



Surveillance report 2017 – Psoriasis: assessment and management (2012) NICE guideline CG153

Surveillance report

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Surveillance decision

We will not update the guideline on [psoriasis](#) at this time.

During surveillance, editorial or factual amendments were identified. Details are included in [appendix A](#): summary of evidence from surveillance.

Reason for the decision

Assessing the evidence

We found 91 studies through surveillance of this guideline.

We found evidence in the following areas that could potentially add to existing recommendations: the effect of weight loss through diet and exercise on psoriasis; a medicated adhesive plaster containing betamethasone valerate (a potent corticosteroid); and a foam formulation of calcipotriol monohydrate plus betamethasone dipropionate. However, we have decided to await further evidence before considering an update. In making this decision, it was noted that the guideline in its current form does not preclude the use of any of these interventions. Additionally, the current recommendations broadly cover the interventions. For example: diet and exercise is covered by recommendations to offer healthy lifestyle information in line with NICE guidance on obesity and physical activity; the betamethasone plaster is covered by recommendations to offer a potent corticosteroid; and the foam formulation is covered by recommendations to offer a combined product containing calcipotriol monohydrate and betamethasone dipropionate.

We also found evidence that could affect NICE's recommendations on the use of biological agents for psoriasis. However, recommendations on the first-line use of biological agents are covered by NICE technology appraisals. Review of technology appraisals is outside the remit of the surveillance process, therefore information has been passed to the NICE technology appraisals team for consideration as part of a review proposal process. Knowing the outcome of this process would be beneficial before any updates to the NICE guideline on psoriasis are considered.

We also identified other areas where evidence was not consistent with, or not covered by, current recommendations, but the evidence was not considered to impact on the guideline

at this time. See [appendix A](#) for full details of all evidence considered and a discussion of the impact on recommendations.

We did not find any evidence related to risk of skin cancer with coal tar, phototherapy, or systemic non-biological or biological therapy.

For any evidence relating to published, ongoing or proposed NICE technology appraisals, the guideline surveillance review deferred to the technology appraisal decision (where available). This included evidence on apremilast, adalimumab, briakinumab, brodalumab, dimethyl fumarate, etanercept, guselkumab, infliximab, ixekizumab, secukinumab, tildrakizumab, tofacitinib and ustekinumab.

All other evidence was deemed consistent with current recommendations.

Equalities

No equalities issues were identified during the surveillance process.

Overall decision

After considering all the evidence and views of topic experts and stakeholders, we decided that no update is necessary for this guideline.

See [how we made the decision](#) for further information.

Commentary on selected evidence

With advice from topic experts we selected 2 studies for further commentary.

Assessment and referral – weight loss through diet and exercise to improve psoriasis

We selected the systematic review and meta-analysis by [Upala and Sanguaneko \(2015\)](#) for a full commentary because topic experts drew attention to lifestyle interventions for psoriasis. They stated that this was an important area particularly given that many patients with psoriasis are overweight or obese. Experts also noted that cardiovascular disease risk factors (including obesity and inactivity) may not always be addressed as part of consultations. The evidence also addresses a NICE research recommendation about whether reduction of relevant, modifiable cardiovascular risk factors (for example weight loss, exercise or statins) improves psoriasis.

What the guideline recommends

NICE's guideline on [psoriasis](#) recommends that patients are given information about relevant lifestyle risk factors, that the presence of comorbidities should be assessed, and that risk factors for cardiovascular comorbidities should be discussed with advice and support offered in line with the relevant NICE guidance (including guidance on obesity and increasing physical activity), see recommendations [1.1.1.1](#), [1.2.1.1](#) and [1.2.3.1–2](#). However, the advice is focussed on the relationship between comorbidities and cardiovascular risk rather than any potential benefits for psoriasis. Recommendations specifically linking diet, exercise and weight loss to psoriasis outcomes are not currently made.

Methods

The systematic review and meta-analysis by Upala and Sanguaneko (2015) examined the effect of weight loss interventions (diet, exercise, or both) on psoriasis severity in overweight and obese patients aged 18 or over with any type of psoriasis. Participants on a diet or medication to lose weight were excluded, as were studies of bariatric surgery. The review found 7 randomised controlled trials (RCTs) which included a total of 878 patients. Risk of bias was assessed for the included studies according to the

Cochrane handbook. The primary outcome was psoriasis severity assessed by a 100, 75 and 50% reduction in Psoriasis Area and Severity Index (PASI) score.

Results

Significantly more patients receiving a weight loss intervention achieved a 75% reduction in PASI score than controls (odds ratio=2.92, 95% confidence interval [CI] 1.39 to 6.13, $p=0.005$; 4 RCTs, $n=649$). Weight loss interventions also led to a significantly greater reduction in PASI score versus controls (mean difference=-2.49, 95% CI -3.90 to -1.08, $p=0.004$; 4 RCTs, $n=460$). A sensitivity analysis using the risk ratio rather than the odds ratio and fixed-effects rather than random-effects model did not affect the direction or significance of the result.

Strengths and limitations

Strengths

- The review included only RCTs.

Limitations

- Of the primary outcomes, only data for PASI 75 was meta-analysed (and only 4 of the 7 included trials reported this outcome and therefore contributed to the analysis). Data for PASI 100 and PASI 50 were reported by a total of 3 trials (all of which showed weight loss was numerically more effective than control, though significance was not stated).
- Only 1 study examined exercise as the weight loss intervention alongside diet (all others involved diet alone) so the review was unable to compare different methods of weight loss on psoriasis.
- Most included studies were short (the longest follow-up was 6 months), therefore maintenance of weight loss and long-term impact on psoriasis was not addressed.
- Heterogeneity was substantial in the 2 meta-analyses ($I^2=67%$ and $77%$) but this was not investigated further because there were too few included studies.
- Publication bias was not checked with a funnel plot because there were too few included studies.

- Several included studies failed on 2 or more domains of the risk of bias assessment. All studies failed on blinding of participants/personnel (though blinding of outcome assessment was reported in all but 2 studies).

Impact on guideline

The new evidence suggests that weight loss through diet or exercise appears to reduce the severity of psoriasis over 6 months. NICE's guideline on psoriasis does not currently make recommendations specifically linking weight loss to psoriasis outcomes. However it does recommend that patients are given information about relevant lifestyle risk factors, that the presence of comorbidities should be assessed, and that risk factors for cardiovascular comorbidities should be discussed with advice and support offered in line with the relevant NICE guidance (including guidance on obesity and increasing physical activity). Offering advice on weight loss is already covered by current recommendations, and no immediate need to update the guideline was identified.

Topical therapy (trunk and limbs) – calcipotriol/betamethasone combination (aerosol foam)

We selected the randomised controlled trial (RCT) by [Koo et al. \(2016\)](#) for a full commentary because evidence is emerging on foam formulations, but the guideline does not currently mention foam as a treatment option. Topic experts also noted that it may be helpful to re-examine the place in the treatment pathway of combined formulations, because a single product is likely to be easier for patients than 2 separate products.

What the guideline recommends

For topical treatment of psoriasis affecting the trunk and limbs, NICE's guideline on psoriasis recommends offering adults a combined product containing calcipotriol monohydrate and betamethasone dipropionate applied once daily for up to 4 weeks. However this is only recommended after a sequence of other separately applied topical treatments has been offered (or cannot be used), or if a once-daily preparation would improve adherence in adults (see [recommendations 1.3.2.1–4](#)).

The guideline does not specify the formulation of calcipotriol monohydrate and betamethasone dipropionate to use. Nor does it include foam in the list of formulations that should be discussed with the patient for use depending on preference (currently:

cream, lotion or gel for widespread psoriasis; lotion, solution or gel for the scalp or hair-bearing areas; and ointment to treat areas with thick adherent scale) (see [recommendation 1.3.1.4](#)).

Methods

The RCT by Koo et al. (2016) compared topical aerosol foam and ointment formulations of combined calcipotriol (0.005%) plus betamethasone (0.064%) among 376 adults aged 18 or over with plaque psoriasis having lasted at least 6 months. Inclusion criteria were: at least mild psoriasis on the Physician's Global Assessment of disease severity scale (PGA) covering 2–30% of body surface area; and modified Psoriasis Area and Severity Index (mPASI; head excluded as it was not treated) score of 2 or more. Main exclusion criteria were: treatment within 2–16 weeks (depending on the treatment) before randomisation with systemics, psoralen combined with ultraviolet light A (PUVA) or UVB therapy, or topicals; planned prolonged exposure to natural or artificial sunlight; commencing or changing other medications that may affect psoriasis; and guttate, erythrodermic, exfoliative or pustular psoriasis.

Patients were assigned to 1 of 4 treatments: calcipotriol/betamethasone aerosol foam; calcipotriol/betamethasone ointment; aerosol foam vehicle; and ointment vehicle (randomised 3:3:1:1 respectively). Only the trunk, arms and legs were treated, using a maximum 90 g of product per week. Psoriasis severity was assessed on the 5-point PGA scale (clear, almost clear, mild, moderate, severe). The primary outcome was treatment success (clear or almost clear plus a minimum 2-step improvement on the PGA) at week 4. Treatment was stopped in patients who were clear on the PGA at week 1 and 2, but restarted if psoriasis reappeared. Patients also assessed their itch severity in the 24 hours before their treatment visit on a visual analogue scale (VAS; 0=none, 100=most severe).

Results

For the primary outcome, treatment success at week 4 was achieved in significantly more patients using calcipotriol/betamethasone aerosol foam (77/141, 54.6%) than among those using calcipotriol/betamethasone ointment (58/135, 43.0%; mean difference=11.6%; odds ratio 1.7; 95% CI 1.1 to 2.8, $p=0.025$). Itch relief was similar for the 2 active treatments, with a rapid and continuous reduction in score on the VAS between weeks 0 and 4 for both foam (–39.8) and ointment (–36.5; significance not stated).

The number of adverse events was also similar with foam (20 events in 16 patients; 11.3%)

and ointment (23 events in 14 patients; 10.4%). One adverse drug reaction (application site itch) occurred with foam versus 4 reactions (application-site dryness, application-site pain, psoriasis, itch) with ointment.

Strengths and limitations

Strengths

- The use of foam and ointment vehicle controls meant patients were blinded to their treatment, and investigators were blinded by separating out duties related to study procedures and clinical assessments.
- The primary outcome was based on the PGA, which is an assessment tool recommended by NICE's guideline on psoriasis.

Limitations

- Although patients were shown how to apply treatments and the first application was supervised, no data on the amount of product actually used were reported.
- Patient satisfaction with the treatments was not measured therefore acceptability (such as cosmetic appeal, or ease of use) could not be compared.
- The final assessment was at 4 weeks; topic experts noted that longer follow up on efficacy and relapse would have been useful.

Impact on guideline

The new evidence suggests that over 4 weeks, calcipotriol/betamethasone aerosol foam is significantly more effective than a calcipotriol/betamethasone ointment formulation for psoriasis of the trunk and limbs. NICE's guideline on psoriasis recommends offering adults with psoriasis of the trunk and limbs calcipotriol/betamethasone after a sequence of other separately applied topical treatments has been offered (or cannot be used), or if a once-daily preparation would improve adherence in adults.

As the guideline does not specify the formulation of calcipotriol monohydrate and betamethasone dipropionate to use, treatment with the foam formulation is covered by current recommendations. No immediate need to update the guideline was identified.

How we made the decision

We check our guidelines regularly to ensure they remain up to date. We based the decision on surveillance 4 years after the publication of NICE's guideline on [psoriasis](#) (NICE guideline CG153) in 2012.

For details of the process and update decisions that are available, see [ensuring that published guidelines are current and accurate](#) in developing NICE guidelines: the manual.

Previous surveillance [update decisions](#) for the guideline are on our website.

Evidence

We found 76 studies in a search for systematic reviews and randomised controlled trials published between 1 June 2014 and 12 July 2016. We also included 3 relevant studies from a total of 12 identified by members of the guideline committee who originally worked on this guideline.

We also considered evidence identified in previous surveillance 2 years after publication of the guideline. This included 12 studies identified by search.

From all sources, we considered 91 studies to be relevant to the guideline.

We also checked for relevant ongoing research, which will be evaluated again at the next surveillance review of the guideline.

See [appendix A](#): summary of evidence from surveillance for all evidence considered, and references.

Views of topic experts

We considered the views of topic experts, including those who helped to develop the guideline and other correspondence we have received since the publication of the guideline.

Views of stakeholders

Stakeholders commented on the decision not to update the guideline. Overall, 12 stakeholders commented. See [appendix B](#) for stakeholders' comments and our responses.

Twelve stakeholders commented on the proposal to not update the guideline: 7 agreed with the decision; 1 partially agreed with the decision (plus 1 endorsement of the partial agreement); and 3 disagreed with the decision.

Reasons for disagreements with the decision not to update included: a request to add recommendations on subcutaneous methotrexate (evidence supplied was not deemed sufficient to warrant an update); a request to note in the guideline that the foam formulation of calcipotriol/betamethasone is more effective than gel and ointment (this would need an evidence review which has been deemed unwarranted at this time as interventions are broadly covered by existing recommendations); and a request to consider an in-development technology appraisal for discussion in the guideline (an editorial amend to the guideline will be made now that the appraisal has published).

Comments received on scope exclusions included: psoriatic arthritis (diagnosis and management of psoriatic arthritis is now within the scope of the recently published NICE guideline on spondyloarthritis in over 16s); and use of biological agents (appraising evidence for first-line use of biologics is within the remit of the NICE technology appraisals for the individual drugs and therefore outside the scope of the surveillance process).

See [ensuring that published guidelines are current and accurate](#) in developing NICE guidelines: the manual for more details on our consultation processes.

Equalities

We identified no equalities issues during the surveillance process.

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