



# How Should We Use Magistral Drugs in the Treatment of Scabies in Babies and Children?

Bebek ve Çocukta Scabies Tedavisinde Majistral İlaçları Nasıl Kullanmalıyız?

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**Question:** How should we use magistral drugs in the treatment of scabies in babies and children? **Aylin Demirtaş, MD.**

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## Answer (Fatma Dilşad Aksoy, MD; Mustafa Kemal Hacımustafaoğlu, MD)

**Overview of scabies treatment:** Scabies treatment can be external topical or oral. Treatment is mainly topical. Topical treatment options include permethrin (5%), benzyl benzoate (12.5-25%), sulfur pomades (2.5-12%), topical ivermectin (1%), spinosad (0.09%), crotamiton (10%), lindane (1%) (1-4). Lindane is no longer recommended due to its systemic toxicity (CNS toxicity, convulsions, death). Antihistamines (such as loratidine cetirizine, hydroxyzine) can be given symptomatically for pruritus. If topical treatment is impractical or unresponsive, oral ivermectin may be given if necessary. Oral ivermectin; 200 µg/kg/dose, single dose, given orally on an empty stomach or two hours after a meal. Treatment is repeated after 1-2 weeks. Oral ivermectin is not recommended for children <15 kg and pregnant women (5). Among topical treatments, especially permethrin (5%), sulfur topical drugs and benzyl benzoate are given and these will be mainly mentioned in this paper. Their clinical efficacy has generally been reported between 70-90% in

different studies (1,2,4). Although there are differences in efficacy according to different studies, permethrin has been found to be the most effective among them (3). Among these, permethrin and benzyl benzoate are sold as pomade or lotion, and sulfur topical drugs are prepared magistral except pomade Wilkinson (12.5%).

Permethrin (5% pomade or lotion) is one of the most commonly used topical drugs. It can be applied to infants, children aged two months and older, adults and pregnant women. It is applied from the neck downwards in older children and adults, and to the whole body including the head, neck, nape and behind the ear where the lesion is located in infants and young children, and a bath is taken after 8-14 hours. The same procedure is repeated after seven days.

Benzyl benzoate is applied at a concentration of 25% in adults and 10-12.5% in children (given at >1 year of age). It is applied two days in a row (usually at night). It is repeated one week later (applied two days in a row).

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Spinosad (0.9%) is not available in our country. Again, it is applied all over the body, clothes are worn after drying, and bathing can be done at least six hours later.

Crotamiton (10%) is not available in our country. It is applied to the whole body under the chin and reapplied after 24 hours. Bath can be taken 48 hours after the last application. If necessary, five consecutive applications can be made (2).

**Magistral topical scabies medicines:** Magistral topical scabies medicines mainly contain topical sulfur. Topical sulfur preparations show keratolytic and scabicial properties. The disadvantage is that they do not have a good odor. They can be applied to all age groups (including newborns and pregnant women). Topical sulfur preparations can be given in concentrations of 2-12%, usually <6% in infants. Generally, it can be applied in concentrations of approximately 6% under seven years of age and 10-12% above seven years of age. In newborns, it is applied at a concentration of 2.5%. Topical sulfur preparations are applied to the whole body for three consecutive days (preferably at night), and a bath is taken on the fourth day. The treatment is repeated after 7-14 days (again as a three-day course). Pomade Wilkinson contains 12.5% sulfur. It is diluted 1:1 (more if necessary) with petroleum jelly and applied in the same way to infants and small children. Sulfur-containing magistral medicines are usually prepared with petroleum jelly, sometimes with petroleum jelly and lanolin. For example, for a three-year-old child, a 6% sulfur pomade can be prescribed as a mixture of "Soufre precipitate 6 g, Vaseline pure 94 g". Likewise, a 12% sulfur pomade for a 15-year-old adolescent can be written as a mixture of "soufre precipitate 12 g, vaseline pure 88 g".

**General prevention measures in scabies:** *Sarcoptes scabii* can usually survive outside the body for 24-36 hours, after three days it is no longer infectious in the external environment. Transmission occurs through direct and prolonged skin contact (1,2). It is appropriate to avoid such

close skin contact for at least eight hours after treatment (1,2,4). It is appropriate to give treatment to a person who has close contact with a person who clinically develops scabies until six weeks-two months ago in terms of potential infection (1,2). In addition, transmission via fomites (infected materials such as clothes, bed sheets) is generally not expected except in crusted scabies with a high sarcoptes load. To prevent transmission, especially in crusted scabies, washing clothes and sheets at high temperatures (>50-65 °C for at least 10') or steam cleaning is recommended. For infected persons, strict contact precautions and, if possible, vacuum cleaning of the room are appropriate. Clothes that cannot be washed should be kept in a closed package for >3 days and then used. It is important that the entire family of the infected infant or child receives treatment to prevent repeated infections. If preventive measures are not observed, intra-family transmission and recurrence of infection (ping-pong ball infection) may occur.

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