**Future Sessions**

- Begin the next session with the size candy the child swallowed at the end of the previous session.
- Once the child progresses through the 3 types of candy, he/she can swallow the empty enzyme capsule.
- Some children move through the hierarchy easily in one or two sessions. Other children may require 2 to 6 sessions.
- Be patient and make it fun!
- Continue to praise and reinforce pill swallowing until the behavior is well-established.

**Other Strategies at Home**

- Put the pill into a spoonful of ice cream, applesauce, or pudding and let it slide down your child’s throat.
- Swallow the pill with milk or juice instead of water to change the thickness and taste of the liquid.

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**References:**


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**Developed by:**

Alexandra L. Quittner, Ph.D.
Kristen K. Marciel, Ph.D.
Avani C. Modi, Ph.D.
Ivette Cruz, M.S.

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Why is pill swallowing important?

Difficulty swallowing pills is a significant barrier to adherence in young children with CF. In a survey of patients from general pediatric practices, 26% of children had difficulty swallowing pills (Anderson et al., 1995). In a study of barriers to adherence for CF, “difficulty swallowing pills” was listed by the child as the second most important reason for missing enzymes or oral medications (after “forgetting”; Modi & Quittner, 2006). Learning to swallow pills is important for children who must regularly take oral medications. Swallowing pills without difficulty increases adherence, convenience for parents, and the efficacy of enzymes.

Behavioral Intervention

- Uses successive approximations (steps) to establish the behavior (swallowing pills)
- Positive reinforcement (rewards) helps to get the behavior going and maintained (Beck et al., 2005)
- Program was developed and evaluated in an NIH study to improve adherence (Quittner et al., 2001)

Preparation

- Create a pill swallowing kit including: candy (sprinkles, mini M&Ms, Nerds), small cups for water, empty gel capsules, stickers, sticker charts.
- Ask parents to save gel capsules when they remove enzyme beads; these capsules can be used later!

Assessment

- Get approval from the CF team; Check for allergies to the candies
- Ask parents if eating candy is okay

Instructions for Successive Approximations

Step 1: Ask the child to swallow a sip of water. Praise the child, “great job swallowing the water!” Let the child pick a sticker for this first success!

Step 2: Start with the smallest candy (sprinkles). Let the child feel the candy on his/her tongue and feel it melting down his/her throat.

Step 3: Ask the child to “place the candy on the middle of the tongue. Feel how the sprinkle melts, take a drink of water, and swallow the ‘pill’.”

Step 4: If the child is comfortable with Steps 1-3, go on to the next larger candy.

Hierarchy

- After several consecutive successes, the child may move on to the next size candy "pill." You can set the pace for moving through the hierarchy below:
  - Sprinkles
  - Mini M&Ms
  - Nerds
  - Empty pill gel capsule.
  - Finally, take the enzyme!

First Session

- Praise the child for both effort and success.
- Most children find swallowing these sprinkles surprisingly easy.
- Sessions generally last 5 to 10 minutes and should be fun!
- Length of the session should be based on the child’s attention and skill.
- If the child has difficulty with a larger piece of candy, end the session with a success by having the child swallow a smaller piece. [You can move backwards on the hierarchy at any time!]

Homework

- Give the parent samples of each candy, blank sticker charts, and stickers to continue the program at home.
- Encourage the parent to practice each day and to reinforce progress with praise and stickers.
- Be specific about when they will practice (e.g., before dinner).
- After the child earns a certain number of stickers (determined by the parent), the child can earn a small prize, such as crayons, a coloring book, or extra time playing video games or with parents.
- Check progress and continue the pill swallowing program at the next clinic visit. [This can also be done if child is in hospital.]