adults

In adults, seborrhoeic dermatitis is a chronic condition, which is likely to recur after treatment. Diagnostic investigations are not usually required, as the rash of seborrhoeic dermatitis is characteristic. However, if there is doubt about the diagnosis, investigations (e.g. skin scrapings to exclude tinea infection) may be indicated.

- Treatment for seborrhoeic dermatitis is not curative and symptoms often recur after treatment has stopped
- Remove thick crusts or scales on the scalp before using an antifungal shampoo. Removal of crusts can be achieved by:
  - » Applying warm mineral or olive oil to the scalp for several hours, then washing with a detergent or coal tar shampoo, or
  - » Application of a keratolytic preparation (for example salicylic acid) or coal tar-keratolytic preparation.<sup>3</sup>
- Prescribe ketoconazole 2% shampoo for adolescents and adults, if it has not been tried already. Selenium sulphide shampoo may be used as an alternative or an over the counter (OTC) anti-dandruff shampoo (e.g. containing coal-tar or salicylic acid). Medicated shampoos (as well as ketoconazole and selenium sulphide shampoos) may be purchased over the counter and managed through self care. Shampoos can also be applied to the beard area.<sup>3</sup>
- NICE clinical knowledge summaries (CKS) recommend ketoconazole 2% shampoo as first line treatment for adolescents and adults because there is most evidence to support its use. Ketoconazole appears to be better tolerated than selenium sulphide. Both treatments improved symptoms (mean total adherent dandruff severity scores) from day one and continued to improve symptoms until day 28.<sup>3</sup>
- There is very limited published evidence that medicated shampoos such as zinc pyrithione (e.g. Head and Shoulders®), coal-tar, or salicylic acid are effective for treating seborrhoeic dermatitis. However, they are recommended in several literature sources, and they have been used for many years to treat seborrhoeic dermatitis.<sup>3</sup>

- Advise the person that shampoos should be used twice a week for at least one month.
- Once symptoms are under control, the frequency of shampooing may be reduced, for example to once a week or once every two weeks. The recommendation to use a shampoo once a week or once every two weeks to prevent recurrence is based on published expert opinion. CKS found evidence from one double-blind, placebo-controlled trial involving 312 people that compared ketoconazole shampoo with placebo (either weekly, or alternating with placebo every other week). Ketoconazole was more effective at preventing recurrence of seborrhoeic dermatitis. In the placebo group, 47% of people experienced relapse, compared with 19% in the weekly treatment group ( $p < 0.0001$ ) and 31% in the group treated with ketoconazole every other week.<sup>3</sup>
- If the person has severe itching of the scalp consider prescribing four weeks of treatment with a potent topical corticosteroid scalp application such as betamethasone valerate 0.1%, hydrocortisone butyrate 0.1%, or mometasone furoate 0.1%.
  - » Potent topical corticosteroid scalp applications are not suitable for application to the beard, because of adverse effects such as thinning of the skin on the face.
  - » Seek specialist advice if symptoms have not resolved after four weeks, or sooner if response to treatment is poor.
  - » There is very limited evidence to support the use of any topical corticosteroids for treating seborrhoeic dermatitis of the scalp; however consensus expert opinion supports their use. CKS is aware that the only published evidence available is that for a very potent topical corticosteroid (clobetasol propionate). However CKS recommends using potent corticosteroid such as betamethasone valerate 0.1%, hydrocortisone butyrate 0.1%, or mometasone furoate 0.1%. This is because these preparations are licensed in the UK to treat seborrhoeic dermatitis (clobetasol propionate is not). In addition, clobetasol propionate is a very potent corticosteroid, and as such it confers a greater risk of adverse effects.<sup>3,9,10</sup>
- Topical corticosteroids are not appropriate for continuous long term use, and their use as maintenance treatment is not recommended.<sup>3</sup>

Links to information leaflets for seborrhoeic dermatitis can be found in appendix 1.

Table 1 below lists cost effective treatment choices for both scalp psoriasis and seborrhoeic dermatitis, age recommendations in children and treatment costs.

**Table 1: Cost effective shampoo and scalp preparations, indications and cost**

Preparation (by brand)	Ingredients	Indication		BNF recommendation in children where specific age range stated <sup>10</sup>	Price per ml/g <sup>15</sup>
		Psoriasis of scalp <sup>9,10</sup> Also see SPC	Seborrhoeic dermatitis <sup>9,10</sup> Also see SPC		
<b>OTC</b> Over the counter - These items can be purchased without prescription. Prescribers may suggest patients buy such medication for as part of self care, particularly for conditions such as dandruff.					
<b>Potent corticosteroid</b>					
Betacap Scalp Application 0.1%	Betamethasone valerate 0.1%	Yes	Yes	>1 years	£0.04
Betnovate Scalp Application 0.1%	Betamethasone valerate 0.1%	Yes	Yes	>1 years	£0.05
Bettamousse Foam Aerosol 0.1%	Betamethasone valerate 0.1%	Yes	Yes	>6 years	£0.10

## B118. Shampoos and scalp preparations 2.2

Preparation (by brand)	Ingredients	Indication		BNF recommendation in children where specific age range stated <sup>10</sup>	Price per ml/g <sup>15</sup>
		Psoriasis of scalp <sup>9,10</sup> Also see SPC	Seborrhoeic dermatitis <sup>9,10</sup> Also see SPC		
Elocon Scalp Lotion 0.1%	Mometasone furoate 0.1% in an aqueous isopropyl alcohol basis	Yes	Yes	>2 years	£0.15
Diprosalic Scalp Application 0.05%/2%	Betamethasone (as dipropionate) 0.05%, salicylic acid 3%	Yes	Yes	No age range specified	£0.10
Synalar gel	Fluocinolone acetonide 0.025%	Yes		>1 years	£0.17 (60g)
<b>Very potent corticosteroid</b>					
Dermovate Scalp Application 0.05%	Clobetasol propionate 0.05%	Yes			£0.10
Etrivex shampoo	Clobetasol propionate 0.05%				£0.13
<b>Vitamin D with corticosteroid</b>					
Dovobet gel	Betamethasone (as dipropionate) 0.05%, calcipotriol (as monohydrate) 50 micrograms/g	Yes		12-18 years (specialist use only)	£0.51 (120g)
<b>Coal-tar</b>					
Alphosyl Shampoo 2 In 1 OTC	Alcoholic coal tar extract 5%	Yes	Yes	No age range	£0.02
Neutrogena T-gel shampoo OTC	Coal tar extract 2%	Yes	Yes	No age range	£0.03
Psoriderm scalp lotion OTC	Coal tar 2.5%, lecithin 0.3%	Yes		No age range	£0.02
Exorex lotion 5% v/w cutaneous emulsion OTC	Coal tar solution 5% v/w	Yes		>12 years	£0.08
Capasal Therapeutic Shampoo OTC	Coal tar 1%, coconut oil 1%, salicylic acid 0.5%	Yes	Yes	No age range	£0.02
Sebco scalp ointment OTC	Coal tar solution 12%, salicylic acid 2%, precipitated sulfur 4%, in a coconut oil emollient basis	Yes	Yes	6-12 years - medical supervision needed	£0.09
<b>Anti-fungal</b>					
Ketoconazole shampoo 2% OTC	Ketoconazole shampoo 2%		Yes	> 12 years	£0.03
Selsun shampoo 2% OTC	selenium sulfide 2.5%		Yes	> 5 years	£0.02

## Savings

Across England, over £12.3 million is spent annually on shampoos and scalp preparations (ePACT May to July 2015). NICE states that a potent corticosteroid should only be used for up to four weeks. A 30% reduction in prescribing across England could result in **potential annual savings of over £1 million or £1,752 per 100,000 patients.**

A very potent corticosteroid should only be used for up to two weeks only in adults. A 50% reduction in prescribing across England could result in **potential annual savings of £427,000 million or £748 per 100,000 patients.** A data collection form for topical corticosteroids (in shampoos and scalp preparations) and a patient invite letter are found in attachments 2 and 3.

Patient education and adherence to treatment is a crucial part of management.

If 80% of prescribed ketoconazole or selenium shampoo were purchased for seborrhoeic dermatitis, **potential annual savings could be £2.4 million or £4,259 per 100,000 patients across England.**

The annual spend on preparations of limited clinical value across England is over £1.3 million.

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