

# A “Solution” for Patients Unable to Swallow a Pill: Crushed Terbinafine Mixed With Syrup

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Because oral terbinafine is now formulated only as a tablet, there is a barrier to treatment of superficial fungal infections in patients who are unable to swallow a pill such as young children and patients with pill dysphagia. We describe a preparation method that allows this population to safely and effectively use oral terbinafine.

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## Practice Gap

Terbinafine can be used safely and effectively in adult and pediatric patients to treat superficial fungal infections, including onychomycosis.<sup>1</sup> These superficial fungal infections have become increasingly prevalent in children and often require oral therapy<sup>2</sup>; however, children are frequently unable to swallow a pill.

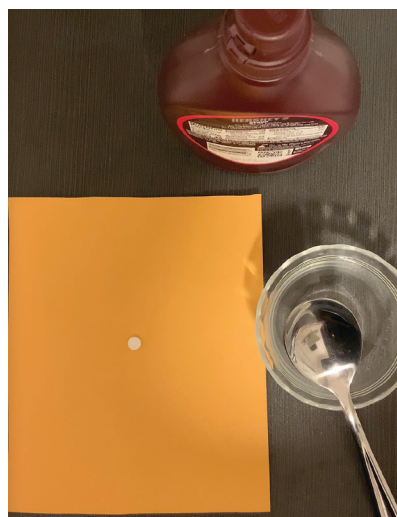
Until 2016, terbinafine was available as oral granules that could be sprinkled on food, but this formulation has been discontinued.<sup>3</sup> In addition, terbinafine tablets have a bitter taste. Therefore, the inability to swallow a pill—typical of young children and other patients with pill dysphagia—is a barrier to prescribing terbinafine.

## The Technique

For patients who cannot swallow a pill, a terbinafine tablet can be crushed and mixed with food or a syrup without loss of efficacy. Terbinafine in tablet form has been shown to have relatively unchanged properties after being crushed and mixed in solution, even several weeks after preparation.<sup>4</sup> Crushing and mixing a terbinafine tablet with food or a syrup therefore is an effective option

for patients who cannot swallow a pill but can safely swallow food.

The food or syrup used for this purpose should have a pH of at least 5 because greater acidity reduces absorption of terbinafine. Therefore, avoid mixing it with fruit juices, applesauce, or soda. Given the bitter taste of the terbinafine tablet, mixing it with a sweet food or syrup improves taste and compliance, which



Simple setup for preparing a syrup solution using supplies found in the home. A terbinafine tablet can be crushed and mixed with the syrup.

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Ms. Miller and Dr. Naka report no conflict of interest. Dr. Lipner has served as a consultant for BelleTorus Corporation, Hoth Therapeutics, Moberg Pharmaceuticals, and Ortho Dermatologics.

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makes pudding a particularly good food option for this purpose.

However, because younger patients might not finish an entire serving of pudding or other food into which the tablet has been crushed and mixed, inconsistent dosing might result. Therefore, we recommend mixing the crushed terbinafine tablet with 1 oz (30 mL) of chocolate syrup or corn syrup (Figure). This solution is sweet, easy to prepare and consume, widely available, and affordable (as low as \$0.28/oz for corn syrup and as low as \$0.10/oz for chocolate syrup, as priced on Amazon).

The tablet can be crushed using a pill crusher (\$5–\$10 at pharmacies or on Amazon) or by placing it on a piece of paper and crushing it with the back of a metal spoon. For children, the recommended dosing of terbinafine with a 250-mg tablet is based on weight: one-quarter of a tablet for a child weighing 10 to 20 kg; one-half of a tablet for a child weighing 20 to 40 kg; and a full tablet for a child weighing more than 40 kg.<sup>5</sup> Because terbinafine tablets are not scored, a combined pill splitter–crusher can be used (also available at pharmacies

or on Amazon; the price of this device is within the same price range as a pill crusher).

### Practical Implication

Use of this method for crushing and mixing the terbinafine tablet allows patients who are unable to swallow a pill to safely and effectively use oral terbinafine.

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