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CLINICAL GUIDELINE

British Association of Sexual Health and HIV national guideline on the management of Scabies in adults 2024

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3. ABSTRACT

The British Association for Sexual Health and HIV UK guideline on the management of scabies has been updated in 2024. It provides details on the pathology and clinical features of scabies, with recommendations on diagnosis, treatment and follow-up of adults and children aged 13 or above attending sexual health services. Scabies is most often transmitted by prolonged or frequent skin-to-skin contact and so can be transmitted between sexual partners as well as by non-sexual contact. To prevent re-infestation, coordinated treatment of the case and sexual, household and other close contacts and hygiene measures, such as cleaning clothes, towels and bedding are recommended. Diagnosis is normally based on clinical history and examination. The 2020 International Alliance for the Control of Scabies consensus criteria for the diagnosis of scabies standardise the diagnosis and grading of scabies. Options for first-line treatment for scabies are permethrin 5% cream and ivermectin oral tablets (200 micrograms per kg). Both treatments have similar effectiveness in clinical trials, although there may be cost and resource implications of using ivermectin tablets. Whichever treatment is used, a second dose should be administered 7 to 14 days after the first dose, and coordinated treatment of contacts and environmental eradication is required. Several second-line treatments are available, but evidence for their efficacy is weaker and/or inconclusive. Patients often return to clinical services after treatment because of persistent symptoms. Time to resolution of symptoms, even after successful eradication of scabies mites, may be longer than expected, and all treatments have an inherent risk of failure. Ascertainment of the cause of suspected treatment failure requires careful clinical assessment.

Keywords: Scabies; Permethrin; Ivermectin; Infection

4. ABBREVIATIONS

AGREE II	Appraisal of Guidelines, Research and Evaluation
BAD	British Association of Dermatologists
BASHH	British Association for Sexual Health and HIV
BIT	Burrow Ink Test
BNF	British National Formulary
CD4	Clusters of Differentiation 4
CEG	Clinical Effectiveness Group
COVID-19	Coronavirus Disease 2019
ELISA	Enzyme Linked Immunosorbent Assay
EQI	Equality Impact Assessment
FDA	Food and Drug Administration
GPP	Good Practice Point
GRADE	Grading of Recommendations, Assessment, Development, and Evaluations
GUMCAD	Genitourinary Medicine Clinic Activity Dataset
HIV	Human Immunodeficiency Virus
HTLV-1	Human T-cell Leukaemia Virus Type 1
IACS	International Alliance for the Control of Scabies
PCDS	Primary Care Dermatology Society
PCR	Polymerase Chain Reaction
PSP	Post Scabies Prurigo
RCT	Randomised Control Trial
SHHAPT	Sexual Health and HIV Activity Property Type
SmPC	Summary of Product Characteristics
STI	Sexually Transmitted Infections
UK	United Kingdom
UKHSA	UK Health Security Agency

5. WHAT IS NEW IN THE 2024 GUIDELINE?

- Updated description of the biology of the mite and the host response.
- The following diagnostic tests are included: adhesive tape test for microscopy, dermoscopy and histology.
- The 2020 International Alliance for the Control of Scabies (IACS) consensus criteria for the diagnosis of scabies are summarised.
- Two first-line treatments are recommended: topical 5% permethrin cream, or ivermectin by mouth.
- The evidence base for recommended first-line treatments has been expanded in light of systematic reviews published since the last version of this guideline.
- The evidence base and specific recommendations for non-pharmacological management (e.g. decontamination of fomites) are included.
- Malathion lotion is now listed as an alternative, rather than recommended, regimen.
- Other alternative regimens (benzyl benzoate, topical ivermectin, sulphur ointment, spinosad and tea tree oil) are briefly considered, and the evidence summarised.
- New section on follow-up including evaluation and management of post-scabetic itch and treatment failure is included.

6. INTRODUCTION AND METHODOLOGY

6.1. Objectives

The objective of this guideline is to provide updated, evidence-informed, practical recommendations on the clinical management of people with scabies who are aged 13 and above.

This guideline offers recommendations on 1) diagnostic approach, treatment and follow-up of individuals presenting with scabies, and 2) management of sexual and other close contacts and hygiene measures to prevent re-infestation.

The guideline is aimed primarily at adults with scabies aged 18 years or older presenting to healthcare professionals working in departments offering specialist level 3 care in sexually transmitted infections (STIs) management within the United Kingdom (UK). However, the principles of the recommendations are applicable across all levels of STI care providers, and non-specialist services may need to develop, where appropriate, local referral pathways. Children aged 13 to 17 can attend sexual health clinics in the UK; unless otherwise stated, the recommendations for this age group are the same as for adults.

6.2. Search Strategy

This guideline was produced according to specifications set out in the British Association for Sexual Health and HIV (BASHH) Clinical Effectiveness Group (CEG) document 'framework for guideline development and assessment' (2015, updated 2020) accessed at https://www.bashh.org/_userfiles/pages/files/resources/2020_guidelines_framework.pdf.

This guideline has been updated by reviewing the previous 2016 UK Guideline on the Management of Scabies[1] and conducting a comprehensive literature search of publications. Four databases (Medline, Embase, Cochrane Central Register of Controlled Trials and Cochrane Database of Systematic Reviews) were searched for articles published from 1 January 2015 to 7 June 2023 with the search terms "scabies" or "sarcoptic mange" or "sarcoptes scabei" combined with at least one of the following set of terms:

- Etiology or case$ or diagnosis or treat$ or therap$ or intervention$;
- Specific drugs such as permethrin or ivermectin or malathion or spinosad or crotamiton or hexachlorocyclohexane or lindane or benzyl benzoate or sulphur ointment;

- Terms related to side effects or sexual transmission or contract tracing, pregnancy, breast feeding or epidemiology.

The search was limited to systematic reviews and randomised controlled trials (RCTs) using specialist filters designed by the Scottish Intercollegiate Guidelines Network[2] relating to humans. Articles relating to children (< 16 years old), mass-treatment strategies or without a focus on scabies were excluded. For the complete list of search terms used for each database, refer to Appendix 1.

6.3. Methods

In total, 366 unique articles were retrieved from the four databases following deduplication. One author (AST) reviewed the titles of these articles and excluded 105 articles as irrelevant. Another author (LH) reviewed the titles of the excluded articles and agreed that they were irrelevant. The remaining 261 articles were randomly assigned to four of the authors (AST, LH, GM and PNS) for screening. The authors excluded 197 articles on the basis of the abstract and/or full-text. The findings of the remaining 64 articles were summarised by the four authors who had conducted the screening. Additional articles, not retrieved from the initial comprehensive literature search, and book chapters were considered when appropriate. The guideline recommendations were made and graded based on the available evidence, using the Grading of Recommendations, Assessment, Development and Evaluations (GRADE, refer to Appendix 2) system to assign quality of evidence (grade 1 to 4) and strength of recommendation (grade A or B) Where there was a paucity of high-quality evidence, expert judgement was considered. The guideline was revised by all authors (AST, CB, GM, LH, PNS, SLW and SS).

6.4. Equality Impact Assessment

An assessment of the guideline and its recommendations was undertaken to ensure the principles of equality and diversity were adhered to and is available in Appendix 3.

BASHH has adopted an anatomical approach without assuming gender in the majority of guidelines and uses gender terminology in line with BASHH ‘sexual health standards for trans, including non-binary, people’.

6.5. Stakeholder Involvement, Piloting and Feedback

The writing group consisted of Specialist Physicians in genitourinary medicine (GM, LH, PNS and SS) with experience in managing scabies, a physician trainee within general medicine (AST) with experience in managing scabies as a Clinical Fellow in genitourinary medicine, a Clinical Academic and Consultant Dermatologist with UK and international expertise in scabies (SLW) and a consultant in health protection at UK Health Security Agency (UKHSA) (CB). The first draft was produced by the writing group and then circulated to the BASHH Clinical Effectiveness Group (CEG) for review using the Appraisal of Guidelines, Research and Evaluation (AGREE) appraisal tool Appendix 4 The second draft of the guideline was posted on the BASHH website for wider consultation (two months) and any comments received during the consultation period were reviewed by the authors and acted on appropriately. The document was also reviewed by a patient representative, target users and the public panel of BASHH, and their feedback was considered by the authors and used to inform the guideline. The final draft was presented to the CEG for review and piloting in sexual health clinics.

Once the guideline is published, the CEG will keep it under review should critical new evidence become available that affects the current recommendations. The guideline will be formally reviewed and updated, if necessary, every five years.

6.6. Introduction

Scabies is a common disease that can affect people of any age or socioeconomic status worldwide. Estimates of its prevalence range from 0.2 to 71%, with the highest rates found in the Pacific region and Latin America.[3] Risk of acquiring scabies is increased in crowded conditions such as in care homes, schools and prisons.

7. AETIOLOGY

7.1. Causative Pathogens

Scabies is caused by the human mite *Sarcoptes scabiei* var *hominis*. Female mites measure 0.3 to 0.4 mm and are about twice the size of males.[4] Mites burrow into human skin and lay their eggs, which later hatch and grow into adults.

The life cycle begins after mating following which the male dies and the female mite begins to dig burrows with help of proteolytic enzymes. The burrows are seen in the superficial layers of epidermis, primarily the stratum corneum, and typically persist for 4 to 6 weeks. Mites live in the host by ingesting intercellular fluid at the interface of stratum lucidum and stratum granulosum.[5, 6] They are able to penetrate the skin within 30 minutes of contact with the host.[7] Mites burrow at a rate of 0.5 to 5 mm per day throughout their adult lifetime, which typically spans four to 6 weeks. The female lays one to three eggs per day, totalling about 25 eggs in her lifetime, before dying. The eggs hatch after 3 to 4 days, developing into larvae that mature into adults after 10 to 15 days. Less than 10% of the eggs develop into mature adults. The possible reasons for this include removal by scratching and the host immune response.[8] The average number of mites in a person with an initial infestation is 10 to 15 and about half this number with a subsequent infestation.[9, 10] The newly hatched adult mites can reinfest the host at a different site or infest another host.[11, 12]

7.2. Transmission

Transmission occurs from person to person through skin-to-skin contact. Scabies mites are attracted by both heat and body odour.[13] In young adults, scabies is frequently sexually acquired. Other factors for transmission include living in crowded conditions and malnutrition.[7] Transmission through casual contact such as a hand shake is unlikely.[14] Transmission of scabies is more common during the first 4 to 6 weeks, when patients are asymptomatic.[15] Fomite transmission is uncommon but can occur in those wearing contaminated clothing or using a bed recently occupied by a person with scabies, for example.[10] Transmission is more likely to occur with crusted scabies due to the greater number of mites present[16-18] and because mites can survive longer for up to 7 days in the shed skin.[19] The survival of mites outside the human body depends on the room temperature and humidity. At 21ºC[20] with a relative humidity of 40-80%, mites survive outside the body for 24 to 36 hours.[11,

[21-25] In contrast, fasting female mites have been shown to survive for up to 19 days at 10ºC and relative humidity of 97%.[22]

Scabies mites are resistant to alcohol and to other antiseptics such as povidone iodine and soap.[11, 26] Chloramine 5% has been used to disinfect rooms of individuals with scabies.[27]

7.3. Risk Factors for Scabies

Risk factors for scabies include: young age; old age; living in crowded homes, care homes or prisons; low income level and sharing clothes and towels.[28]

The epidemiology of scabies is complex and varies between different global regions, but crowded living conditions and immunodeficiency are frequently encountered as risk factors. In the UK, most cases are through sporadic transmission with occasional outbreaks in closed institutions such as nursing homes.[7, 28]

8. CLINICAL FEATURES

8.1. Clinical History

A history of pruritus that worsens at night and concurrent history of itching among family members and/or sexual or household contacts is suggestive of scabies.

8.2. Symptoms and Signs

8.2.1. Classical Scabies

The main symptom of scabies is intense pruritus that is usually worse at night. The pruritus is caused by the direct effects of the host-mite interaction,[29] as well as a delayed type-IV hypersensitivity reaction to the mite and its products (faeces and eggs).[9, 30] The exact mechanism of itch in scabies is still to be determined. Recent studies have shown that non-histaminergic receptors may play a role in causing pruritus.[31] This results in excoriations that provide a point of entry to bacteria such as *Staphylococcus aureus* and Group B streptococci.

Symptoms begin three to 6 weeks after the primary infestation but can occur as early as 1 to 3 days, in a person with prior infection, probably due to sensitisation to the mite and mite products. Scabies is infectious before the rash develops.[32-34] A lack of a history of itching does not exclude scabies.

The most common lesions are erythematous papules, often excoriated, seen in a characteristic distribution over the interdigital web spaces, sides of fingers, flexor aspects of wrists, extensor aspects of elbows, anterior and posterior axillary folds, around nipples, penis and scrotum, around the umbilicus, medial aspect of thighs, buttocks, sides and back of feet. Vesicles, nodules and wheals may also be seen.[21] The back is usually not affected, and the head is spared except in children. The mites tend to avoid areas with a high density of pilosebaceous follicles, such as the scalp and beard in men.[35]

Palms are frequently affected in all age groups. The soles are also affected in infants and in people who are non-ambulatory. Despite the predilection for certain sites, lesions are roughly symmetrical across the body.[36]

The pathognomonic lesion is the burrow, which is a linear intra-epidermal tunnel produced by the moving mite and appears as short wavy greyish/white threadlike elevations of 2 to 10 mm

in length. Burrows are difficult to find if there is excoriation or secondary eczematisation. Nodular lesions may also be seen especially on the penis and scrotum, the areola, the buttocks, groin and the axillary regions. These lesions are intensely pruritic and tend to persist after treatment, suggesting they result from a hypersensitivity reaction to dead mites[8, 37, 38] and do not indicate active infection. Urticarial lesions may rarely occur.[39, 40] It has been proposed that the more severe inflammatory response seen in nodular lesions may be due to deeper penetration of the mite from the epidermis to dermis.[41]

8.2.2. Crusted Scabies

Risk factors for crusted scabies (Scabies crustosa) include: immunocompromise e.g. people living with advanced human immunodeficiency virus (HIV) infection , leprosy, lymphoma, organ transplant recipients, those receiving systemic or potent topical steroids[42]; older age; learning disability (e.g. people with Down syndrome); neurological disease causing reduced sensation; and physical disability with decrease capacity to respond to itch by scratching.[43, 44] In about 40% of cases, no risk factors can be identified.[45] There is some evidence that crusted scabies may be associated with immunogenetic susceptibility.[46, 47]

Crusted scabies is characterised by generalised erythematous scaly crusted plaques, which can be malodorous and associated with fissuring and can affect any part of the body including the face and scalp. The plaques can become verrucous over bony prominences. It may also occur as a diffuse non crusted form with involvement of the back.[21] However, itching may be mild or absent. Crusts contain large numbers of mites and eggs, and hence crusted scabies is considerably more infectious than classical scabies.

Generalised lymphadenopathy is usually present.[23] Sepsis is a frequent complication of crusted scabies as fissures associated with this condition provide an entry point for bacteria.[48]

Scabies contracted by a healthy person from a patient with crusted scabies is no different from classical scabies.[43]

8.2.3. Nail Scabies

This is usually seen in people with crusted scabies. It has rarely been reported in children and healthy adults.[49] Affected nails become thick, dystrophic and discoloured. Subungual hyperkeratosis may be seen.[49] This may be an important reservoir of mites resulting in repeat re-infestation.[50]

8.2.4. Bullous Scabies

Bullous scabies is a rare variant seen in the elderly which presents with extremely itchy bullae with or without concomitant classical scabies lesions.[50] The trunk and extremities are commonly affected, and the differential diagnosis would involve other bullous disorders such as bullous pemphigoid.[50]

8.2.5. Scabies in the Elderly

Atypical manifestations of scabies may occur in older adults, with involvement of scalp and face, reduced inflammatory response and persistence of pruritus..[51] Elderly people are more likely to develop crusted scabies.

8.2.6. Scabies in People Living with Human Immunodeficiency Virus

People living with HIV who are immunosuppressed (usually those with CD4 counts < 200) may present with crusted scabies[52-55] and atypical papular lesions on the face and scalp, psoriasiform lesions, and generalised pruritus with few lesions. Pruritus may be mild due to an impaired immune response.[56] Individuals not taking antiretrovirals may initially present with classical scabies and, as their CD4 cell count falls, may develop crusted scabies with little or absent pruritus. In most people living with HIV, however, the symptoms and signs of scabies are no different from people without HIV. Crusted scabies presenting as a manifestation of immune reconstitution inflammatory syndrome following initiation of antiretroviral therapy has been reported.[57]

8.3. Atypical scabies

8.3.1. Animal Scabies

Humans can rarely contract scabies from pet dogs (caused by *S. scabiei* var *canis*) and cats (caused by *Notoedres cati*). Zoonotic scabies differs from classical scabies in that the incubation period is shorter, the distribution of lesions is confined to sites of contact with the animal, and burrows are not seen. It does not cause extensive infestations in humans unless the animal remains untreated. The lesions are self-limiting, as these mites do not reproduce in human hosts and rarely survive for more than a few days.[17] Consequently, human to human transmission does not occur,[58] and no treatment other than that of the infested animal is required.

8.3.2. Scabies Incognito

This refers to the altered clinical picture seen following use of topical steroids and consists of widespread atypical papular lesions that may mimic other generalized forms of eczema. Symptoms are masked but the patient remains infectious.[9]

8.4. Complications

Secondary bacterial infections due to *Staphylococcus aureus*, group A β-haemolytic streptococci, or peptostreptococci[59] may result in skin conditions such as impetigo, folliculitis, furunculosis, ecthyma and abscesses. Secondary eczematisation due to constant scratching, and/or irritant effects of topical medication can occur. Other reported complications include glomerulonephritis[60] and leukocytoclastic vasculitis.[61, 62] Scabies associated pruritus can be distressing and cause significant problems with sleep.[11, 63] Secondary infection can also aggravate itch in scabies.[64, 65]

9. DIAGNOSIS

Scabies is a clinical diagnosis that should be suspected on the basis of symptoms, signs and risk factors as described above. (**Grade 1D**) Diagnosis is usually confirmed on the appearance of excoriated papules, burrows and nodules at sites of predilection.

The 2020 IACS consensus criteria[36] were developed to assist clinicians in the diagnosis of scabies in a variety of settings, and provide consistency for research (Appendix 5).

9.1. Identification of Mites and Mite Products

9.1.1. Microscopy

Definitive diagnosis relies on microscopic identification of the mites, eggs or faecal pellets (scybala) obtained by scraping skin burrows with a scalpel blade and placing the specimen on a glass slide with 10% potassium hydroxide.[8] Scrapings should be taken from multiple sites. Potassium hydroxide dissolves excess keratin (particularly seen in crusted scabies) and thereby permits better visualisation of the mite and mite products.

Alternatively, a drop of mineral oil is applied to the selected lesion or on the scalpel blade. The entire lesion is scraped away with the scalpel blade. The oil and the skin scrapings are then transferred to the microscopic slide and examined under the microscope.[66]

In another useful technique, which can be combined with scraping using a scalpel blade, the adhesive side of a transparent tape is firmly applied on to an appropriate skin lesion (e.g. burrow), the tape is pulled off after a few seconds and transferred directly onto a slide for microscopy.[67]

A negative microscopic result does not exclude scabies. Microscopy is highly operator dependant.[16] The sensitivity of microscopy in diagnosing scabies varies from 46% to 90% but the specificity is 100%.[68]

9.1.2. Identification of Burrow: Burrow Ink Test

The burrow ink test (BIT) allows identification of burrows. To perform the BIT, black or blue ink is applied to the suspected papule and then wiped off with alcohol to remove surface ink. A positive BIT is indicated by the presence of a characteristic dark, zigzagged line running across and away from the lesion due to ink tracking down the mite's burrow.[69, 70]

9.1.3. Other Methods

Using a standard magnifying lens with 10 x magnification is useful for the identification of mites/burrows.

Other methods used for diagnosis of scabies include in vivo techniques such as dermoscopy, optical coherence tomography and detection of *S. scabiei* DNA from cutaneous scales using PCR or ELISA.[71, 72]

9.1.3.1. Dermoscopy

Very few clinicians use dermoscopy in Sexual Health Clinics, but it is universally used in dermatology services. The technique helps to locate mites and burrows, and serves as a guide for obtaining skin scrapings for microscopy.[68] The two signs described in scabies are: 1) Delta wing sign or jet with contrail sign that represents the head and anterior legs of the mite that are usually seen at the end of a burrow; 2) The "mini triangle sign" that corresponds to the head of the maturing larva within an egg.[23] In crusted scabies, multiple burrows may be seen.[73] Eggs may also be seen as ovoid structures within the burrows.[23]

A disadvantage of dermoscopy, when used on its own, is that its specificity is low[68] and it can be difficult to detect mites on pigmented skin.[70]

9.1.3.2. Histology

Biopsy is rarely performed or required in the context of suspected scabies presenting to a sexual health clinic. However, it can be helpful where diagnosis is uncertain, especially in cases of crusted or nodular scabies. Histological findings include pleomorphic infiltrate of eosinophils, lymphocytes and histiocytes in the dermis. In addition, pink, pig-tail-like structures, denoting egg fragments, may be seen in the epidermis.[74]

9.2. Differential Diagnosis

9.2.1. Classical Scabies

Scabies may frequently be mistaken for other skin diseases. It is important to have a high degree of suspicion to recognise symptoms and signs of scabies.

Differential diagnoses for scabies include impetigo, folliculitis, papular urticarial reactions, atopic dermatitis, contact dermatitis, dermatitis herpetiformis, psoriasis, seborrhoeic dermatitis, pytiriasis rosea, secondary syphilis and lymphoma and pseudolymphoma (if scabies presents with nodules).

9.2.2. Crusted Scabies

Differential diagnosis includes psoriasis, eczema, Darier's disease, pityriasis rubra pilaris, palmoplantar keratoderma and cutaneous lymphoma.

10. MANAGEMENT

10.1. General Advice

People with scabies should be informed about its transmission through skin-to-skin contact, particularly between sexual partners and people living in the same household, and secondarily by fomite transmission. (Good practice point [**GPP]**)

People with scabies should be offered screening for other STIs. (**GPP**)

Failure to disinfect fomites is a risk factor for treatment failure.[75] The mites may be killed by laundering items at 50°C for 30 minutes.[76]

Clinicians should advise patients on the correct method of disinfecting or quarantining potential fomites. (**GPP**) All clothes, soft slippers, towels and bed linen of the affected case should be washed at a minimum of 50°C on the day of application of the first treatment. If clothes cannot be washed at high temperature, they can be sealed in plastic bags for 4 days at room temperature, after which mites are unlikely to survive.[77]

Clinicians should inform patients about proper application of topical scabicides. (**GPP**) The ankles, under finger nails, between the toes, and sacral region are body sites often left untreated and where scabies has a predilection.[78] Assistance with topical application may be required e.g. from a partner, relative or carer to ensure full coverage.[78, 79]

Written advice in the form of a leaflet or website link should be provided. Availability in different languages and a pictorial guide are recommended.[79] (**GPP**).

- The writing committee recommends the use of the patient information leaflets on scabies produced by the British Association of Dermatologists (BAD) (available at https://www.skinhealthinfo.org.uk/condition/scabies/[80]) and the Primary Care Dermatology Society (PCDS) (available at https://www.pcds.org.uk/patient-info-leaflets/scabies[81])

Clinicians should counsel patients to expect that symptoms may take more than 4 weeks to resolve.[82]

11. TREATMENTS

11.1. Recommended Scabicide Treatment Regimens for Classical Scabies

Two possible treatment regimens are recommended for uncomplicated classical scabies: permethrin cream and oral ivermectin. Both have been shown to have similar effectiveness in a systematic review of RCTs.[83] Prescribing decision should be based on the individual clinical situation.

11.1.1. Permethrin 5% Cream[83-91] (Grade 1A)

- Adults below 65 years of age and children aged 13 to 17 should apply a thin layer of cream to the whole body, excluding the head and face. For adults aged 65 years and above, apply to the entire body, including the neck, face, ears and scalp.
- Pay special attention to applying the cream to the hands and wrists, under fingernails, between the fingers and toes, the soles of the feet and the external genitalia.
- Most adults require one tube (30 g) to cover their body adequately. However, some adults may need up to two tubes (60 g) for a single application. Do not apply the cream to mucous membranes.
- Apply the cream to cool, dry skin. Avoid applying immediately after a hot bath or shower. Leave the cream on for 8 to 12 hours, then wash it off. If hands are washed within 8 hours of application, reapply the cream to the hands.
- Given that one cream application often does not achieve full skin coverage, reapply the cream 1 to 2 weeks later.[91]

11.1.2. Ivermectin Tablets[83, 86, 88, 89, 92-94] (Grade 1A)

- The recommended regimen involves two doses of oral ivermectin[92] each at a dosage of 200 micrograms per kg.[95] The first dose should be administered on day one of the treatment, followed by a second dose on day eight, but this can be taken up to day 15 if necessary. (**Grade 1D**)
- Ivermectin is unlicensed for children (aged under 18).[95]
- Tablets should be taken with water on an empty stomach. Avoid consuming food two hours before or after taking the medication.[94]

There is wide variability in trial protocols regarding dosing for both permethrin and ivermectin. Permethrin doses ranged from 1 to 5 applications of 30 to 60 g of cream, while ivermectin doses ranged from 1 to 2 doses of 200 micrograms per kg. Ivermectin is not ovicidal and giving a second dose is associated with lower risk of treatment failure than a single dose.[92] Our recommendations for ivermectin dosing are based on expert opinion and the BNF, while recommendations for permethrin are aligned with licensing standards in the UK.

11.2. Alternative Regimens for Classical Scabies

There are no data on the use of sequenced treatment with multiple agents, or the management of suspected drug-resistant scabies.[96]

In addition to the recommended treatments, several other agents, for which there is less evidence, may be available.

Malathion, a cholinesterase inhibitor and insecticide, is available as a 0.5% emulsion. In the UK it is licensed for use against head lice, crab lice and scabies in adults and children over the age of 6 months. Patients should apply the liquid over the whole body in two applications on day one and day eight (the second dose can be applied up to day 15). After each application, the medication should be left on the skin for 24 hours. There are no RCTs studying the efficacy of malathion in people with scabies. Malathion may be used where recommended treatments have failed, are unavailable, or are thought to cause adverse effects in specific patients. (**Grade 1D**)

Benzyl benzoate is the only other agent currently licensed in the UK for the treatment of scabies, used as a 25% emulsion, although it is unlicensed for people under 18 and may not be widely available. Several clinical trials have assessed its use, with generally worse response rates of benzyl benzoate (ranging from 60% to 92% effectiveness) in comparison to permethrin or ivermectin (84% to 100% effectiveness).[87, 88, 90, 93, 97] There are no published systematic reviews of these trials. Benzyl benzoate is recommended as an alternative treatment in cases where there have been multiple treatment failures (consider discussion with dermatology or infectious diseases colleagues). (**Grade 2B**)

Topical ivermectin preparations such as 1% ivermectin lotion are available but not licensed in the UK for the treatment for scabies. There is limited evidence for the efficacy of topical

ivermectin in people with scabies.[83] Therefore, its use is currently not recommended by the guideline committee.

Sulphur preparations such as 5% ointment are widely available globally, as well as being licensed by the Food and Drug Administration (FDA) in the United States as a treatment for scabies. There is mixed RCT evidence for its effectiveness[90, 98], it is not generally available to prescribers in the UK, and its use in this context is not recommended by the guideline committee.

Spinosad is a bacterially derived pesticide, also with neurotoxic properties, which is available as an FDA licensed treatment for head lice. Two RCTs have estimated its efficacy in people with scabies to be 78%, significantly better than placebo[99], but the cream is neither licensed nor widely available in the UK. Therefore, treatment with spinosad is currently not recommended.

The tea tree plant contains terpene compounds and 5% tea tree oil. This is used in conjunction with topical benzyl benzoate as part of standard treatment of crusted scabies in the Northern Territory, Australia, where this problem is particularly common.[100] Tea tree products are widely available as cosmetic skin products and topical antiseptic agents. However, there are no completed RCTs of its use in any form of scabies. Therefore, treatment with tea tree products is not recommended.[101, 102]

11.3. Treatment of Crusted Scabies

Crusted scabies is characterised by hyperinfestation with mites. There is relatively little evidence to inform treatment, and most published information comes from the treatment of Aboriginal Australians.[103] Treatment regimens comprise a combination of oral and topical antiparasitic agents and a topical keratolytic agent.[100, 104] A scoring system has been described with three grades of severity indicating 3, 5 or 7 doses of oral ivermectin 200 micrograms per kg over 28 days.[100] The topical antiparasitic agent may be benzyl benzoate combined with 5% tea tree oil, or permethrin 5% cream. The keratolytic is lactic acid and urea in sorbolene cream. The addition of systemic antibacterials is often required. Admission to hospital is avoided unless there is a clinical necessity (e.g. severe sepsis) to prevent risk of transmission to clinical staff and patients. Early involvement of a dermatologist is recommended. (**Grade 1D**) Some patients will also require input from an infectious disease specialist. Because of the high parasite burden and shedding of viable mites, there is a

significant risk of transmission to carers, health care staff and family or friends who have had only casual contact with the affected person.[54]

11.4. Pregnancy and Breastfeeding

People who are breastfeeding or pregnant should be treated with permethrin 5% cream. Alternatively, use malathion 0.5% aqueous liquid if permethrin is not available or appropriate (e.g. prior hypersensitivity or suspected permethrin resistance). Breastfeeding mothers should remove the liquid or cream from the nipples before breastfeeding and reapply treatment afterwards. (**GPP**)

Ivermectin is not recommended because of uncertainty about its safety in the fetus or breastfed infant, and the lack of evidence that it is superior in efficacy to permethrin. (**Grade 2D**)

11.5. In People Living with HIV taking Antiretroviral Therapy

Patients who have uncomplicated scabies and are also living with HIV should receive the same treatment regimens as those who are HIV negative. Prior to the availability of effective antiretroviral therapy, crusted scabies was recognised as a possible complication of HIV-related immunodeficiency.[56]

11.6. Reactions to Treatment

Skin reactions may occur with any topical treatment. Paraesthesia is a recognised side effect of permethrin[91, 105] and is usually mild and transient. More significant irritation and hypersensitivity can occur, including erythema, oedema, pruritus or dermatitis. Clinical assessment may be needed to differentiate between contact dermatitis, caused by treatment, and ongoing symptoms of scabies. Treatment of skin reactions may include emollients, antihistamines and/or corticosteroids.

A wide range of adverse drug reactions, particularly neurological syndromes, are reported for oral ivermectin therapy.[94, 106] Nausea and headache are also thought to be common side effects. The frequency of such side effects is unknown, but in a systematic review of clinical trials of scabies treatment, the overall adverse event rate for oral ivermectin was 5% compared to 4% for topical permethrin.[83] It should be noted that “adverse events” in a clinical trial context do not imply causal association with the intervention under study. It has been suggested that the potential for toxicity or side effects of ivermectin is much lower than once thought.[107]

12. FOLLOW-UP

- No clear clinical trial evidence exists regarding optimal follow-up, and routine post-treatment reviews have not been recommended previously for scabies in the UK.[1]
- However, a face to face review to evaluate the cure of the patient, prevent re-infestation from untreated contacts or from failure to follow laundry and cleaning advice, and limit unnecessary repeat self-treatments may be helpful 4 to 6 weeks after the last administration of scabicide.[79]
- Itch beyond 4 weeks after last (second dose) administration of a primary recommended scabicide treatment can represent a diagnostic challenge, and clinicians should perform careful re-examination, including skin scrapings, BIT and dermoscopy where available. (**GPP**)
- Appearance of new burrows and/or evidence of visible mites at any stage beyond 7 days after completion of anti-scabies treatment is indicative of need for further treatment.[36] (**see below**)
- Itching should progressively improve with treatment. If itching worsens despite receiving adequate treatment, the possibility of re-infection or an alternate diagnosis is to be considered.[108]

12.1. Post-Scabetic Itch

In most cases, itch and rash should be expected to improve within 2 to 4 weeks after treatment.[83] However, a recent study found that in a third of individuals, itch persisted between 4 weeks and 3 months (median time to symptom resolution was 52 days) after successful mite and egg eradication[82] and clinicians should advise patients about this. (**GPP)**

The psychological impact of the diagnosis and the fear of social repercussions may lead to behaviours that can aggravate pruritis and skin irritation. For example, excessive cleaning of their body, furniture or clothing with toxic/irritating products. Non-recommended and unnecessary multiple applications of scabicide creams are often observed.

- Treat post-scabies itch with crotamiton 10% cream (2 to 3 times a day) or emollients. (**Grade 1C**)

- Provide advice regarding use of an emollient soap substitute and avoidance of soaps and shower gels, perfumed products, repeated applications of topical scabicides and other potential irritants.
- If the scabies mites have been eradicated and eczematous areas are present, then a potent topical corticosteroid (e.g. mometasone furoate 0.1% ointment, triamcinolone acetonide 0.1%, betamethasone valerate 0.1%) may be helpful. Nighttime use of a sedating antihistamine (e.g. chlorpheniramine or hydroxyzine) may assist with sleep and reduce scratching but does not treat the underlying pruritic mechanism.
- Itchy nodules, including those affecting genital skin, may persist for months as a post-scabies inflammatory reaction (post-scabies prurigo syndrome). If emollients, and topical corticosteroids are not helpful, we would recommend referral to a dermatologist for advice regarding treatment.[109]

12.2. Secondary Bacterial Infection

- Superadded bacterial infections should be treated according to local antimicrobial resistance patterns and microbiological advice.

12.3. Evaluation of Treatment Failure

Reasons for an apparent non-successful treatment outcome with an effective anti-scabies treatment include:[75, 78, 79, 92, 110]

- Incorrect diagnosis;
- Dermatitis secondary to the mite, topical agent or hygiene practices;
- Incorrect application of the topical agent;
- Failure to repeat treatment after 7 to 14 days;
- Poor penetration of the agent into hyperkeratotic skin or nails;
- Immunosuppressed host (greater disease severity/numbers of mites);
- Re-infestation from untreated close contacts or potentially contaminated fomites;
- Delusional infestation;
- Ivermectin incorrectly prescribed or taken (ie not on empty stomach).

True treatment failure does occur, primarily because scabicide drugs are not 100% effective. A meta-analysis of RCTs from 2018 reported 74-93% clearance observed with permethrin and 68-86% with ivermectin.[83]

A recent systematic review and meta-analysis, including RCTs and observational studies up to 2021, looked specifically at treatment failure prevalence and associated factors.[92] However, it was noted that there was no clear definition given for treatment failure in most studies and many referred to reinfestation, retreatment, recurrence of scabies, or persistent itching and classed these together as failures or non-successful treatment outcomes. The only clear conclusion was that taking a second dose of ivermectin resulted in significantly lower rates of failure than a single dose. Only three studies included a multivariable risk factor analysis to explore reasons for treatment failure. Most attributed non-successful outcomes to patient behaviour, drug administration compliance, environmental and disease severity related factors. Drug resistance, through mite susceptibility testing, was not assessed in any of the included studies.

12.4. Drug Resistance

Whilst clinically significant drug resistance is documented in headlice[111], there is still uncertainty regarding acaricides in human scabies.[112] Reduced clinical susceptibility to permethrin has been reported in Europe[79, 96] and to ivermectin in scabies-endemic areas.[113, 114] Molecular pathways have been elucidated for potential resistance in *S. scabiei* mites for both permethrin[115-119] and ivermectin using animal models[113, 114, 120, 121] but there are complexities with isolating and preserving sufficient mites for testing, and to date there is no confirmed evidence of these mutations having emerged in patients who have failed treatment.[112]

- After confirmed failure of first-line treatments, combination treatment with oral ivermectin plus either permethrin 5% or benzyl benzoate 25% should be considered, ideally with supervised administration.[79, 82, 85, 112] (**GPP**)

- Intensive treatment regimens with more frequent administration such as those used in crusted scabies, might also be considered in conjunction with local dermatology and/or infectious diseases multi-disciplinary teams in recalcitrant cases.[79, 112] (**GPP**)

13. GUIDELINE APPLICATION

This guideline is designed primarily for use by clinicians working in level 3 sexual health services, for the management of individuals aged 18 years and over. It may also be useful for those working in general practice, and dermatology services.

At the time of writing, there have within the past two years been interruptions in the supply of all recommended and alterative regimens for the treatment of scabies, at different times and places across the UK. This may, in part, have been caused by a rapid rise in the number of cases of scabies seen in many countries after the relaxation of public health measures that were implemented in 2020-21 to control the spread of Coronavirus Disease 2019 (COVID-19). Delays in obtaining treatment may lead to clinically significant delays in treating the index patient and their contacts. There is a substantial cost difference between the two recommended regimens, with ivermectin tablets incurring a higher cost than either permethrin cream or malathion lotion.

The guideline committee therefore recognises that treatment decisions may need to be made on pragmatic or cost grounds, with variations between different locales changing over time. These guidelines are intended to summarise best practice based on available evidence.

14. TRACING AND TREATMENT OF CONTACTS

Contact tracing for specific STIs should be performed according to BASHH guidelines (www.bashh.org/guidelines), with reference to look back periods. Clinicians should inform patients about the importance of partner notification, and this can be carried out by the patient themselves in most cases. The 2020 IACS[36] definitions for positive contact history and close contact are presented in Table 1**.**

- Contact tracing and notification of partners, household members and other close contacts from the previous two months prior to the onset of symptoms should be undertaken.[122, 123] (**GPP**)
- Where possible, coordinate the treatment of index case and ongoing contacts to break cycle of transmission. "Ongoing" contacts may include current sexual partners, household members, carers and other close contacts through skin-to-skin or fomite sharing. This may involve referral to general practitioners, community pharmacies and other sexual health services.[122, 123] If applicable, inform patients that permethrin can be bought over-the-counter. (**GPP**)
- Contact your local health protection unit if two or more epidemiologically linked cases occur within an 8 week period involving a closed setting (e.g. a care home, residential facility or prison).[77] (**GPP**)
- Provide advice regarding laundry and decontamination measures, alongside treatment recommendations.[77] (see Section 10)
- An individual case-by-case risk assessment is recommended to take into account the severity of infection in the index patient and the likely exposure risk to potential contacts.[77]
- Contacts should be treated even if asymptomatic given that it can take 6 weeks to develop symptoms. We recommend that they are given first-line treatments and follow laundry and cleaning advice as per cases. (see Section 11, **GPP**)
- Clinicians should advise patients to avoid sexual activity and other close skin-to-skin contact until both they and their current contacts have used treatment, followed laundry and decontamination advice and waited at least 24 hours after initiating the first dose of permethrin or at least 24 hours after initiating the first dose of ivermectin.[79] (**GPP**)

15. AUDITABLE OUTCOME MEASURES

- All patients with suspected or confirmed scabies should receive an appropriate diagnosis code for audit purposes. (performance standard 95%).
- People with suspected or confirmed scabies should be treated with two doses of a recommended first-line treatment regimen (performance standard 95%).
- Individuals presenting with scabies should be provided with written information about the condition and its management (performance standard 95%); e.g. patient information leaflets on scabies from BAD[80] or from PCDS[81].
- Testing for other STIs where scabies is suspected to have been sexually transmitted should be offered (performance standard 95%).

16. RECOMMENDATIONS FOR FURTHER RESEARCH

- There is a need to develop sensitive and specific diagnostic tests to support clinical diagnosis of scabies (e.g. a PCR test that could be utilised in clinical settings).
- There is a need for a standardised outcome measure for treatment success in scabies that is clinically meaningful, reproducible across a range of clinical and research settings, and shares common criteria with previous RCTs. There is currently no standard definition of treatment failure.
- Many recommended interventions for scabies have not been studied in RCTs, and some have never been studied in any controlled observational studies. The following could be considered for future work:
    - Clinical trials in which malathion lotion is an intervention (versus permethrin and ivermectin);
    - Trials of second-line treatment regimens, in which participants have recently been treated and experienced treatment failure, relapse or re-infection;
    - Clinical trials comparing spinosad cream to standard of care (rather than placebo or "vehicle" cream);
    - Studies estimating the effectiveness of hygiene, decontamination and quarantining methods currently recommended to improve long term cure rates.
- Improved surveillance data beyond simple case-finding in outbreaks and sexual health clinic settings. No data are currently collected on rates of persistent symptoms, scabies re-treatment or ivermectin usage. Enhanced surveillance data, including outcomes of repeat treatments for scabies or alternative diagnoses made would help to identify trends and clarify the situation regarding potential resistance to first-line treatments for scabies.
- Research into testing drug susceptibility of mites and developing commercial methods for doing this e.g. genetic typing of selected multiple targets, which are feasible with smaller numbers of mites than required for current phenotypic testing or can be performed on non-live mites.

17. QUALIFYING STATEMENT

The recommendations in this guideline may not be appropriate for use in all clinical situations. Decisions to follow these recommendations must be based on professional clinical judgement, consideration of individual patient circumstances and available resources.

All possible care has been undertaken to ensure specification of the correct dosage of medication and route of administration. However, it remains the responsibility of the prescribing clinician to ensure the accuracy and appropriateness of the medication they prescribe.

18. REVIEW ARRANGEMENTS

An author group will be invited by the BASHH CEG to review and revise the guideline in 2029 using the BASHH framework for guideline development. However, addenda may be issued sooner than 2029, particularly if relevant new data are available relating to testing or treatment options.

19. TABLES

Table 1 Definitions for contact history for scabies transmission.

Positive contact history: all of the following are considered high risk for scabies transmission
Any contact with an individual diagnosed with crusted scabies Close contact with an individual diagnosed with scabies Close contact with an individual with itch that is not accounted for by another condition Close contact with an individual with typical scabies lesions in a typical distribution that are not accounted for by another condition.
Close contacts are defined as any of:
Individuals who sleep in the same dwelling Individuals who share a bed (including sexual partners) Children in the same classroom or who play closely together Adults with known skin-to-skin contact

Reproduced from the Guideline "The 2020 International Alliance for the Control of Scabies Consensus Criteria for the Diagnosis of Scabies".[36]

20. DISCLOSURES

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20.2. Declaration of Conflicting Interests

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20.5. Membership of the Clinical Effectiveness Group

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21. REFERENCES

1. Sashidharan PN, Basavara S and Bates CM. 2016 UK National Guideline on the Management of Scabies, https://www.bashhguidelines.org/media/1137/scabies-2016.pdf (2016, accessed 08 February 2024).
2. Healthcare Improvement Scotland. Search filters - Scottish Intercollegiate Guidelines Network (SIGN), https://www.sign.ac.uk/what-we-do/methodology/search-filters/ (accessed 16 February 2024).
3. Romani L, Steer AC, Whitfeld MJ, et al. Prevalence of scabies and impetigo worldwide: a systematic review. *Lancet Infect Dis* 2015; 15: 960-967.
4. Angeles RM. A closer look at Sarcoptes scabiei. *Arch Pathol Lab Med* 2005; 129: 810.
5. Van Neste D and Lachapelle JM. Host-parasite relationships in hyperkeratotic (Norwegian) scabies: pathological and immunological findings. *Br J Dermatol* 1981; 105: 667-678.
6. Van Neste D. Intraepidermal localization of scabies mites overlooked? *J Am Acad Dermatol* 1984; 10: 676-677.
7. Sunderkotter C, Wohlrab J and Hamm H. Scabies: Epidemiology, Diagnosis, and Treatment. *Dtsch Arztebl Int* 2021; 118: 695-704.
8. Hicks MI and Elston DM. Scabies. *Dermatol Ther* 2009; 22: 279-292.
9. Currie BJ and McCarthy JS. Permethrin and ivermectin for scabies. *N Engl J Med* 2010; 362: 717-725.
10. Johnston G and Sladden M. Scabies: diagnosis and treatment. *BMJ* 2005; 331: 619-622.
11. Thomas J, Christenson JK, Walker E, et al. Scabies-An ancient itch that is still rampant today. *J Clin Pharm Ther* 2017; 42: 793-799.
12. Hengge UR, Currie BJ, Jager G, et al. Scabies: a ubiquitous neglected skin disease. *Lancet Infect Dis* 2006; 6: 769-779.
13. Arlian LG, Runyan RA, Sorlie LB, et al. Host-seeking behavior of Sarcoptes scabiei. *J Am Acad Dermatol* 1984; 11: 594-598.
14. Fox GN and Usatine RP. Itching and rash in a boy and his grandmother. *J Fam Pract* 2006; 55: 679-684.
15. Centers for Disease Control and Prevention. Parasites - Scabies, https://www.cdc.gov/parasites/scabies/index.html (updated 6 June 2023, accessed 01 March 2024).
16. Chosidow O. Clinical practices. Scabies. *N Engl J Med* 2006; 354: 1718-1727.
17. Heukelbach J and Feldmeier H. Scabies. *Lancet* 2006; 367: 1767-1774.
18. Figueroa J, Hall S and Ibarra J. A guide to common parasitic diseases. *Nurs Stand* 1998; 13: 33-34.
19. Burkhart CN, Burkhart CG and Morrell DS. 84 - Infestations. In: Bolognia JL, Schaffer JV and Cerroni L (eds) *Dermatology*. Fifth ed., 2024, pp.1519-1532.
20. Mellanby K., Johnson C.G., Bartley W.C., et al. Experiments on the Survival and Behaviour of the Itch Mite, Sarcoptes scabiei DeG. var. hominis. *Bull Entom Res* 1942; 33(4): 267-271.
21. Salavastru CM, Chosidow O, Boffa MJ, et al. European guideline for the management of scabies. *J Eur Acad Dermatol Venereol* 2017; 31: 1248-1253.
22. Arlian LG, Runyan RA, Achar S, et al. Survival and infectivity of Sarcoptes scabiei var. canis and var. hominis. *J Am Acad Dermatol* 1984; 11: 210-215.
23. Chandler DJ and Fuller LC. A Review of Scabies: An Infestation More than Skin Deep. *Dermatology* 2019; 235: 79-90.
24. Liu JM, Wang HW, Chang FW, et al. The effects of climate factors on scabies. A 14-year population-based study in Taiwan. *Parasite* 2016; 23: 54.
25. Micali G, Lacarrubba F, Verzi AE, et al. Scabies: Advances in Noninvasive Diagnosis. *PLoS Negl Trop Dis* 2016; 10: e0004691.
26. Cinotti E, Perrot JL, Labeille B, et al. Inefficacy of alcohol-based hand rub on mites in a patient with hyperkeratotic scabies. *Clin Exp Dermatol* 2015; 40: 177-181.
27. Andersen BM, Haugen H, Rasch M, et al. Outbreak of scabies in Norwegian nursing homes and home care patients: control and prevention. *J Hosp Infect* 2000; 45: 160-164.
28. Walton SF and Currie BJ. Problems in diagnosing scabies, a global disease in human and animal populations. *Clin Microbiol Rev* 2007; 20: 268-279.
29. Kim HS, Hashimoto T, Fischer K, et al. Scabies itch: an update on neuroimmune interactions and novel targets. *J Eur Acad Dermatol Venereol* 2021; 35: 1765-1776.
30. Flinders DC and De Schweinitz P. Pediculosis and scabies. *Am Fam Physician* 2004; 69: 341-348.
31. Sanders KM, Nattkemper LA, Rosen JD, et al. Non-Histaminergic Itch Mediators Elevated in the Skin of a Porcine Model of Scabies and of Human Scabies Patients. *J Invest Dermatol* 2019; 139: 971-973.
32. Chosidow O. Scabies and pediculosis. *Lancet* 2000; 355: 819-826.

33. Vorou R, Remoudaki HD and Maltezou HC. Nosocomial scabies. *J Hosp Infect* 2007; 65: 9-14.
34. McCarthy JS, Kemp DJ, Walton SF, et al. Scabies: more than just an irritation. *Postgrad Med J* 2004; 80: 382-387.
35. Monsel G, Delaunay P and Chosidow O. Arthropods. In: Griffiths CEM, Barker J, Bleiker TO, et al. (eds) *Rook's Textbook of Dermatology*. 9th ed.: Wiley & Sons, 2016.
36. Engelman D, Yoshizumi J, Hay RJ, et al. The 2020 International Alliance for the Control of Scabies Consensus Criteria for the Diagnosis of Scabies. *Br J Dermatol* 2020; 183: 808-820.
37. Shimose L and Munoz-Price LS. Diagnosis, prevention, and treatment of scabies. *Curr Infect Dis Rep* 2013; 15: 426-431.
38. Sunderkotter C, Feldmeier H, Folster-Holst R, et al. S1 guidelines on the diagnosis and treatment of scabies - short version. *J Dtsch Dermatol Ges* 2016; 14: 1155-1167.
39. Witkowski JA and Parish LC. Scabies: a cause of generalized urticaria. *Cutis* 1984; 33: 277-279.
40. Chapel TA, Krugel L, Chapel J, et al. Scabies presenting as urticaria. *JAMA* 1981; 246: 1440-1441.
41. Tesner B, Williams NO and Brodell RT. The pathophysiologic basis of scabietic nodules. *J Am Acad Dermatol* 2007; 57: S56-57.
42. Kartono F, Lee EW, Lanum D, et al. Crusted Norwegian scabies in an adult with Langerhans cell histiocytosis: mishaps leading to systemic chemotherapy. *Arch Dermatol* 2007; 143: 626-628.
43. Wong SS, Woo PC and Yuen KY. Unusual laboratory findings in a case of Norwegian scabies provided a clue to diagnosis. *J Clin Microbiol* 2005; 43: 2542-2544.
44. Talaga-Cwiertnia K. Sarcoptes Infestation. What Is Already Known, and What Is New about Scabies at the Beginning of the Third Decade of the 21st Century? *Pathogens* 2021; 10.
45. Roberts LJ, Huffam SE, Walton SF, et al. Crusted scabies: clinical and immunological findings in seventy-eight patients and a review of the literature. *J Infect* 2005; 50: 375-381.
46. Falk ES and Thorsby E. HLA antigens in patients with scabies. *Br J Dermatol* 1981; 104: 317-320.
47. Morsy TA, Romia SA, al-Ganayni GA, et al. Histocompatibility (HLA) antigens in Egyptians with two parasitic skin diseases (scabies and leishmaniasis). *J Egypt Soc Parasitol* 1990; 20: 565-572.
48. Lin S, Farber J and Lado L. A case report of crusted scabies with methicillin-resistant Staphylococcus aureus bacteremia. *J Am Geriatr Soc* 2009; 57: 1713-1714.
49. Chinazzo M, Desoubeaux G, Leducq S, et al. Prevalence of Nail Scabies: A French Prospective Multicenter Study. *J Pediatr* 2018; 197: 154-157.
50. Arora P, Rudnicka L, Sar-Pomian M, et al. Scabies: A comprehensive review and current perspectives. *Dermatol Ther* 2020; 33: e13746.
51. Thomas C, Coates SJ, Engelman D, et al. Ectoparasites: Scabies. *J Am Acad Dermatol* 2020; 82: 533-548.
52. Donabedian H and Khazan U. Norwegian scabies in a patient with AIDS. *Clin Infect Dis* 1992; 14: 162-164.
53. Inserra DW and Bickley LK. Crusted scabies in acquired immunodeficiency syndrome. *Int J Dermatol* 1990; 29: 287-289.
54. Corbett EL, Crossley I, Holton J, et al. Crusted ("Norwegian") scabies in a specialist HIV unit: successful use of ivermectin and failure to prevent nosocomial transmission. *Genitourin Med* 1996; 72: 115-117.
55. Schlesinger I, Oelrich DM and Tyring SK. Crusted (Norwegian) scabies in patients with AIDS: the range of clinical presentations. *South Med J* 1994; 87: 352-356.
56. Orkin M. Scabies in AIDS. *Semin Dermatol* 1993; 12: 9-14.
57. Fernandez-Sanchez M, Saeb-Lima M, Alvarado-de la Barrera C, et al. Crusted scabies-associated immune reconstitution inflammatory syndrome. *BMC Infect Dis* 2012; 12: 323.
58. Aydingoz IE and Mansur AT. Canine scabies in humans: a case report and review of the literature. *Dermatology* 2011; 223: 104-106.
59. Adjei O and Brenya RC. Secondary bacterial infection in Ghanaian patients with scabies. *East Afr Med J* 1997; 74: 729-731.
60. Dieng MT, Ndiaye B and Ndiaye AM. Scabies complicated by acute glomerulonephritis in children: 114 cases observed in two years in a pediatric service in Dakar. *Dakar Med* 1998; 43: 201-204.
61. Jarrett P and Snow J. Scabies presenting as a necrotizing vasculitis in the presence of lupus anticoagulant. *Br J Dermatol* 1998; 139: 701-703.
62. Valks R, Buezo GF and Dauden E. Scabies and leukocytoclastic vasculitis in an HIV-seropositive man. *Int J Dermatol* 1996; 35: 605-606.
63. Shin K, Jin H, You HS, et al. Clinical characteristics of pruritus in scabies. *Indian J Dermatol Venereol Leprol* 2017; 83: 492-493.

64. Han RT, Kim HY, Ryu H, et al. Glyoxal-induced exacerbation of pruritus and dermatitis is associated with staphylococcus aureus colonization in the skin of a rat model of atopic dermatitis. *J Dermatol Sci* 2018; 90: 276-283.
65. Blicharz L, Usarek P, Mlynarczyk G, et al. Is Itch Intensity in Atopic Dermatitis Associated with Skin Colonization by Staphylococcus aureus? *Indian J Dermatol* 2020; 65: 17-21.
66. Muller G, Jacobs PH and Moore NE. Scraping for human scabies. A better method for positive preparations. *Arch Dermatol* 1973; 107: 70.
67. Katsumata K and Katsumata K. Simple method of detecting sarcoptes scabiei var hominis mites among bedridden elderly patients suffering from severe scabies infestation using an adhesive-tape. *Intern Med* 2006; 45: 857-859.
68. Micheletti RG, Dominguez AR and Wanat KA. Bedside diagnostics in dermatology: Parasitic and noninfectious diseases. *J Am Acad Dermatol* 2017; 77: 221-230.
69. Chouela E, Abeldano A, Pellerano G, et al. Diagnosis and treatment of scabies: a practical guide. *Am J Clin Dermatol* 2002; 3: 9-18.
70. Walter B, Heukelbach J, Fengler G, et al. Comparison of dermoscopy, skin scraping, and the adhesive tape test for the diagnosis of scabies in a resource-poor setting. *Arch Dermatol* 2011; 147: 468-473.
71. Bezold G, Lange M, Schiener R, et al. Hidden scabies: diagnosis by polymerase chain reaction. *Br J Dermatol* 2001; 144: 614-618.
72. Banzhaf CA, Themstrup L, Ring HC, et al. In vivo Imaging of Sarcoptes scabiei Infestation Using Optical Coherence Tomography. *Case Rep Dermatol* 2013; 5: 156-162.
73. Chavez-Alvarez S, Villarreal-Martinez A, Argenziano G, et al. Noodle pattern: a new dermoscopic pattern for crusted scabies (Norwegian scabies). *J Eur Acad Dermatol Venereol* 2018; 32: e46-e47.
74. Kristjansson AK, Smith MK, Gould JW, et al. Pink pigtails are a clue for the diagnosis of scabies. *J Am Acad Dermatol* 2007; 57: 174-175.
75. Aussy A, Houivet E, Hebert V, et al. Risk factors for treatment failure in scabies: a cohort study. *Br J Dermatol* 2019; 180: 888-893.
76. Leeyaphan C, Pluetrattanabha N, Limphoka P, et al. Scabicidal effect of heat on the in vitro survival of scabies mites and their eggs: Optimal temperature and exposure time. *Indian J Dermatol Venereol Leprol* 2019; 85: 647-649.
77. UK Health Security Agency. UKHSA guidance on the management of scabies cases and outbreaks in long-term care facilities and other closed settings., https://www.gov.uk/government/publications/scabies-management-advice-for-health-professionals/ukhsa-guidance-on-the-management-of-scabies-cases-and-outbreaks-in-long-term-care-facilities-and-other-closed-settings#references (updated 12 January 2023, accessed 25 February 2024).
78. Nemecek R, Stockbauer A, Lexa M, et al. Application errors associated with topical treatment of scabies: an observational study. *J Dtsch Dermatol Ges* 2020; 18: 554-559.
79. Sunderkotter C, Aebischer A, Neufeld M, et al. Increase of scabies in Germany and development of resistant mites? Evidence and consequences. *J Dtsch Dermatol Ges* 2019; 17: 15-23.
80. British Association of Dermatologists. Patient information leaflet - Scabies, https://www.skinhealthinfo.org.uk/condition/scabies (updated October 2023, accessed 02 April 2024).
81. Primary Care Dermatologist Society. Patient Information Leaflet - Scabies, https://www.pcds.org.uk/patient-info-leaflets/scabies (updated 25 Dec 2023, accessed 02 April 2024).
82. Chiu LW, Berger TG and Chang AY. Management of common scabies and postscabetic itch in adults: Lessons learned from a single-center retrospective cohort study. *Int J Womens Dermatol* 2021; 7: 716-720.
83. Rosumeck S, Nast A and Dressler C. Ivermectin and permethrin for treating scabies. *Cochrane Database Syst Rev* 2018; 4: CD012994.
84. Dhana A, Yen H, Okhovat JP, et al. Ivermectin versus permethrin in the treatment of scabies: A systematic review and meta-analysis of randomized controlled trials. *J Am Acad Dermatol* 2018; 78: 194-198.
85. Thadanipon K, Anothaisintawee T, Rattanasiri S, et al. Efficacy and safety of antiscabietic agents: A systematic review and network meta-analysis of randomized controlled trials. *J Am Acad Dermatol* 2019; 80: 1435-1444.
86. Goldust M, Rezaee E and Hemayat S. Treatment of scabies: Comparison of permethrin 5% versus ivermectin. *J Dermatol* 2012; 39: 545-547.
87. Chitti Babu G, Kavita Dhar B, Praveen A, et al. A comparative study to assess the efficacy of permethrin (topical) and benzyl benzoate (topical) for the treatment of scabies patients. *IJPSR* 2019; 10: 3688-3693.
88. Manjhi PK, Sinha RI, Kumar M, et al. Comparative study of efficacy of oral ivermectin versus some topical antiscabies drugs in the treatment of scabies. *J Clin Diagn Res* 2014; 8: HC01-04.

89. Chitti Babu G, Kavita Dhar B, Praveen A, et al. A comparative study to assess the efficacy of permethrin (topical) and ivermectin (oral) in scabies patients seeking care at a tertiary care teaching hospital of northern India. *IJPSR* 2020; 11: 1155-1159.
90. Abdel-Raheem TA, Meabed EM, Nasef GA, et al. Efficacy, acceptability and cost effectiveness of four therapeutic agents for treatment of scabies. *J Dermatolog Treat* 2016; 27: 473-479.
91. Permethrin 5% w/w Cream - Summary of Product Characteristics (SmPC). www.medicines.org.uk/emc/product/6540/smpc (updated 25 October 2021, accessed 26 February 2024).
92. Mbuagbaw L, Sadeghirad B, Morgan RL, et al. Failure of scabies treatment: a systematic review and meta-analysis. *Br J Dermatol* 2024; 190: 163-173.
93. Bachewar NP, Thawani VR, Mali SN, et al. Comparison of safety, efficacy, and cost effectiveness of benzyl benzoate, permethrin, and ivermectin in patients of scabies. *Indian J Pharmacol* 2009; 41: 9-14.
94. Ivermectin 3mg - Summary of Product Characteristics (SmPC). www.medicines.org.uk/emc/product/15513/smpc (updated 22 February 2024, accessed 26 February 2024).
95. Ivermectin In: Joint Formulary Committee. British National Formulary. British Medical Association and Royal Pharmaceutical Society of Great Britain, , https://bnf.nice.org.uk/drugs/ivermectin/ (accessed 15 April 2024).
96. Meyersburg D, Kaiser A and Bauer JW. Loss of efficacy of topical 5% permethrin for treating scabies: an Austrian single-center study. *J Dermatolog Treat* 2022; 33: 774-777.
97. Meyersburg D, Welponer T, Kaiser A, et al. Comparison of topical benzyl benzoate vs. oral ivermectin in treating scabies: A randomized study. *J Eur Acad Dermatol Venereol* 2023; 37: 160-165.
98. Ertugrul G and Aktas H. Comparison of sulfur ointment and permethrin treatments in scabies. *Dermatol Ther* 2022; 35: e15897.
99. Seiler JC, Keech RC, Aker JL, et al. Spinosad at 0.9% in the treatment of scabies: Efficacy results from 2 multicenter, randomized, double-blind, vehicle-controlled studies. *J Am Acad Dermatol* 2022; 86: 97-103.
100. Davis JS, McGloughlin S, Tong SY, et al. A novel clinical grading scale to guide the management of crusted scabies. *PLoS Negl Trop Dis* 2013; 7: e2387.
101. Thomas J, Carson CF, Peterson GM, et al. Therapeutic Potential of Tea Tree Oil for Scabies. *Am J Trop Med Hyg* 2016; 94: 258-266.
102. Thomas J, Davey R, Peterson GM, et al. Treatment of scabies using a tea tree oil-based gel formulation in Australian Aboriginal children: protocol for a randomised controlled trial. *BMJ Open* 2018; 8: e018507.
103. May PJ, Tong SYC, Steer AC, et al. Treatment, prevention and public health management of impetigo, scabies, crusted scabies and fungal skin infections in endemic populations: a systematic review. *Trop Med Int Health* 2019; 24: 280-293.
104. Huffam SE and Currie BJ. Ivermectin for Sarcoptes scabiei hyperinfestation. *Int J Infect Dis* 1998; 2: 152-154.
105. Soolantra 10mg/g Cream - Summary of Product Characteristics (SmPC). www.medicines.org.uk/emc/product/6819/smpc (updated 28 November 2022, accessed 26 February 2024).
106. Chandler RE. Serious Neurological Adverse Events after Ivermectin-Do They Occur beyond the Indication of Onchocerciasis? *Am J Trop Med Hyg* 2018; 98: 382-388.
107. Alvarez-Moreno C, Cassell JA, Donkor CM, et al. Long-term consequences of the misuse of ivermectin data. *Lancet Infect Dis* 2021; 21: 1624-1626.
108. Goldstein BG and Goldstein AO. Scabies: Management, https://www.uptodate.com/contents/scabies-management (2022, accessed 08 April 2024).
109. Manjhi M, Yadav P, Mohan S, et al. A comparative study of topical tacrolimus and topical triamcinolone acetonide in nodular scabies. *Dermatol Ther* 2020; 33: e13954.
110. Bernigaud C, Fischer K and Chosidow O. The Management of Scabies in the 21st Century: Past, Advances and Potentials. *Acta Derm Venereol* 2020; 100: adv00112.
111. Durand R, Bouvresse S, Berdjane Z, et al. Insecticide resistance in head lice: clinical, parasitological and genetic aspects. *Clin Microbiol Infect* 2012; 18: 338-344.
112. Absil G, Lebas, E., Libon, F., El Hayderi, L., Dezfoulian, B., Nikkels, A.F.,. Scabies and therapeutic resistance: Current knowledge and future perspectives. *JEADV Clinical Practice* 2022. ; 1: 157–164.
113. Mounsey KE, Holt DC, McCarthy JS, et al. Longitudinal evidence of increasing in vitro tolerance of scabies mites to ivermectin in scabies-endemic communities. *Arch Dermatol* 2009; 145: 840-841.
114. Currie BJ, Harumal P, McKinnon M, et al. First documentation of in vivo and in vitro ivermectin resistance in Sarcoptes scabiei. *Clin Infect Dis* 2004; 39: e8-12.
115. Walton SF, Myerscough MR and Currie BJ. Studies in vitro on the relative efficacy of current acaricides for Sarcoptes scabiei var. hominis. *Trans R Soc Trop Med Hyg* 2000; 94: 92-96.

116. Mounsey KE, Holt DC, McCarthy J, et al. Scabies: molecular perspectives and therapeutic implications in the face of emerging drug resistance. *Future Microbiol* 2008; 3: 57-66.
117. Pasay C, Arlian L, Morgan M, et al. High-resolution melt analysis for the detection of a mutation associated with permethrin resistance in a population of scabies mites. *Med Vet Entomol* 2008; 22: 82-88.
118. Pasay C, Arlian L, Morgan M, et al. The effect of insecticide synergists on the response of scabies mites to pyrethroid acaricides. *PLoS Negl Trop Dis* 2009; 3: e354.
119. Mounsey KE, Pasay CJ, Arlian LG, et al. Increased transcription of Glutathione S-transferases in acaricide exposed scabies mites. *Parasit Vectors* 2010; 3: 43.
120. Mounsey KE, McCarthy JS and Walton SF. Scratching the itch: new tools to advance understanding of scabies. *Trends Parasitol* 2013; 29: 35-42.
121. Khalil S, Abbas O, Kibbi AG, et al. Scabies in the age of increasing drug resistance. *PLoS Negl Trop Dis* 2017; 11: e0005920.
122. Tiplica GS, Radcliffe K, Evans C, et al. 2015 European guidelines for the management of partners of persons with sexually transmitted infections. *J Eur Acad Dermatol Venereol* 2015; 29: 1251-1257.
123. McClean H, Radcliffe K, Sullivan A, et al. 2012 BASHH statement on partner notification for sexually transmissible infections. *Int J STD AIDS* 2013; 24: 253-261.

APPENDIX 1: LIST OF SEARCH TERMS

Table 1. List of terms used to search Medline database.

	Search Term	**Results**
1	Scabies/	3838
2	Scabies.mp.	5294
3	(sarcoptic mange or sarcoptes scabiei).mp.	1492
4	or/1-3	5556
5	(etiolog$ or aetiolog$ or cause$).mp.	5320374
6	exp Diagnosis/	9347770
7	(diagnos$ or clinical feature$ or symptom$).mp.	6719374
8	exp Therapeutics/	5211638
9	(therap$ or treat$ or regimen or regimens or manag$ or personal hygiene or laundering or prevent$ or control$ or transmission or transmitted or effectiveness or efficacy or evidence or grade$ or resistan$).mp.	17465111
10	Permethrin/	2517
11	Permethrin.mp.	4414
12	Ivermectin/	7486
13	Ivermectin.mp.	10051
14	Malathion/	2465
15	Malathion.mp.	4410
16	spinosad.mp.	1022
17	crotamiton.mp.	188
18	Hexachlorocyclohexane/	4804
19	Hexachlorocyclohexane.mp.	5812
20	lindane.mp.	2779
21	benzyl benzoate.mp.	608
22	sulphur ointment.mp.	6
23	sulfur ointment.mp.	25
24	"drug-related side effects and adverse reactions"/ or drug hypersensitivity/ or drug eruptions/	74425
25	(side effect$ or adverse effect$ or adverse drug reaction$ or adverse reaction$ or hypersensitiv$ or drug eruption$ or complication$).mp.	5391350

	Search Term	Results
26	((treatment$ or therap$) adj2 reaction$).mp.	3713
27	(fail$ or resistan$ or persisten$).mp.	3052155
28	(anogenital or anal or anus or perianal or peri-anal or genital$ or penile or penis or vulva or vulval or vaginal or vagina).mp.	374872
29	((sexual$ or sex) adj3 (“caused by” or encounter$ or transmitted or transmission or acquire$ or act$)).mp.	88584
30	(sexual adj3 (etiolog$ or aetiolog$ or cause$)).mp.	1874
31	(STI or STIs or STD or STDs).mp.	28129
32	et.fs. and sexual$.mp.	26657
33	Contact Tracing/	6201
34	Contact Tracing.mp.	8898
35	(follow-up or follow up or following up or advice or advising or further investigation$).mp.	1755124
36	Child Abuse, Sexual/	11027
37	Rape/ and exp Child/	1210
38	((child$ or boy$ or girl$ or baby or babies or infant$ or infancy or school aged) adj3 (sexual$ abuse$ or molestation$ or sexual molestation$ or sexually molested or abused sexually or	8848
39	(sexual child abuse or sexual child molestation).mp.	92
40	(p?ediatric adj3 (sexually transmitted or STI or STIs or STD or STDs)).mp.	25
41	(et or dt or th or di or pc or ae or co).fs.	10319837
42	Pregnancy/	984498
43	pregnan$.mp.	1129323
44	Breast Feeding/	43620
45	breastfeeding.mp.	34794
46	breast feeding.mp.	49337
47	exp hiv infections/ or hiv seropositivity/	315031
48	hiv/ or hiv-1/ or hiv-2/	107405
49	hiv.mp.	400632
50	(recommend$ or audit$ or further research).mp.	1174627
51	or/5-50	25415465
52	4 and 51	4764
53	Epidemiology/	12576

	Search Term	Results
54	("total number of cases" or outbreak$ or epidemiology or epidemic or public health or population wide).mp.	2630188
55	or/53-54	2630188
56	exp United Kingdom/	389810
57	(UK or united kingdom or britain or england or scotland or northern ireland or wales).mp.	526092
58	or/56-57	542271
59	55 and 58	123383
60	4 and 59	81
61	52 or 60	4772
62	limit 61 to yr="2015 -Current"	1453
63	exp animals/	26414779
64	humans/	21287249
65	63 not 64	5127530
66	62 not 65	1263
67	Randomized Controlled Trials as Topic/	162364
68	randomized controlled trial/	594019
69	Random Allocation/	106932
70	Double Blind Method/	175348
71	Single Blind Method/	32748
72	clinical trial/	538101
73	clinical trial, phase i.pt.	24929
74	clinical trial, phase ii.pt.	39731
75	clinical trial, phase iii.pt.	21749
76	clinical trial, phase iv.pt.	2417
77	controlled clinical trial.pt.	95326
78	randomized controlled trial.pt.	594019
79	multicenter study.pt.	334443
80	clinical trial.pt.	538101
81	exp Clinical Trials as topic/	382542
82	or/67-81	1564609
83	(clinical adj trial$).tw.	475607

	Search Term	Results
84	((singl$ or doubl$ or treb$ or tripl$) adj (blind$3 or mask$3)).tw.	197181
85	PLACEBOS/	35929
86	placebo$.tw.	246474
87	randomly allocated.tw.	36222
88	(allocated adj2 random$).tw.	39975
89	or/83-88	779141
90	82 or 89	1908585
91	case report.tw.	395006
92	letter/	1218891
93	historical article/	369327
94	or/91-93	1964305
95	90 not 94	1866030
96	66 and 95	71
97	Meta-Analysis as Topic/	22352
98	meta analy$.tw.	268755
99	metaanaly$.tw.	2566
100	Meta-Analysis/	181972
101	(systematic adj (review$1 or overview$1)).tw.	288009
102	exp Review Literature as Topic/	22522
103	or/97-102	451837
104	cochrane.ab.	132699
105	embase.ab.	152210
106	(psychlit or psyclit).ab.	917
107	(psychinfo or psycinfo).ab.	58024
108	(cinahl or cinhal).ab.	45548
109	science citation index.ab.	3765
110	bids.ab.	665
111	cancerlit.ab.	638
112	or/104-111	242852
113	reference list$.ab.	22050

	Search Term	Results
114	bibliograph$.ab.	22439
115	hand-search$.ab.	8535
116	relevant journals.ab.	1351
117	manual search$.ab.	6003
118	or/113-117	54224
119	selection criteria.ab.	35929
120	data extraction.ab.	32136
121	119 or 120	65403
122	Review/	3161206
123	121 and 122	34779
124	Comment/	1009752
125	Letter/	1218891
126	Editorial/	651880
127	animal/	7283290
128	human/	21287249
129	127 not (127 and 128)	5093573
130	or/124-126,129	7182725
131	103 or 112 or 118 or 123	539699
132	131 not 130	513804
133	66 and 132	41
134	96 or 133	102

Table 2. List of terms used to search Embase database.

	Search Term	Results
1	scabies/	6744
2	scabies.mp.	7674
3	(sarcoptic mange or sarcoptes scabiei).mp.	2086
4	or/1-3	8189
5	(etiolog$ or aetiolog$ or cause$).mp.	6273815
6	exp diagnosis/	7883893

	Search Term	Results
7	(diagnos$ or clinical feature$ or symptom$).mp.	9157319
8	exp Therapy/	10305598
9	(therap$ or treat$ or regimen or regimens or manag$ or personal hygiene or laundering or prevent$ or control$ or transmission or transmitted or effectiveness or efficacy or evidence or grade$ or resistan$).mp.	26332281
10	permethrin/	6790
11	Permethrin.mp.	7751
12	ivermectin/	16383
13	Ivermectin.mp.	17316
14	malathion/	6031
15	malathion.mp.	6925
16	spinosad/	859
17	spinosad.mp.	1200
18	crotamiton/	819
19	crotamiton.mp.	848
20	hexachlorocyclohexane/	2727
21	Hexachlorocyclohexane.mp.	5253
22	lindane/	7628
23	lindane.mp.	8454
24	benzyl benzoate/	1619
25	benzyl benzoate.mp.	1798
26	sulphur ointment.mp.	13
27	sulfur ointment.mp.	22
28	exp adverse drug reaction/ or exp drug hypersensitivity/ or exp drug eruption/	637155
29	(side effect$ or adverse effect$ or adverse drug reaction$ or adverse reaction$ or hypersensitiv$ or drug eruption$ or complication$).mp.	5244702
30	((treatment$ or therap$) adj2 reaction$).mp.	5413
31	(fail$ or resistan$ or persisten$).mp.	4520952
32	(anogenital or anal or anus or perianal or peri-anal or genital$ or penile or penis or vulva or vulval or vaginal or vagina).mp.	652558
33	((sexual$ or sex) adj3 (“caused by” or encounter$ or transmitted or transmission or acquire$ or act$)).mp.	124942
34	(sexual adj3 (etiolog$ or aetiolog$ or cause$)).mp.	2830

	Search Term	Results
35	(STI or STIs or STD or STDs).mp.	46004
36	et.fs. and sexual$.mp.	30183
37	contact tracing/	8697
38	contact tracing.mp.	5108
39	(follow-up or follow up or following up or advice or advising or further investigation$).mp.	2819424
40	child sexual abuse/	11042
41	rape/ and exp child/	1130
42	((child$ or boy$ or girl$ or baby or babies or infant$ or infancy or school aged) adj3 (sexual$ abuse$ or molestation$ or sexual molestation$ or sexually molested or abused sexually or	16664
43	(sexual child abuse or sexual child molestation).mp.	135
44	(p?ediatric adj3 (sexually transmitted or STI or STIs or STD or STDs)).mp.	40
45	(et or dt or th or di or pc or ae or co).fs.	10325683
46	exp pregnancy/	773630
47	pregnan$.mp.	1109311
48	breast feeding/	65846
49	breastfeeding.mp.	44503
50	breast feeding.mp.	71591
51	human immunodeficiency virus/	138067
52	exp human immunodeficiency virus 1/ or exp human immunodeficiency virus 2/	88892
53	hiv.mp.	470646
54	(recommend$ or audit$ or further research).mp.	1719815
55	or/5-54	31981643
56	4 and 55	7563
57	epidemiology/	241771
58	(“total number of cases” or outbreak$ or epidemiology or epidemic or public health or population wide).mp.	2236105
59	or/57-58	2236105
60	exp United Kingdom/	462857
61	(UK or united kingdom or britain or england or scotland or northern ireland or wales).mp.	858332
62	or/60-61	858332
63	59 and 62	101330

	Search Term	Results
64	4 and 63	85
65	56 or 64	7571
66	limit 65 to yr=”2015 -Current”	2955
67	limit 66 to human	2384
68	clinical trial/	1077325
69	randomized controlled trial/	788089
70	controlled clinical trial/	469369
71	multicenter study/	379220
72	Phase 3 clinical trial/	69908
73	Phase 4 clinical trial/	5476
74	exp RANDOMIZATION/	99633
75	Single Blind Procedure/	52064
76	Double Blind Procedure/	211017
77	Crossover Procedure/	75382
78	PLACEBO/	403966
79	randomi?ed controlled trial$.tw.	328184
80	rct.tw.	53916
81	(random$ adj2 allocat$).tw.	54879
82	single blind$.tw.	31834
83	double blind$.tw.	245788
84	((treble or triple) adj blind$).tw.	1910
85	placebo$.tw.	369066
86	Prospective Study/	880574
87	or/68-86	2956785
88	Case Study/	98993
89	case report.tw.	535754
90	abstract report/ or letter/	1319676
91	Conference.pt.	5555505
92	Conference abstract.pt.	4776805
93	Editorial.pt.	778639

	Search Term	Results
94	Letter.pt.	1307108
95	Note.pt.	943388
96	or/88-95	9133532
97	87 not 96	2084258
98	67 and 97	165
99	exp Meta Analysis/	296945
100	((meta adj analy$) or metaanalys$).tw.	359953
101	(systematic adj (review$1 or overview$1)).tw.	364833
102	or/99-101	588506
103	cancerlit.ab.	758
104	cochrane.ab.	175850
105	embase.ab.	198680
106	(psychlit or psyclit).ab.	1019
107	(psychinfo or psycinfo).ab.	57974
108	(cinahl or cinhal).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating	57300
109	science citation index.ab.	4409
110	bids.ab.	854
111	or/103-110	304730
112	reference lists.ab.	24235
113	bibliograph$.ab.	29292
114	hand-search$.ab.	10607
115	manual search$.ab.	7216
116	relevant journals.ab.	1620
117	or/112-116	65880
118	data extraction.ab.	40874
119	selection criteria.ab.	45596
120	118 or 119	83732
121	review.pt.	3105513
122	120 and 121	38615
123	letter.pt.	1307108

	Search Term	Results
124	editorial.pt.	778639
125	animal/	1609903
126	human/	25414907
127	125 not (125 and 126)	1180818
128	or/123-124,127	3248270
129	102 or 111 or 117 or 122	694180
130	129 not 128	676604
131	67 and 130	64
132	98 or 131	215

Table 3. List of terms used to search Cochrane Central Register of Controlled Trials and Cochrane Database of Systemic Reviews.

	Search Terms	Results
1	MeSH descriptor: [Scabies] explode all trees	132
2	Scabies	303
3	"sarcoptic mange" or "sarcoptes scabiei"	34
4	{or #1-#3}	304
5	etiolog* or aetiolog* or cause*	231372
6	MeSH descriptor: [Diagnosis] explode all trees	443952
7	diagnos* or clinical NEXT feature* or symptom*	490640
8	MeSH descriptor: [Therapeutics] explode all trees	410490
9	therap* or treat* or regimen or regimens or manag* or "personal hygiene" or laundering or prevent* or control* or transmission or transmitted or effectiveness or efficacy or evidence or grade* or resistan*	2036439
10	MeSH descriptor: [Permethrin] this term only	208
11	Permethrin	444
12	MeSH descriptor: [Ivermectin] this term only	556
13	Ivermectin	1008

	Search Terms	Results
14	MeSH descriptor: [Malathion] this term only	30
15	Malathion	82
16	spinosad	21
17	crotamiton	28
18	MeSH descriptor: [Hexachlorocyclohexane] this term only	31
19	Hexachlorocyclohexane	38
20	lindane	55
21	"benzyl benzoate"	67
22	"sulphur ointment"	19
23	"sulfur ointment"	19
24	MeSH descriptor: [Drug-Related Side Effects and Adverse Reactions] this term only	1972
25	MeSH descriptor: [Drug Hypersensitivity] this term only	699
26	MeSH descriptor: [Drug Eruptions] this term only	424
27	side NEXT effect* or adverse NEXT effect* or "adverse drug" NEXT reaction* or adverse NEXT reaction* or hypersensitiv* or drug NEXT eruption* or complication*	495200
28	(treatment* or therap*) NEAR/2 reaction*	2466
29	fail* or resistan* or persisten*	259079
30	anogenital or anal or anus or perianal or peri-anal or genital* or penile or penis or vulva or vulval or vaginal or vagina	40012
31	(sexual* or sex) NEAR/3 ("caused by" or encounter* or transmitted or transmission or acquire* or act*)	8436
32	sexual NEAR/3 (etiolog* or aetiolog* or cause*)	266
33	STI or STIs or STD or STDs	6511
34	MeSH descriptor: [] explode all trees and with qualifier(s): [etiology - ET]	87201
35	sexual*	26169
36	#34 and #35	1137
37	MeSH descriptor: [Contact Tracing] this term only	129
38	"Contact Tracing"	239

	Search Terms	Results
39	follow-up or "follow up" or "following up" or advice or advising or further NEXT investigation*	319565
40	MeSH descriptor: [Child Abuse, Sexual] this term only	245
41	MeSH descriptor: [Rape] this term only	157
42	MeSH descriptor: [Child] explode all trees	77899
43	#41 and #42	17
44	(child* or boy* or girl* or baby or babies or infant* or infancy or "school aged") NEAR/3 (sexual* NEXT abuse* or molestation* or sexual NEXT molestation* or "sexually molested" or "abused sexually" or rape* or sexual* NEXT assault*)	521
45	"sexual child abuse" or "sexual child molestation"	2
46	(pediatric or paediatric) NEAR/3 (sexually NEXT transmitted or STI or STIs or STD or STDs)	4
47	MeSH descriptor: [] explode all trees and with qualifier(s): [adverse effects - AE, drug therapy - DT, therapy - TH, diagnosis - DI, prevention & control - PC, etiology - ET, complications - CO]	549799
48	MeSH descriptor: [Pregnancy] this term only	30022
49	pregnan*	85052
50	MeSH descriptor: [Breast Feeding] this term only	2633
51	breastfeeding or "breast feeding"	10248
52	MeSH descriptor: [HIV Infections] explode all trees	15949
53	MeSH descriptor: [HIV Seropositivity] this term only	863
54	MeSH descriptor: [HIV] explode all trees	3745
55	hiv	32234
56	recommend* or audit* or "further research"	120322
57	{or #5-#33}	2036505
58	{or #36-#40}	320539
59	{or #43-#56}	705763
60	{or #57-#59}	2036527
61	#4 and #60	304

	Search Terms	Results
62	MeSH descriptor: [Epidemiology] this term only	296
63	"total number of cases" or outbreak* or epidemiology or epidemic or "public health" or "population wide"	117211
64	{or #62-#63}	117211
65	MeSH descriptor: [United Kingdom] explode all trees	9379
66	UK or "united kingdom" or britain or england or scotland or "northern ireland" or wales	136901
67	77-#66	137122
68	#64 and #67	15453
69	#4 and #68	14
70	#61 or #69 with Cochrane Library publication date Between Jan 2015 and Jul 2023, in Cochrane Reviews, Cochrane Protocols, Trials	197

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APPENDIX 2: GRADE SYSTEM FOR ASSESSING EVIDENCE

Introduction:

There has been a general move to using the GRADE system by many guideline producing bodies in recent years and the BMJ published a series of papers about the method in 2008 [1,2,3,4,5,6].

The GRADE system applied in its purest form requires scientific analyses of evidence to produce "tables" from a series of "PICO" questions: Questions that identify the patient problem or population (P), intervention (I) (or aetiology/diagnosis/frequency/prognosis), comparison (C) and outcome(s) (O). Practically this is very labour intensive and requires someone very experienced in this area, and many large guideline writing bodies employ a scientist to do this for them. However, some bodies adapt the GRADE system according to their own needs, assess the evidence in the way they have done in the past, and then make strengths of recommendations according to the GRADE system, which when applied in this way is quite simple to do and understand. BASHH have adopted GRADE to use in this manner.

The principles of GRADE:

1. Assessment of the evidence

GRADE offers four levels of evidence quality: high, moderate, low, and very low, with randomised trials classed as high-quality evidence and observational studies as low-quality evidence. Quality may be downgraded because of limitations in study design or implementation, imprecision of estimates (wide confidence intervals), variability in results, indirectness of evidence, or publication bias. Quality may be upgraded because of a very large

[1] Guyatt GH, Oxman AD, Vist G, et al; GRADE Working Group. BMJ 2008; 336:924-926.

[2] Guyatt GH, Oxman AD, Kunz R, et al; GRADE Working Group. BMJ 2008; 336(7651):995-8.

[3] Schünemann HJ, Oxman AD, Brozek J, et al; GRADE Working Group. BMJ 2008; 336(7653):1106-10.

[4] Guyatt GH, Oxman AD, Kunz R, et al; GRADE Working Group. BMJ 2008; 336(7654):1170-3.

[5] Guyatt GH, Oxman AD, Kunz R, et al; GRADE Working Group. BMJ 2008; 336(7652):1049-51.

[6] Jaeschke R, Guyatt GH, Dellinger P, et al; GRADE working group. BMJ 2008; 337:a744.

magnitude of effect, a dose-response gradient, and if all plausible biases would reduce an apparent treatment effect.

Summary of factors affecting quality of evidence:

Study limitations	Imprecision	Large magnitude of effect
Inconsistency of results	Publication bias	Dose-response gradient
Indirectness of evidence	Factors that might increase quality of evidence	Plausible confounding, which would reduce a demonstrated effect

Based on the analysis of the evidence with these factors borne in mind the evidence should be graded as follows:

A	A body of evidence of high-quality meta-analyses, systematic reviews of and RCTs directly applicable to the target population
B	As above but relating to high quality case control or cohort studies with low risk of bias or confounding and high probability that a relationship is causal
C	As B but trials may have some flaws
D	Non-analytic evidence (e.g. case reports or series or expert opinion)

However, when reviewing evidence graded A-D as above the grading can be altered follows:

- The strength of recommendation should be higher if the following apply:
    - A large effect of an intervention is demonstrated.
    - Dose response/evidence of gradient.
    - All plausible confounding would reduce a demonstrated effect or would suggest a spurious effect when results show no effect.
- Lower if there is evidence of:
    - Serious/very serious study limitations
    - Inconsistency
    - Indirectness
    - Imprecision

- Publication bias
- Study limitations
- Inconsistency of results
- Indirectness of evidence
- Imprecision
- Publication bias

2. Formulating recommendations

There are only two strengths of recommendation, which may be either for or against an intervention: 1 = strong or 2 = weak. Pragmatically, this means the following:

- Strong recommendation for intervention:

For patients — Most people in this situation would want the recommended course of action and only a small proportion would not.

For clinicians — Most people should receive the intervention.

For quality monitors — Adherence to this recommendation could be used as a quality criterion or performance indicator. If clinicians choose not to follow such a recommendation, they should document their rationale.

- Weak recommendation for intervention:

For patients — Most people in this situation would want the suggested course of action, but many would not.

For clinicians — Examine the evidence or a summary of the evidence yourself and be prepared to discuss that evidence with patients, as well as their values and preferences.

For quality monitors — Clinicians' discussion or consideration of the pros and cons of the intervention, and their documentation of the discussion, could be used as a quality criterion.

- No specific recommendation:
  - The advantages and disadvantages are equivalent.
  - The target population has not been identified.

- Insufficient evidence on which to formulate a recommendation.

3. Consideration of using PICO

This may be helpful if guideline writing committee wish to utilise this method, this is explained in the NICE guideline manual; chapter 4:6.

Patients/population	Which patients or population of patients are we interested in? How can they be best described? Are there subgroups that need to be considered?
Intervention	Which intervention, treatment or approach should be used?
Comparison	What is/are the main alternative/s to compare with the intervention?
Outcome	What is really important for the patient? Which outcomes should be considered, such as intermediate or short-term measures; mortality; morbidity and treatment complications; rates of relapse; late morbidity and readmission; return to work, physical and social functioning? Should other measures such as quality of life, general health status and costs be considered?

4. Consideration of costs

These may or may not legitimately be included in the GRADE system, but it would be sensible in the current climate to always consider these, and if they are not considered this should be stated and why – for example, there is no significant difference in cost between the recommended treatments.

Generally speaking, GRADE suggests a balance sheet should inform judgments about whether the net benefits are worth the incremental costs. Evidence profiles should always present resource use, not just monetary values.

5. Using the GRADE grid to resolve differences:

This supports the Delphi technique we already adopt, i.e. to develop a consensus within the group.

6. GRADE training for BASHH guideline authors

Authors need to be familiar and confident in using the GRADE system, and training for this is available as follows:

- The papers from the BMJ series in 2008, as listed in the introduction to this appendix. The articles can be accessed through the grade working group web site at: http://www.gradeworkinggroup.org/publications/index.htm
- McMaster GRADE online modules: these have been recommended by the GRADE working group and take about 20 minutes each to complete. The web address is: http://cebgrade.mcmaster.ca/
- Journal of Clinical Epidemiology 2011: published a 20-part series that is available through the GRADE working group website (link above).

Summary:

BASHH have now moved to the GRADE system for evaluating evidence and making recommendations by asking guideline authors and reviewers to apply the principles outlined in sections 1-3 above. Authors should consider structuring their analysis of evidence into PICO questions addressing Population / Intervention / Comparison / Outcome as stated in section 4. Costs should be included in the evaluation and formulation of recommendations as stated in section 5. When resolution of conflicting opinions is required, the GRADE grid should be used. This appendix is a brief summary of the GRADE system how it is to be adopted by BASHH guideline authors.

Title: BASHH national guideline on the management of Scabies in adults 2024	
Version No.: Draft 2	**Date:** 22 October 2024

APPENDIX 3: EQUALITY IMPACT ASSESSMENT TABLE

BASHH Guideline Equality Impact Assessment *(based on NICE documentation shared with BASHH August 2019)*				
Guidance title: BASHH Guidelines for the Management of Scabies in Adults 2024		**Completed by: Lewis Haddow**		**Date: 08/07/2024**
How relevant is the topic to equality?	**Inequalities in health impact of the condition or public health issue**	**Potential of guidance to add value**	**Priority for NHS or other government department**	**Topic relevance; conclusions and outcomes**
	• Prevalence and impact of condition or public health problem • Prevalence of risk factors	• Inequalities in access, uptake or impact • Timeliness • Equality issues identified by proposers of the topic • Equality issues identified by patient or lay organisations	• Department of Health or other centralised NHS bodies such as NHS England • Local authorities • Home Office • Other agencies	• If equality issues had impact on the guidance summarise these impacts
Sex/gender	More men than women attend sexual health services with scabies but the population rates of scabies in different genders is unknown	No anticipated potential of guidance to add value in this context	Nil	Nil
Race	The intersection between race and risk of scabies is unknown	n/a	n/a	Nil
Disability	Some people with disabilities may be more at risk of scabies	Guidance may help with better diagnosis, management, and contact	UKHSA has published guidance that may be relevant, in relation to	Remarks are made in the description of scabies to reflect the differences in

Title: BASHH national guideline on the management of Scabies in adults 2024	
Version No.: Draft 2	**Date:** 22 October 2024

BASHH Guideline Equality Impact Assessment *(based on NICE documentation shared with BASHH August 2019)*				
Guidance title: BASHH Guidelines for the Management of Scabies in Adults 2024		**Completed by: Lewis Haddow**		**Date: 08/07/2024**
		treatment for people with relevant disabilities	scabies outbreaks in closed (institutional) settings	risk factors for some people with disabilities
Age	People with scabies who attend sexual health services are most likely to be younger adults (age 18-40), although in other clinical settings there may be a preponderance towards older people (over 65)	No anticipated potential of guidance to add value in this context	n/a	Nil
Sexual orientation	The intersection between sexual orientation and risk of scabies is not known	n/a	n/a	Nil
Gender reassignment	The risk of scabies in people who have, or are undergoing, gender reassignment is not known	n/a	n/a	Nil
Religion/belief	The risk of scabies in people, when grouped according to religion and belief, is unknown. It is unlikely that diagnosis or treatment would differ according to religion or belief	n/a	n/a	Nil

Title: BASHH national guideline on the management of Scabies in adults 2024	
Version No.: Draft 2	**Date:** 22 October 2024

BASHH Guideline Equality Impact Assessment
(based on NICE documentation shared with BASHH August 2019)

Guidance title: BASHH Guidelines for the Management of Scabies in Adults 2024		**Completed by: Lewis Haddow**		**Date: 08/07/2024**
Pregnancy & maternity	The treatment options for scabies may differ for people who are pregnant or breastfeeding.	Guidance expected to improve treatment for patients with scabies who are pregnant or breastfeeding	n/a	The guidelines explicitly consider the different treatment options for patients who are pregnant or breastfeeding.
Other definable characteristics & socioeconomic factors that may affected by protected characteristics, including: • Prisoners and young offenders • Refugees and asylum seekers • Migrant workers • Looked after children • Homeless people • Deprivation • Disadvantage associated with geographical distinctions	It is likely that all of the characteristics listed to the left are potential risk factors for scabies, mainly due to crowding and less access to healthcare.	Guidance may help with better diagnosis, management, and contact treatment for people with relevant socioeconomic disadvantages	UKHSA has published guidance that may be relevant, in relation to scabies outbreaks in closed (institutional) settings	The guidelines describe, briefly, the epidemiological risk factors for scabies, which may include factors that disproportionately affect people affected by the socioeconomic factors listed in the left column. Guideline authors considered the complexities of contact treatment for people with this sort of disadvantage.

BASHH: British Association for Sexual Health and HIV; n/a: not applicable; UKHSA: UK Health Security Agency.

APPENDIX 4: AGREE II USER MANUAL

The AGREE II consists of 23 key items organized within 6 domains followed by 2 global rating items ("Overall Assessment"). Each domain captures a unique dimension of guideline quality [7].

DOMAIN 1. SCOPE AND PURPOSE

1. The overall objective(s) of the guideline is (are) specifically described.

2. The health question(s) covered by the guideline is (are) specifically described.

3. The population (patients, public, etc.) to whom the guideline is meant to apply is specifically described.

DOMAIN 2. STAKEHOLDER INVOLVEMENT

4. The guideline development group includes individuals from all relevant professional groups.

5. The views and preferences of the target population (patients, public, etc.) have been sought.

6. The target users of the guideline are clearly defined.

DOMAIN 3. RIGOUR OF DEVELOPMENT

7. Systematic methods were used to search for evidence.

8. The criteria for selecting the evidence are clearly described.

9. The strengths and limitations of the body of evidence are clearly described.

10. The methods for formulating the recommendations are clearly described.

11. The health benefits, side effects, and risks have been considered in formulating the recommendations.

12. There is an explicit link between the recommendations and the supporting evidence.

13. The guideline has been externally reviewed by experts prior to its publication.

[7] Appraisal of Guidelines for Research & Evaluation (AGREE) II User Manual, update from December 2017. Access: https://www.agreetrust.org/wp-content/uploads/2017/12/AGREE-II-Users-Manual-and-23-item-Instrument-2009-Update-2017.pdf

14. A procedure for updating the guideline is provided.

DOMAIN 4. CLARITY OF PRESENTATION

15. The recommendations are specific and unambiguous.

16. The different options for management of the condition or health issue are clearly presented.

17. Key recommendations are easily identifiable.

DOMAIN 5. APPLICABILITY

18. The guideline describes facilitators and barriers to its application.

19. The guideline provides advice and/or tools on how the recommendations can be put into practice.

20. The potential resource implications of applying the recommendations have been considered.

21. The guideline presents monitoring and/or auditing criteria.

DOMAIN 6. EDITORIAL INDEPENDENCE

22. The views of the funding body have not influenced the content of the guideline.

23. Competing interests of guideline development group members have been recorded and addressed.

APPENDIX 5: THE 2020 INTERNATIONAL ALLIANCE FOR THE CONTROL OF SCABIES CONSENSUS CRITERIA FOR THE DIAGNOSIS OF SCABIES

The 2020 International Alliance for the Control of Scabies Consensus Criteria [36] was developed by a group of experts for the Diagnosis of Scabies with the aim of standardizing the diagnosis of classical scabies and enable comparison of epidemiological and clinical data. These criteria will be useful in different settings, but especially in research.

They are not meant for use in the diagnosis of variant or atypical scabies.

These criteria are helpful in the initial diagnosis of Scabies but not considered as a replacement to clinical judgement.

Table 1 - Summary of 2020 IACS criteria for the diagnosis of scabies.

A. Confirmed scabies At least one of: A1: Mites, eggs, or feces on light microscopy of skin samples A2: Mites, eggs, or feces visualised on an individual using a high-powered imaging device A3: Mites visualised on an individual using dermoscopy
B. Clinical scabies At least one of: B1: Scabies burrows B2: Typical lesions affecting male genitalia B3: Typical lesions in a typical distribution and two history features
C. Suspected scabies One of: C1: Typical lesions in a typical distribution and one history feature C2: Atypical lesions or atypical distribution and two history features.

H. History features

H1: Pruritus

H2: Close contact with an individual who has pruritus or typical lesions in a typical distribution.

Diagnosis can be made at one of the three levels (A, B or C). A diagnosis of clinical or suspected scabies should only be made if other differential diagnoses are considered less likely than scabies.
Reproduced from the Guideline "The 2020 International Alliance for the Control of Scabies Consensus Criteria for the Diagnosis of Scabies".[36]

APPENDIX 6: PILOT FEEDBACK FORM

Guideline	
Dates for the period of guideline piloting	
Name	
Affiliation	
Date	
Good points about the guideline	
Points for improvement	
Any other general comments	