Psoriasis is a common inflammatory skin condition affecting about 1.3–2.2% of the UK population and may be associated with psoriatic arthritis. People with psoriasis, especially those with severe disease, are also at increased risk of cardiovascular disease, diabetes, and depression. Psoriasis may result in functional, psychological, and social morbidity, even in people with minimal involvement (less than the equivalent of three palm areas). However, doctors, including dermatologists, often fail to appreciate the extent of this disability, and many people with psoriasis are dissatisfied with their treatment. Yet, highly effective and cost effective treatments are available, and improving outcomes therefore requires better assessment and management of psoriasis, including its impact on a patient’s wellbeing, by healthcare professionals. This article summarises the most recent recommendations from the National Institute for Health and Clinical Excellence (NICE) on the management of psoriasis.

**Assessment and management of psoriasis: summary of NICE guidance**

Eleanor Samarasekera, Laura Sawyer, Jill Parnham, Catherine H Smith, on behalf of the Guideline Development Group

**Recommendations**

NICE recommendations are based on systematic reviews of the best available evidence and explicit consideration of cost effectiveness. When minimal evidence is available, recommendations are based on the Guideline Development Group’s experience and opinion of what constitutes good practice. Evidence levels for the recommendations are in the full version of this article on bmj.com.

**Principles of care**

- Provide a single point of contact for people with all types of psoriasis (and their families or carers) to aid access to appropriate information and advice about the condition and the services available at each stage of the care pathway.

**Box 1 | Indications for specialist referral**

**Adults**
- Diagnostic uncertainty
- Any type of psoriasis that is severe or extensive, for example if it affects more than 10% of the body surface area
- Any type of psoriasis that cannot be controlled with topical therapy
- Acute guttate psoriasis requiring phototherapy
- Nail disease with a major functional or cosmetic impact
- Any type of psoriasis with a major impact on a person’s physical, psychological, or social wellbeing

**Children and young people**
- Any type of psoriasis

**Urgent referral for same day assessment**
- Generalised pustular psoriasis or erythroderma

**Assessment of disease severity and impact, and when to refer for specialist care**

- Assess the severity and impact of any type of psoriasis:
  - At first presentation
  - Before referral for specialist advice and at each referral point in the treatment pathway
  - To evaluate the efficacy of interventions

- When assessing the disease severity in any healthcare setting, record:
  - The results of a static Physician’s Global Assessment (the physician’s assessment of disease severity, which uses the descriptions “clear,” “nearly clear,” “mild,” “moderate,” “severe,” or “very severe”)
  - The patient’s assessment of current disease severity, for example, with the static Patient’s Global Assessment (also using the descriptions “clear,” “nearly clear,” “mild,” “moderate,” “severe,” or “very severe”)
  - The body surface area affected
  - Any involvement of nails and of high impact or difficult to treat sites (such as the face, scalp, palms, soles, flexures, and genitals)
  - Any systemic upset, such as fever and malaise, which are common in unstable forms of psoriasis such as erythroderma or generalised pustular psoriasis.

- Assess the impact of any type of psoriasis on physical, psychological, and social wellbeing by asking:
  - What aspects of the patient’s daily living are affected by the psoriasis
  - How the person is coping with the skin condition and if any treatments are being used
  - If the person needs further advice or support
  - If the psoriasis has an impact on mood or causes distress
  - If the condition has any impact on family or carers.

Ask children and young people age-appropriate questions.

- Box 1 outlines the indications for specialist referral.

**Assessment and referral for psoriatic arthritis**

- Use a validated tool to assess adults for psoriatic arthritis in primary care and specialist settings; for example, the Psoriasis Epidemiological Screening Tool (PEST, see box 2). Be aware that PEST does not detect axial arthritis or inflammatory back pain.

- As soon as psoriatic arthritis is suspected, refer the person to a rheumatologist for assessment and advice about planning their care.
Identification of comorbidities

- Offer adults with severe psoriasis of any type a cardiovascular risk assessment at presentation with a validated risk estimation tool. Offer further assessment of cardiovascular risk every five years, or more frequently if indicated after assessment. For further information see NICE clinical guideline CG67 (Lipid modification).

Topical therapy

- Offer people with psoriasis topical therapy as first line treatment (see figure). Offer second line treatment (phototherapy or systemic non-biological therapy) or third line treatment (systemic biological therapies) options at the same time when topical therapy alone is unlikely to adequately control psoriasis—such as in patients with
  - Extensive disease (for example, >10% of body surface area affected)
  - A score of at least “moderate” on the static Physician’s Global Assessment

Algorithm for use of active topical treatments for psoriasis in adults. (Refer to British National Formulary (www.bnf.org) for guidance on use of emollients, which are not considered here)

**Box 2 | Psoriasis Epidemiological Screening Tool (PEST)**

**Question**

- Have you ever had a swollen joint (or joints)?
- Has a doctor ever told you that you have arthritis?
- Do your finger nails or toenails have holes or pits?
- Have you had pain in your heel?
- Have you had a finger or toe that was completely swollen and painful for no apparent reason?

Score 1 point for each question answered in the affirmative. A total score of ≥3 is indicative of psoriatic arthritis

- Conditions where topical therapy is ineffective, such as nail disease.
- Offer practical support and advice about the use and application of topical treatments (box 3). Advice should be provided by healthcare professionals who are trained and competent in the use of topical therapies. Support patients to adhere to treatment in line with NICE clinical guideline CG76 (Medicines adherence).
**PRACTICE**

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Previous articles in this series

- Diagnosis of active and latent tuberculosis: summary of NICE guidance (BMJ 2012;345:e6828)
- Diagnosis and management of headaches in young people and adults: summary of NICE guidance (BMJ 2012;345:e5765)
- Diagnosis and management of lower limb peripheral arterial disease: summary of NICE guidance (BMJ 2012;345:e4947)

- Arrange a review appointment after starting a new topical treatment—after four weeks in adults, and after two weeks in children—to:
  - Evaluate tolerability, toxicity, and initial response to treatment
  - Reinforce the importance of adherence when appropriate
  - Reinforce the importance of a four week break between courses of potent or very potent corticosteroids. If there is little or no improvement at this review, discuss the next treatment option with the patient.

**Box 3** Safe use of topical corticosteroids

Things to remember and explain to patients, along with discussion of how to avoid the risks

- Continuous use of potent or very potent corticosteroids may cause:
  - Irreversible skin atrophy and striae
  - Psoriasis to become unstable
  - Systemic side effects when applied continuously to extensive psoriasis (>10% of body surface area affected)
- The face, flexures, and genitals are particularly vulnerable to steroid atrophy, and corticosteroids should be used only for short term treatment of psoriasis at these sites (for 1–2 weeks per month)

When prescribing topical corticosteroids (intermittent or short term courses)

- Select the potency and formulation based on patient need
- Do not use potent or very potent corticosteroids on the face, flexures, or genitals
- Do not use very potent corticosteroids continuously at any site for longer than 4 weeks, or at all in patients aged >18 years
- Do not use potent corticosteroids continuously at any site for longer than 8 weeks
- Aim for a break of 4 weeks between courses of treatment with potent or very potent corticosteroids. During this break, consider topical treatments that are not steroid based as needed to maintain psoriasis control (such as vitamin D or vitamin D analogues, or coal tar)
- Review annually:
  - Patients aged ≥18 years using potent or very potent steroids
  - Patients aged <18 years using any potency of steroid

**Box 4** Indications for systemic non-biological therapy

All of the following conditions must be met:

- Psoriasis cannot be controlled with topical therapy
- Psoriasis has a significant impact on physical, psychological or social wellbeing
- Psoriasis is:
  - Extensive (>10% of body surface area affected) or
  - Localised and associated with significant functional impairment or high levels of distress (for example, severe nail disease or affecting high impact sites) or
  - Not suitable for phototherapy because it has been ineffective, cannot be used, or has resulted in rapid relapse (return to >50% of baseline disease severity within 3 months)

Choice of drugs

- Offer methotrexate as the first choice of systemic agent for people who fulfil the criteria for systemic therapy

**Overcoming barriers**

In primary care the main barrier to successful implementation of this guidance is likely to be insufficient training or understanding about psoriasis among healthcare professionals, since dermatology training is not compulsory. Formal assessment of psoriasis—including its impact on wellbeing and identification of psoriatic arthritis and cardiovascular risk—may represent a substantial shift in approach. Both patients and professionals alike will need to be knowledgeable about where, when, and how to use topical treatments, particularly corticosteroids, to achieve effective disease control and minimise risk of adverse effects. Increasing awareness of psoriasis-specific steroid safety issues (such as which preparations contain “hidden” steroids) is also necessary. The forthcoming quality standards and implementation tools to be developed will support this.

There is no nationally managed clinical network for phototherapy in England and Wales (in contrast to Scotland), and thus no means of recording the cumulative phototherapy dose, a critical indicator of skin cancer risk, so this will require development.

**Contributors**

ES and CHS drafted the article. All authors revised it critically for important intellectual content and approved the final version to be published. All authors are guarantors of this article.

**Competing interests**

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UNCERTAINTIES PAGE

Should selective digestive decontamination be used in critically ill patients?

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Healthcare associated infection represents a major burden for critically ill patients; a recent point prevalence survey by the Health Protection Agency observed that 23.4% of patients in intensive care units had evidence of a healthcare associated infection. Ventilator associated pneumonia remains the leading cause of nosocomial infection in this population, and, although recent estimates of attributable mortality (5-10%) are lower than previously thought, length of stay and treatment costs are substantially increased. Colonisation of the oropharynx with enteric bacteria is considered a key step in the development of ventilator associated pneumonia and offers a potential site for intervention with oropharyngeal decontamination.

Selective digestive decontamination involves the administration of topical, non-absorbable antibiotics to the oropharynx and stomach via a nasogastric tube in combination with parenteral antimicrobials to reduce the burden of potentially pathogenic bacteria in the aerodigestive tract. Some studies have focused on decontamination strategies limited to the oropharynx alone (selective oral decontamination), avoiding enteral and intravenous antibiotics. Selective digestive decontamination was first used for immunocompromised haematology patients, but this intervention has been extensively studied in intensive care units over the past three decades. However, many clinicians remain sceptical as to whether this evidence is applicable to different healthcare systems, which vary according to environment and antibiotic resistance rates, and their own clinical practice.

What is the evidence of uncertainty?

A search of PubMed, the Cochrane Library, and Embase identified nine published meta-analyses on the topic of selective digestive decontamination in intensive care patients. The most recent was an updated Cochrane review in 2009, which identified 36 randomised clinical trials involving 6914 patients. However the largest study of selective digestive decontamination was not included on the basis that the cluster design prevented individual patient randomisation. The odds ratio for death was 0.75 (95% confidence interval 0.65 to 0.87) with a number needed to treat of 18, although none of the individual studies was adequately powered to detect a reduction in mortality. Results for reducing ventilator associated pneumonia were more impressive, with an odds ratio of 0.28 (0.2 to 0.38) and a number needed to treat of only four. With around 140 000 admissions to UK intensive care units each year, this implies there is the potential to save upwards of 7700 lives annually with this intervention, in addition to cost savings as a consequence of reduced length of stay from lower rates of ventilator associated pneumonia.

Despite this evidence, uptake of selective digestive decontamination has been poor in the UK and elsewhere. In a survey of 193 UK intensive care units, only 10 units used any form of selective digestive decontamination and just three used it in all mechanically ventilated patients. Major reasons cited for avoiding this therapy were a lack of evidence (51%), fear of antibiotic resistance (47%), and failure of approval by therapeutic boards or pharmacy departments (22%). In 12% of respondents there was also a belief that microbiologists within hospitals would not support it.

Until recently no study had been adequately powered to show a mortality benefit. In a cluster randomised crossover study in 13 intensive care units in the Netherlands (excluded from the recent Cochrane review) a compari-
should we use weight loss in adults? (dementia? function in people with stimulation therapy (non-drug, non-surgical in primary care? respiratory tract infection with acute cough and prognosis in children decontamination be used this series contamination and selective digestive decontamination. colonisation with antibiotic resistant Gram negative bacteria care. after discharge from intensive care compared with standard care (95% confidence interval 0.49 to 0.85, a relative risk of 0.65 for death in the unit using selective units at a single institution in the Netherlands reported decontamination undertaken between two intensive care units for six month periods, with specific emphasis on the applicability of the intervention in a wider range of healthcare systems and longer term ecological effects on antibiotic resistance. What should we do in light of the uncertainty? Selective digestive decontamination seems to be a beneficial strategy for reducing healthcare associated infection in critically ill patients where low levels of antibiotic resistant bacteria exist within an intensive care unit population. 4 In healthcare systems with higher rates of antibiotic resistance clinicians should be cautious about embracing this intervention outside of well designed cluster randomised clinical trials, as there is uncertainty over the longer term benefits and ecological effects on drug resistant bacteria. Decontamination of the oropharynx with antiseptics such as chlorhexidine seems to offer a safe and effective alternative across a variety of healthcare systems, although this intervention has never been directly
compared with selective digestive decontamination or selective oral decontamination. 13

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ANSWERS TO ENDGAMES, p 48 For long answers go to the Education channel on bmj.com

ANATOMY QUIZ

Post contrast axial computed tomogram of the upper abdomen in portal venous phase

A Gallbladder
B Portal vein
C Inferior vena cava
D Abdominal aorta
E T12 vertebral body
F Coeliac trunk
G Splenic artery

STATISTICAL QUESTION

What is risk?

Statements a and c are true, while b is false.

CASE REPORT

Recurrent episodes of hair loss in a 37 year old woman

1 Telogen effluvium. Possible triggers in this patient include emotional stress, miscarriage, low iron stores, and discontinuation of the combined contraceptive pill.

2 Differential diagnoses include other non-scarring forms of diffuse alopecia, such as androgenetic alopecia, diffuse alopecia areata, anagen effluvium, and secondary syphilis.

3 Clinical assessment includes performing the hair pull test. Laboratory tests include a full blood count, ferritin and iron studies, erythrocyte sedimentation rate, thyroid function tests, urea and electrolytes, liver function tests, antinuclear antibody tests, measurement of zinc, and syphilis serology. Scalp biopsy may be needed in difficult cases.

4 Acute telogen effluvium is self limiting, with hair regrowth usually occurring within six months of initial hair loss.

5 Careful explanation of the nature of the hair loss is important. Underlying causes should be identified and treated.

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