



Biofeedback is a therapy that uses a computer, sensors and games to feedback physiological information happening in the body. We use biofeedback therapy as adjunctive therapy for children with constipation and encopresis (fecal soiling). Studies have shown that many children with encopresis/constipation may have difficulty with:

- Incomplete relaxation of the external anal sphincter (EAS) at time of defecation
- Uncoordinated contraction of abdominal and rectal muscles

Biofeedback works by increasing a child's awareness and training him/her in proper muscle use so that he/she can defecate completely and maintain continence. This therapy is done in conjunction with bowel habit training, behavior modification, dietary manipulations and the use of medications.

The biofeedback program at California Pacific Medical Center is unique because no invasive probes or equipment are used. All sensors are placed externally. Therapy consists of a minimum of six weekly 30-45 minute training sessions with our biofeedback specialist. The pediatric nurse practitioner is available during the training period to assess how the medications, diet and behavioral modification strategies are working. At the end of the six-week training session, the referring pediatric gastroenterologist will assess the child's overall progress. There is also an expectation for simple home practices of concepts learned in biofeedback training.

As with any therapy, we have found that certain factors are more likely to promote success. These factors include:

1. *The child has a developmental level of at least five years of age*
 - Understands and cooperates with biofeedback instructions
2. *The family and child are in a position to prioritize the biofeedback therapy*
 - Keep scheduled appointments
 - Arrive on-time for appointments
 - Adjust daily schedules to allow the child to sit on the toilet after meals
3. *Compliance and motivation*
 - Maintain a diet that is high in fiber and fluids
 - Take daily medications as prescribed
 - The child sits on the toilet three times a day after meals
 - Maintain a calendar documenting desirable behaviors (such as sitting and stooling on the toilet)

- Bring the calendar to each visit as a “report card”
4. *Positive reinforcement - Behavioral Modification*
- Grant rewards or special privileges for desirable behaviors
5. *Avoidance of negative reinforcement*
- If desirable behaviors are not achieved, the child does not get his/her reward
 - Punishment not recommended

Biofeedback therapy can be fun and gratifying. But, it is important to remember that cooperation and home involvement from the family are imperative to give the best chance for success. This training can be demanding. However, most kids enjoy it because it can give the child and family a sense of mastery and control.

The members of the Pediatric Gastroenterology Team will assist and support you as the program proceeds. If you have any questions or problems between sessions, we strongly encourage you to call us. We look forward to working with you and your child in this exciting program.