

# ***SCABIES PROTOCOL***

**Federal Bureau of Prisons  
Clinical Guidance**

***JANUARY 2017***

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## WHAT'S NEW IN THIS DOCUMENT?

### **JANUARY 2017 –**

**The December 2016 BOP Scabies Protocol was updated to correct the dosing information for oral ivermectin.**

➔ See [Table 1](#). The correct dosage for patients weighing  $\geq 80$  kg ( $\geq 175$  lbs) is 200 mcg/kg.

### **DECEMBER 2016 –**

**The following changes were made to the version issued in 2014:**

- **Emphasis is placed upon presumptive treatment** for scabies, if scabies is in the differential diagnosis.
- **TYPICAL SCABIES:**
  - ▶ **Oral ivermectin is now recommended as the first-line treatment for typical scabies in the BOP**, replacing the routine use of permethrin 5% cream—due to the risk of scabies treatment failure if the permethrin cream is inadequately applied. Scabies treatment failure in the correctional setting can lead to outbreaks of scabies. Oral ivermectin, administered with direct observation, is highly efficacious for treating scabies.
  - ▶ Two treatments are recommended—an initial treatment and a repeat treatment 7 days later.
- **CRUSTED SCABIES:**
  - ▶ **Treatment consists of both oral ivermectin and permethrin 5% cream administered simultaneously in multiple doses.** The treatment schedule is based upon scabies severity (see “Treatment Guidelines” in [Table 1](#)). Consult the BOP National Dermatology Consultant for treatment recommendations.
  - ▶ Isolation for crusted scabies should be continued until after resolution of scabies-related skin lesions, for a minimum of 8 days.
- **REVISIONS TO THE APPENDICES:**
  - ▶ [Appendix 1, Scabies Management Checklist](#), has been updated to reflect the use of ivermectin as the primary treatment regimen.
  - ▶ [Appendix 2, Inmate Fact Sheet on “Typical” Scabies](#), has been revised.

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## 1. PURPOSE

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The purpose of the BOP *Scabies Protocol* is to provide recommended procedures for detection, diagnosis, treatment, and prevention of scabies in the correctional setting.

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## 2. CAUSATIVE AGENT

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**Scabies** is a parasitic infection of the skin. It is caused by the mite, *Sarcoptes scabiei var. hominis*. Averaging 0.3 x 0.35 mm, female scabies mites cannot be seen with the naked eye. This round, eight-legged mite burrows into the host's superficial skin, laying 1–3 eggs per day during its 30–60 day lifetime. On average, a typical patient harbors 12 mites at a time. Host sensitization to the scabies mite, eggs, and excreta develops over 2–6 weeks.

**Crusted scabies**, also known as **Norwegian scabies**, is an aggressive infestation of *Sarcoptes scabiei var. hominis*. Due to host immunodeficiency, malnourishment, and/or debilitation, thousands of mites are present in the patient's skin and the patient is highly infectious.

→ **In a healthy patient, the mite can survive up to 3 days off the host. In contrast, mites in crusted scabies can survive up to 7 days off the host.**

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## 3. CLINICAL PRESENTATION

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**TYPICAL INFESTATION:** After acquiring the scabies mite, a patient (without prior infestation) typically develops pruritus after 2–6 weeks. Previously exposed patients develop pruritus within 24–48 hours of re-infestation.

Typical lesions are symmetrically distributed on the hands (especially the interdigital spaces), wrists, elbows, waist, legs, and feet. In men, lesions are frequently around the belt line, thigh, and external genitalia. In women, they are often located on the areola, nipples, buttocks, and vulvar areas.

Burrows can be observed at these sites; however, many patients will not have observable burrows. Burrows appear as 1–10 mm, flesh-colored to erythematous, wavy, raised, and thread-like lines on the skin surface. Excoriations are commonly found at these sites and may be the only clinical findings. The mites may be found under the distal fingernails secondary to scratching. Pruritus is worse at night and after a hot shower or bath. Lesions can become secondarily infected and present as pustules or cellulitis.

**CRUSTED SCABIES:** The usual crusted scabies patient is bedridden or with severe disability or immunosuppression. Pruritus is not present or is a minor concern. The lesions are commonly found on the hands and extremities, but can be located anywhere on the body. Unlike a typical scabies infestation, crusted scabies can involve the face and scalp. The lesions are thickened, scaly crusts that may encompass a large body surface area. Due to the patient's decreased immunity, impaired sensation, and/or physical inability to scratch, the scabies mites number in the thousands.

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## 4. DIAGNOSIS

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→ **All inmates should be screened at intake for signs and symptoms of scabies.**

The rendering of a presumptive scabies diagnosis is often based on the following: clinical suspicion, severe pruritus, typical distribution of lesions, and response to treatment.

- If available, microscopic examination of mineral oil preparations can identify the mite. This is accomplished by applying mineral oil and gently scraping the suspected lesions with a #15 surgical blade. The collected skin debris is placed on a microscope slide with a coverslip and examined under low power. Identification of the mites confirms the diagnosis, while the eggs or scybala (fecal pellets) provide indirect confirmation.
  - *Microscopic verification is not needed to initiate treatment.*
- A skin biopsy is rarely helpful in diagnosing scabies, but may be considered in unusual cases.

**Given the consequences of scabies in the correctional setting and the minimal risks associated with treatment, presumptive treatment is recommended if scabies is in the differential diagnosis.**

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## 5. MODE OF TRANSMISSION

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**TYPICAL SCABIES INFESTATION:** Direct skin-to-skin contact is needed for transmission, and 15–20 minutes of skin-to-skin contact is generally required. Overcrowding and sexual contact increases the risk of transmission. Sharing of clothing or bedding and towels can transmit the mite—especially if used immediately after the infested person. Asymptomatic patients, or patients with minimal symptoms, can unknowingly transmit mites.

**CRUSTED SCABIES:** In contrast to typical scabies infestations, persons with crusted scabies are highly contagious because of the large number of mites, skin sloughing, and increased mite survival. With crusted scabies, there is a much higher risk of transmission of scabies from contaminated clothing, bedding, and towels. Close contacts and staff taking care of patients with crusted scabies are at higher risk of acquiring scabies than in the case of a typical scabies infestation.

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## 6. INFECTIOUS PERIOD

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Scabies remains communicable until all mites and eggs are eradicated from the host. In the absence of treatment, individuals can remain infectious for prolonged periods. Fomites (e.g., clothing, hats, headphones, towels, bedding, furniture, etc.) can be a source of infection because the mites can live up to 3 days off the host (up to 7 days, in the case of crusted scabies).

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## 7. TREATMENT

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A general overview of treatment considerations is provided below.

- **Consult [Appendix 1, Scabies Management Checklist](#), for detailed, step-by-step instructions on management of scabies in the correctional setting, including treatment, infection control measures, and management of contacts.**

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### TYPICAL SCABIES INFESTATION

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#### TREATMENT

- **Oral ivermectin, dosed by weight, is the first-line treatment for typical scabies in the BOP.**
  - See [Table 1](#) for dosing and treatment guidelines for ivermectin.
  - ▶ Ivermectin should be taken with food or close to mealtime, due to a significant increase in bioavailability when the drug is taken with food.
  - ▶ The administration of ivermectin should be directly observed.
  - **Ivermectin is contraindicated in pregnant or breastfeeding women.**
- **Topical permethrin 5% cream** is an effective alternative treatment (see [Table 2](#)); however, if it is utilized, it is essential that application be directly observed and applied contiguously from the neck to the toes.
  - See instructions for permethrin administration in [STEP 3.d.2](#) of Appendix 1.
- **During either treatment, the inmate should be isolated in a single cell (for 8–14 hours after treatment).**
- **Clothing, linens, towels, and personal items** (e.g., hats, foot wear, etc.) should be washed in hot water and dried at the hottest setting (or bagged for 7 days), at the same time that treatment is initiated, to prevent reinfection.
  - See instructions for managing contaminated items in [STEP 4](#) of Appendix 1.
- **Regardless of which of the two treatments is used, inmates with typical scabies are retreated 7 days later, generally with the same treatment regimen.** Isolation for the second treatment is not required. Clothing, linens and towels should again be cleaned in the same time frame as treatment.

#### EXPECTED IMPROVEMENT

- **Most patients report significant improvement within 3 days of treatment.** Inmates treated for scabies should be advised that the rash and itching may persist for 2–4 weeks, and that antipruritic medications may help minimize this discomfort.
- **Symptoms or signs of scabies that persist beyond 2 weeks can be attributed to several factors:**
  - ▶ Misapplication of the scabicide (i.e., permethrin)
  - ▶ Reinfection from other inmates (which may be evidenced by new burrows)
  - ▶ Exposure to infested fomites (e.g., clothing or bed linens)
  - ▶ Host allergic dermatitis
- **The health care provider should consider an alternative diagnosis if an inmate is still symptomatic after two completed treatments.**

## CRUSTED (NORWEGIAN) SCABIES

Any case of crusted scabies requires aggressive treatment, strict implementation of infection control measures, and long-term surveillance. Because crusted scabies is highly communicable, strict isolation and contact precautions are critical. **Limit the number of staff coming into contact with the inmate.**

- **TREATMENT:** For crusted scabies, multiple doses of ivermectin and permethrin 5% cream should be administered simultaneously. Treatment frequency is based on the severity of the rash.
  - ➔ See “Treatment Guidelines” in [Table 1](#).
- **CONTAINMENT MEASURES:** Isolation is continued for at least 8 days and until after resolution of scabies-related skin lesions (i.e., burrows, new bumpy rashes, scales, crusts, and excoriations). Inmates with crusted scabies should be provided with clean linens and clothing *each day* (to remove contaminated skin crusts containing many mites). If possible, the inmate should shower frequently (i.e., daily) to remove skin crusts.

## TREATMENT REGIMENS FOR SCABIES

Table 1 and Table 2 below outline the regimens for treatment of scabies. See [Appendix 1](#) for specific guidelines on treatment administration and timing with other containment measures.

**TABLE 1. ORAL TREATMENT FOR SCABIES (IVERMECTIN)**

<b>BRAND NAME</b>	Stromectol® (available in 3 mg tablets). Generic is available.
<b>DESCRIPTION</b>	<p>Oral ivermectin is an effective agent for scabies treatment.*</p> <ul style="list-style-type: none"> <li>• <b>Ivermectin is now recommended as the standard treatment for typical scabies, as well as for contacts of typical and crusted scabies cases in the BOP.</b></li> <li>• Ivermectin is also utilized in conjunction with topical permethrin 5% cream for the treatment of crusted scabies (see “TREATMENT GUIDELINES” below in this table).</li> </ul>
<b>DOSAGE FORM</b>	<ul style="list-style-type: none"> <li>• Ivermectin is available in 3 mg tablets, with the dose based upon weight (200 micrograms per kg):                             <ul style="list-style-type: none"> <li>36–50 kg (79–111 lbs) = 3 tabs (9 mg)</li> <li>51–65 kg (112–145 lbs) = 4 tabs (12 mg)</li> <li>66–79 kg (146–174 lbs) = 5 tabs (15 mg)</li> <li>≥ 80 kg (≥175 lbs) = 200 mcg/kg</li> </ul> </li> </ul>
<b>TREATMENT GUIDELINES</b>	<ul style="list-style-type: none"> <li>• <b>ADMINISTRATION:</b> Ivermectin administration should be directly observed. Give with food or close to mealtime to maximize effectiveness.</li> <li>• <b>CONTRAINDICATION:</b> Ivermectin is contraindicated in pregnant or breastfeeding women.</li> <li>• <b>TYPICAL SCABIES:</b> Ivermectin is administered orally as a single dose, with a repeat dose in 7 days.</li> <li>• <b>CRUSTED SCABIES is treated with both ivermectin and permethrin 5% cream simultaneously in multiple doses.</b> Depending on infection severity, the CDC recommends that the ivermectin/permethrin regimen be administered together in <b>3 doses</b> (days 1,2,8), <b>5 doses</b> (days 1,2,8,9,15), or <b>7 doses</b> (days 1,2,8,9,15,22, 29). It is recommended that the BOP National Dermatology Consultant be provided photographs of the rash and consulted for treatment recommendations.                             <ul style="list-style-type: none"> <li>➔ See <a href="#">Table 2</a> for information on using permethrin cream.</li> </ul> </li> <li>• <b>CONTACTS:</b> Asymptomatic close contacts of either typical or crusted scabies are presumptively treated with ivermectin, with a repeat dose administered 7 days later.</li> </ul>

\* Ivermectin is an antiparasitic agent that has been used extensively and safely in the treatment of other parasitic infections. While the FDA has not approved the drug for the treatment of scabies infection, the preponderance of evidence demonstrates its safe and effective use for treating scabies.

**TABLE 2. TOPICAL TREATMENT REGIMEN FOR SCABIES (PERMETHRIN 5% CREAM)**

<b>BRAND NAMES</b>	Elimite® and Acticin®. Generic is available.
<b>DESCRIPTION</b>	Permethrin is an insecticide cream that is considered safe and effective.
<b>TREATMENT GUIDELINES</b>	<p><b>Treatment failure will occur if the cream is ineffectively applied.</b> Application of cream should be directly observed (see instructions in <a href="#">STEP 3.d.2</a> in <i>Appendix 1</i>.)</p> <ul style="list-style-type: none"> <li>• <b>TYPICAL SCABIES:</b> Cream should be applied to all areas of the body from the neck down, and washed off after 8–14 hours. Cream should be reapplied in 7 days. (See <a href="#">STEP 3.d.2</a> in <i>Appendix 1</i> for instructions regarding application of permethrin 5% cream for typical scabies.)</li> <li>• <b>CRUSTED SCABIES:</b> Treat with <i>both</i> permethrin and ivermectin (see <a href="#">Table 1</a> above for dosing schedules). Permethrin should also be applied to the face and scalp.</li> <li>• <b>CONTACTS:</b> Permethrin is an <i>alternative</i> presumptive treatment for asymptomatic contacts of typical or crusted scabies, with a repeat treatment in 7 days.</li> </ul>
<b>NOTES</b>	<ul style="list-style-type: none"> <li>• Permethrin has a high alcohol content, with associated flammability risk and the potential for diversion.</li> <li>• Permethrin products that are utilized for lice come in a lower (1%) concentration.</li> </ul>

## 8. CONTACT INVESTIGATION

- ➔ *Prompt contact investigation is indicated whenever a scabies case is diagnosed.*
- ➔ *Consult [STEP 5](#), in *Appendix 1*, for step-by-step instructions on management of scabies contacts. See [STEP 4](#) in *Appendix 1* for instructions on managing contaminated items.*

### TYPICAL SCABIES

In the case of typical scabies, close contacts include any individual who has had skin-to-skin contact, cellmates, or those with potential exposure to the inmate’s clothing, linens, or towels. The inmate with scabies should be interviewed to identify anyone who may be a contact. In addition, an on-site visit to the housing unit should be made to assess the potential for transmission and to identify additional potential contacts. In general, all cell mates are considered close contacts. In dormitory-type settings, close contacts include those who had exposure to the inmate’s bedding or clothing.

#### MANAGEMENT OF SCABIES CONTACTS —KEY POINTS

- ★ *All inmates who are identified as close contacts should be evaluated for scabies signs and symptoms.*
- ★ *Close contacts who are symptomatic should be isolated and treated.*
- ★ *Asymptomatic close contacts do not need to be isolated, but should be presumptively treated for scabies. Symptoms can take 2–6 weeks after a person is infested to appear. Scabies can be transmitted during this asymptomatic period.*
- ★ *All contacts should be retreated in 7 days.*
- ★ *Linens, towels, and clothing of contacts should be laundered simultaneously in hot water with each treatment.*
- ★ *To avoid reinfection, the treatment of cases and contacts should be carefully coordinated so that all are treated within the same time period.*



## SPECIAL CONSIDERATIONS WITH CRUSTED SCABIES

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Crusted scabies is much more communicable than typical scabies infestations, and therefore requires rapid and aggressive detection, diagnosis, infection control, and treatment measures to prevent and control spread. Similarly, a wider circle of contacts should be evaluated and considered for presumptive treatment.

### MANAGEMENT OF CRUSTED SCABIES CONTACTS—KEY POINTS

- ★ *All cellmates and other persons who may have been exposed to a patient with crusted scabies—or their clothing, bedding, towels or personal property—should be identified and treated, because of the high risk of transmission, complexity of controlling an institutional outbreak, and the low risk associated with treatment.*
- ★ *Asymptomatic contacts of inmates with crusted scabies do not need to be isolated, but should be presumptively treated, and then treated again 7 days after the initial treatment.*
- ★ *All suspected and confirmed cases of crusted scabies, as well as all potentially exposed persons, should be treated at the same time to prevent re-exposure.*
- ★ *Linens, towels, and clothing of contacts should be laundered in hot water simultaneously with each treatment.*

## OUTBREAK INVESTIGATION AND MANAGEMENT

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A scabies outbreak suggests that transmission has been occurring within the institution for several weeks to months—thereby increasing the likelihood that infested inmates may have had time to spread scabies elsewhere in the facility and to other facilities. Measures to control scabies in an institution depend on factors such as how many cases are diagnosed or suspected, how long infested persons have been at the institution while undiagnosed or unsuccessfully treated, whether cases are from a single or multiple housing units, and whether any of the cases are crusted scabies.

- ➔ *The Regional/Central Office should be consulted regarding scabies outbreak management.*
- **During an outbreak, all health care workers in the facility should be educated** regarding scabies diagnosis, treatment, and infection control measures.
  - ➔ [Appendix 1](#), *Scabies Management Checklist*, can be a useful educational tool.
- **When there are multiple cases of scabies, control measures include heightened surveillance for early detection of new cases.** It may be necessary to conduct a mass screening, including interviews and visual inspection of large groups of potential inmate contacts, together with simultaneous treatment.
- **In addition, the following should be emphasized:**
  - ▶ Proper use of infection control measures when handling patients or their clothing, bedding, or other belongings (as described throughout [Appendix 1](#)).
  - ▶ Confirmation of a scabies diagnosis.
  - ▶ Early and complete treatment, and follow-up of cases.
  - ▶ Prophylactic treatment of persons identified as close contacts.

*(list continues on next page)*

- ▶ In addition to the laundering of clothing and bedding simultaneously with treatment, unwashed items that contact skin (e.g., headphones with foam ear covers, baseball caps, footwear) should be bagged for 7 days. An outbreak can be prolonged if inmates retain personal items.
- ▶ Identify any shared items that could result in transmission, e.g., shared coats in Special Housing Units, aprons in Food Service.
- ▶ If inmate contacts have left for other BOP facilities or halfway houses during the outbreak, notifications to those facilities should be coordinated with the Regional/Central Office.
- **Long-term surveillance for scabies is imperative to the eradication of scabies from an institution.** For months following a scabies outbreak, clinicians should remain alert for signs and symptoms of scabies and utilize a low threshold of suspicion to initiate treatment.

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## 9. REPORTING

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**The following should be reported utilizing the BP-A0664, Infectious Disease/Outbreak Report:**

- Two or more epidemiologically linked cases of scabies
  - An unusual number of cases
  - Cases occurring over a prolonged period
  - Any case of crusted scabies
- ➔ ***In the event of a scabies outbreak, consultation with the Regional or Central Office is recommended to review the situation on a case-by-case basis.***

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## REFERENCES

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## APPENDIX 1. SCABIES MANAGEMENT CHECKLIST

<p><b>Below is a detailed 4-page checklist for scabies management:</b></p> <ul style="list-style-type: none"> <li>• While the STEPS below are numbered 1–6, many of them are accomplished simultaneously. Use the left-most column to check-off completed tasks.</li> <li>• Scabies cases and close contacts should be treated in the same time frame to avoid reinfection.</li> <li>• The procedures for laundry and environmental cleaning should be performed in the same time frame as other treatment measures.</li> <li>• <b><i>Crusted (Norwegian) scabies requires additional measures, as noted below in bold italics.</i></b></li> </ul>	
<p><b>STEP 1. The provider diagnoses scabies and prescribes treatment.</b></p>	
	<p><b>a. Notify Infection Prevention and Control (IP&amp;C) staff.</b></p>
	<p><b>b. IP&amp;C staff: Identify unit where the scabies case is housed.</b></p>
<p><b>STEP 2. Make notifications; involve staff in planning treatment and management of scabies case.</b></p>	
	<p><b>a. Notify health services and correctional leadership.</b></p>
	<p><b>b. Notify unit staff. In outbreaks, notify other affected departments.</b></p>
	<p><b>c. Plan treatment with all appropriate staff involved, e.g., ensure availability of medication; ensure adequate staff to complete contact screening; plan for simultaneous treatment of all cases and contacts; plan for laundry, cleaning, and 7-day follow-up treatment.</b></p>
	<p><b>d. Notify laundry staff and instruct them regarding the following:</b></p> <ul style="list-style-type: none"> <li>• Laundry from a scabies case should <i>not</i> be sorted; it should be placed directly into the washing machine, avoiding contact with it.</li> <li>• Gloves should be worn, and hands are washed after the gloves are removed. A disposable gown should be worn by those handling contaminated linen.</li> <li>• Laundry should be washed in hot water and dried at the hottest setting. If hot water is unavailable, laundry should be handled in accordance with <a href="#">STEP 4.c.</a> below.</li> </ul>
<p><b>STEP 3. Isolate and treat the scabies case(s)</b></p>	
	<p><b>a. Isolate the case in a single cell or in a cohort with others who are being treated at same time.</b></p> <ul style="list-style-type: none"> <li>• Staff should wear gloves for contact with the inmate. A disposable gown should be worn if contact with inmate or laundry is anticipated.</li> <li>➔ <b><i>For crusted scabies: Staff should wear a disposable gown for all matters.</i></b></li> <li>• Wash hands after the gloves/gown are removed.</li> <li>• Keep soiled linen away from the body, handling it carefully and bag as infectious linen.</li> <li>• Restrict the inmate from work or visits while isolated.</li> </ul>
	<p><b>b. Educate the inmate about the treatment plan.</b></p> <ul style="list-style-type: none"> <li>• Provide education, including the information in <a href="#">Appendix 2, Inmate Fact Sheet on “Typical” Scabies.</a></li> <li>• Instruct the inmate about the plan for treatment, allowing time for questions.</li> <li>• Advise the inmate that it is normal for the rash and itching to persist for 2–4 weeks after treatment.</li> <li>• Advise the inmate that treatment will be repeated in 7 days, but that isolation between treatments is not required. (➔ <b><i>For crusted scabies: Isolation is continued at least 8 days and until lesions resolve.</i></b>)</li> </ul>
	<p><b>c. Prior to treatment, provide the inmate with clean clothes and linens.</b></p> <ul style="list-style-type: none"> <li>• Bag the used linen/clothing in a plastic/impervious bag labeled “INFECTIOUS” for laundering.</li> <li>➔ <b><i>For crusted scabies: Inmates should be provided with clean linens and clothing each day while isolated—in order to remove contaminated skin crusts and scales that contain many mites.</i></b></li> <li>• Bag personal items for 7 days (see <a href="#">STEP 4.c.</a> below).</li> <li>• <b>For large outbreaks:</b> See <a href="#">treatment with oral ivermectin</a> in <a href="#">STEP 3.d.1.</a></li> </ul>
<p><i>(STEP 3 continued on next page.)</i></p>	

(STEP 3 continued from previous page).	
	<p><b>d. Treat scabies case.</b></p> <p>→ <b>Crusted scabies is treated simultaneously with oral ivermectin and permethrin 5% cream.</b> See <a href="#">Table 1</a> for treatment schedules for crusted scabies. Consult BOP National Dermatology Consultant.</p>
	<p><b>1) Treatment with oral ivermectin:</b></p> <p><b>Oral ivermectin is the standard treatment for scabies in the BOP. It is also the standard presumptive treatment for asymptomatic close contacts of inmates diagnosed with either typical or crusted scabies.</b> Permethrin 5% cream is an alternative regimen (see below).</p> <ul style="list-style-type: none"> <li>Obtain the patient's weight.</li> <li>Based on the patient's weight, determine the number of pills to administer (see <a href="#">Table 1</a>).</li> <li>Directly observe ivermectin administration. Ivermectin should be given with food or close to mealtime to maximize effectiveness.</li> </ul> <p><b>CONTRAINDICATION:</b> Ivermectin is contraindicated in pregnant and breast feeding women.</p> <p><b>For large outbreaks:</b> In situations where a large number of inmate cases and contacts are being simultaneously treated with ivermectin, and the logistics of laundering twice with the initial treatment are problematic, the following alternative procedure can be utilized.</p> <ul style="list-style-type: none"> <li>Administer initial dose of ivermectin.</li> <li>Have inmates shower and change clothing and linens, one time only, 8–14 hours after the initial treatment is administered.</li> </ul>
	<p><b>2) Treatment with permethrin 5% cream:</b></p> <p><b>NOTE:</b> Do not confuse with permethrin 1% lotion, which is used for treating lice.</p> <ul style="list-style-type: none"> <li><b>Permethrin is an alternative treatment for typical scabies in the BOP. It is also an alternative presumptive treatment for asymptomatic close contacts of inmates diagnosed with either typical or crusted scabies.</b> Use permethrin for typical scabies if ivermectin is contraindicated, and consider its use in cases where the inmate refuses oral medication.</li> <li><b>Permethrin is also part of the regimen (together with ivermectin) for patients diagnosed with crusted scabies</b> (but not asymptomatic contacts of patients with crusted scabies).</li> </ul> <p><b>The most common reason for scabies treatment failure with permethrin cream is inadequate application. The following directions should be followed carefully:</b></p> <ul style="list-style-type: none"> <li>The inmate should take a lukewarm shower before treatment, <i>if necessary</i>, for hygiene reasons.</li> <li>The inmate should trim fingernails and toenails prior to treatment.</li> <li>Health care staff should directly observe application of permethrin, and assist with application of cream in locations that the inmate cannot reach.</li> <li>Assure that the cream is applied to every square inch of the skin from the neck to the toes, including: between the fingers, under the fingernails, in the armpits, under the breasts, between the buttocks, in the umbilicus, in the genitalia/perianal areas, in between the toes, and on the soles of feet.</li> <li>The face and scalp are not usually treated with permethrin for typical scabies infestations. <ul style="list-style-type: none"> <li>→ <b>For crusted scabies:</b> <i>The face and scalp should also be treated.</i></li> </ul> </li> <li>About half of a 60-gram tube (30 grams) is required to treat an average-size person.</li> <li>Leave a small amount of permethrin with the inmate in a labeled cup so that the inmate can reapply permethrin after washing hands or another part of the body.</li> <li>Advise inmate that they will shower and get clean clothes and bedding 8–14 hours after treatment.</li> </ul>
	<p><b>e. Have inmate shower, change into clean clothing and obtain clean linens <u>8–14 hours after initial treatment</u> (with either ivermectin or permethrin regimen).</b></p> <ul style="list-style-type: none"> <li>Used clothing and linens should again be bagged and treated as potentially infectious laundry, per instructions in <a href="#">STEP 3.c</a>.</li> </ul>
	<p><b>f. Discontinue isolation after inmate has showered and changed into clean clothes.</b></p> <p><b>NOTE:</b> Inmates in long-term care settings who require contact assistance with activities of daily living should be isolated for a total of 24 hours.</p> <p>→ <b>For crusted scabies:</b> The inmate remains in isolation for a minimum of 8 days <u>and</u> until all scabies-related skin lesions (i.e., burrows, new bumpy rashes, scales, crusts, and excoriations) have resolved.</p>
(STEP 3 continued on next page.)	

(STEP 3 continued from previous page).	
<b>g.</b>	<p><b>Retreat the inmate 7 days after the initial treatment.</b></p> <ul style="list-style-type: none"> <li>• There is no need to isolate the inmate for the second treatment.</li> <li>• Administer the same treatment used in <a href="#">STEP 3.d</a>.</li> <li>• Inmates should shower 8–14 hours after treatment is administered and be given clean clothes and linens.</li> <li>• There is no need for special precautions with laundry at this time.</li> <li>• Personal items that were bagged for 7 days can be returned to the inmate at this time.</li> </ul> <p>➔ <b>For crusted scabies:</b> Requires multiple retreatments (see <a href="#">Table 1</a>). Consult BOP National Dermatology Consultant.</p>
<b>STEP 4. Manage contaminated items and clean the area where inmate with scabies is housed.</b>	
	<p><b>General precautions:</b></p> <ul style="list-style-type: none"> <li>• Anyone handling linen or clothing of a scabies case, or cleaning the cell, should wear gloves and a disposable gown.</li> <li>• Soiled linen should be kept away from the body and bagged as infectious linen for laundry.</li> <li>• Hands should be washed after removing gloves.</li> </ul> <p>➔ <b>With crusted scabies:</b> Staff should wear a disposable gown at all times.</p>
	<b>a. Bag all linens and towels in a plastic or impervious bag labeled “INFECTIOUS.”</b>
	<b>b. Bag personal clothing that is to be laundered first in a labeled mesh bag, and then in a plastic or impervious bag labeled “INFECTIOUS.”</b>
	<p><b>c. Place personal property that cannot be laundered in a sealed plastic bag.</b> Any personal items that may have touched the inmate’s skin and cannot be laundered (e.g., headphones with foam ear covers, baseball caps, or footwear) should be placed in a sealed plastic bag. Label and seal the bag with the inmate’s name, registration number, and the date. Personal items can be returned to the inmate in 7 days.</p> <p>➔ <b>With crusted scabies:</b> Personal items are returned when isolation is discontinued.</p>
	<b>d. Discard all lotions, creams, or ointments.</b> If these items were used prior to treatment, they should be discarded because they may be contaminated.
	<b>e. Identify any shared inmate items</b> (e.g., coats in SHU, aprons) and either launder or bag them, as described in STEP 4.c. Shared nail clippers should be disinfected.
	<p><b>f. Disinfect or replace the mattress.</b></p> <ul style="list-style-type: none"> <li>• <b>Vinyl mattress:</b> Wipe off with EPA-approved disinfectant, adhering to manufacturer’s “wet-times.”</li> <li>• <b>Cloth mattress and pillow:</b> The inmate should be issued replacements. They can be reused if placed in a sealed plastic bag for 7 days.</li> </ul>
	<b>g. Clean inmate’s cell/bunk with general cleaner and disinfectant.</b> Fumigation is NOT necessary.
<b>STEP 5. Conduct contact investigation. Presumptively treat contacts.</b>	
	<b>a. Interview scabies case to identify close contacts,</b> e.g., cell-mates, friends, recreation partners, work contacts. Close contacts include any inmate who has had skin-to-skin contact or potential exposure to the inmate’s clothing, bedding, or towels.
	<p><b>b. Visit housing unit to identify close contacts.</b> In general, all cell mates are considered close contacts. In dormitory-type settings, close contacts would be those who had exposure to the inmate’s bedding, towels, or clothing.</p> <p>➔ <b>Crusted scabies</b> is much more infectious than typical scabies. A wider circle of contacts should be evaluated and considered for presumptive treatment. Consult with Regional and/or Central Office.</p>
	<b>c. Examine all identified close contacts for evidence of scabies.</b> If scabies is suspected, isolate and treat as described in <a href="#">STEP 3</a> above.
(STEP 5 continued on next page.)	

<i>(STEP 5 continued from previous page).</i>	
	<p><b>d. Presumptively treat asymptomatic close contacts.</b></p> <ul style="list-style-type: none"><li>• Follow instructions in <a href="#">STEP 3.d.</a> for treatment of typical scabies.</li><li>• Follow instructions in <a href="#">STEP 4</a> for managing potentially contaminated items and cleaning the area where the close contact is housed.</li><li>• Isolation is not required for asymptomatic close contacts.</li><li>• Directly observe retreatment 7 days later. Launder bedding, towels, and clothing at the same time.</li></ul>
<b>STEP 6. Observe for new cases of scabies.</b>	
	<p><b>a. Alert clinicians to suspect scabies when inmates present with itching or rash.</b></p>
	<p><b>b. Remind clinicians to report suspected scabies cases to the IP&amp;C staff.</b></p>
<i>(End of Checklist)</i>	

## APPENDIX 2. INMATE FACT SHEET ON “TYPICAL” SCABIES

### What is scabies?

Scabies is a skin infestation with tiny mites (insects) that cannot be seen with the naked eye. The mites create tunnels or “burrows” under the skin, and can cause intense itching. Often the burrows can be found on or near the webs of the fingers, the inside of the wrist, the nipples (especially in women), the waist, and the sexual organs.

### How is scabies spread?

Scabies is spread with close skin-to-skin contact, including sexual contact. Scabies can also be spread through contact with the infested person’s clothes, bedding, towels, or other personal items. Tell your health care provider about anybody who has been in close contact with you or borrowed your belongings such as head phones or hats. These people may also need to be treated for scabies, even if they have no symptoms. Symptoms can take several weeks to show up in an infested person, but the mites can still be spread in the meantime.

### How is scabies treated and prevented from spreading?

- Carefully place your unit bed linens, blankets, and towels, and any unwashed clothes into plastic bags so they can be properly laundered. These items will be kept separate from other laundry, machine washed in hot water, and then dried on the hot cycle. The mattress, pillows, bedside equipment, and floors will be completely cleaned with a routine disinfectant.
- All wearable items that cannot be washed—such as shoes, head phones, hats—should be placed in a sealed plastic bag for 7 days. (Mites can live only 3–7 days away from someone’s body.) These items will be returned to you after 7 days.
- Remove any rings or bracelets and clean them with soap and water. Keep them off until you shower in 8–14 hours after your treatment.
- Throw away any used lotions, creams, or ointments because they may have become contaminated.
- Your treatment will be either with pills (ivermectin) or a cream medication (permethrin) to apply to your skin.

<input type="checkbox"/> If treated with ivermectin pills:	<input type="checkbox"/> If treated with permethrin cream:
<p><b>a.</b> Put on clean clothes and use the clean towels and bedding.</p> <p><b>b.</b> Take the pills as prescribed close to meal time. The number of pills you take depends on how much you weigh.</p> <p><b>c.</b> You will need to stay in your cell for the next 8–14 hours. After that, you should take a warm (not hot) shower and change into clean clothes and again obtain clean towels and bedding.</p>	<p><b>a.</b> Clip fingernails and toenails. Your nail clipper will be sanitized after you use it.</p> <p><b>b.</b> Apply the permethrin cream medication in a thin, even layer over your entire body from your neckline down, including your feet and behind the ears. Avoid getting the medication into your eyes, nose, or mouth.</p> <p><b>c.</b> Pay special attention to getting cream on your hands (between the fingers and under the nails), between all skin folds, on the navel, on the chest, under the breasts, on the external genital area, between the buttocks, and all over the feet (including the soles and in between the toes).</p> <p><b>d.</b> Put on clean clothes and obtain clean towels and bedding.</p> <p><b>e.</b> Leave the cream on for 8–14 hours. If the cream comes off during this time (for example, while washing hands or using bathroom) reapply the cream. You will need to stay in your cell during this time.</p> <p><b>f.</b> Then take a warm (not hot) shower and completely wash off the cream. Put on clean clothes and use clean towels and bedding.</p>
<p><b>Note:</b> After the treatment, you may initially experience increased itching and continue to itch for 2–3 weeks. However, this does not usually mean that you are still infested. Ask your health care provider about medication that can help with the itching.</p>	

- You must be re-treated by your health care provider 7 days after the initial treatment. After that second treatment, all linen and clothing should be changed again and placed in a bag for laundering.

### When should I see my health care provider for follow-up?

If the original rash does not go away or if any new rashes or skin burrows appear after the second treatment, report this to the health care staff as soon as possible.