

Encouraging Pill Swallowing in Young Children with Cystic Fibrosis (ages 3-8 years): A Behavioral Intervention for the CF Team

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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.
- Place "pills" in generic containers or bags.
- If parents remove enzyme beads, ask them to save the gel capsules; these capsules can be used later!
- Or get empty capsules from the pharmacy!

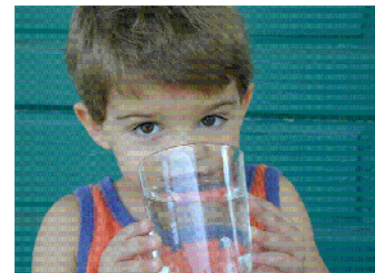


Assessment

- Be sure that the child is physically able and developmentally ready to swallow pills (no developmental delays).
- 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 another sticker for this first success!
- Step 2:** Start with the smallest "pill" (sprinkles). Let the child feel the candy on his/her tongue and melting down his/her throat. (Only refer to the candies as "pills" in order to avoid confusing the child.)
- Step 3:** Ask the child to "place the little 'pill' on the middle of your tongue. Feel how the little 'pill' 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 "pill."



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 candy "pill", 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.



Future Sessions

- Begin the next session with the size candy "pill" the child swallowed at the end of the previous session.
- Once the child progresses through the 3 levels of candy "pills", 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 the child's throat.
- Swallow the pill with milk or juice instead of water to change the thickness and taste of the liquid.

References:

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