

# Biofeedback Eases Recurrent Abdominal Pain

BY DAMIAN McNAMARA  
Miami Bureau

ORLANDO — Therapeutic biofeedback reduces pain intensity, pain frequency, and health care utilization among children with recurrent abdominal pain, according to two posters presented at the annual meeting of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition.

Biofeedback “is noninvasive and it empowers the kids. It gives them the tools to make themselves better,” Dr. Warren Shapiro said in an interview.

“Biofeedback has long-lasting effects.” Unlike more common acute interventions, “it’s really a long-lasting solution,” coauthor Eric Sowder, Ph.D., said.

The researchers decided to assess biofeedback in this pediatric population because “there has not been very much in terms of long-lasting therapies for abdominal pain,” said Dr. Shapiro, a pediatric gastroenterologist at the Southern California Kaiser Permanente Medical Group in San Diego.

Data indicate biofeedback is feasible for adults in a primary care setting (Appl. Psychophysiol. Biofeedback 2004;29:79-93). “It has not been researched as well in kids. But we see they are getting better,” said Dr. Sowder, psychological assistant in biofeedback and behavioral medicine, Alliant International University, San Diego.

Dr. Shapiro, Dr. Sowder, and their associates assessed 64 children referred to pediatric gastroenterology with recurrent abdominal pain. Pain frequency, intensity, and autonomic nervous system functioning were compared before and after an average of six biofeedback sessions.

Biofeedback might help children with recurrent ab-

dominal pain to adapt their pain behavior. The technique addresses a proposed deficit in their autonomic nervous system response to stress. Also, biofeedback might help these patients counter an enhanced subjective response to pain.

To test these theories, pediatric gastroenterologists referred participants with recurrent abdominal pain. Patient ages ranged from 7 to 18 years, and 70% were female. Pain episodes per week were compared before and after completion of biofeedback, and pain intensity was rated on a 1-10 visual analog scale.

Biofeedback significantly reduced the intensity and frequency of pain. Mean pain intensity ratings decreased from 6 to 2.5; mean number of pain episodes per week decreased from seven to three.

Researchers compared peak-to-valley differences in respiratory sinus arrhythmia (RSA) to reflect autonomic nervous system functioning. The RSA during rest increased significantly, from 13.6 before biofeedback to 22.5 afterward. The RSA during slow-paced breathing likewise increased, from 22 to 32.5.

These findings suggest that biofeedback should be considered a first-line therapy for childhood recurrent abdominal pain, the researchers wrote. “We want to do more research and have a control group, and maybe compare this to hypnosis,” Dr. Sowder said.

A second study demonstrated that “primary care and [emergency department] visits come down” with biofeedback, Dr. Sowder said. He, Dr. Shapiro, and a colleague



In each session, the goal is to address various measures of autonomic nervous system functioning and the patient's response to stress.

demonstrated a significant reduction in health care utilization following biofeedback training of children with recurrent abdominal pain.

The researchers identified 39 children (mean age 13 years) who were diagnosed with recurrent abdominal pain and completed a mean of five biofeedback sessions. They compared health care utilization 2 years prior to biofeedback and 1 year afterward in a Kaiser Permanente database.

Biofeedback significantly reduced mean primary care visits from 10.3 to 3.8 per year; emergency department visits from 0.69 to 0.05; prescriptions from 8.8 to 4.5; and diagnostic tests from 0.77 to 0.08. ■

## Customize Treatment to Needs Of Adolescent With Depression

BY BARBARA J. RUTLEDGE  
Contributing Writer

MENDOZA, ARGENTINA — When it comes to adolescents with depression, psychiatrists would do well to tailor treatment to the individual needs of each patient, Dr. Harold I. Eist said at the 6th World Congress on Depressive Disorders.

Adolescence is a turbulent period with enormous biologic, psychological, and social changes, said Dr. Eist, a psychiatrist in



**When it comes to adolescents, an inability to fall asleep within 30 minutes is a sign of depression.**

DR. EIST

private practice in Bethesda, Md., and a past president of the American Psychiatric Association. The brain of the adolescent is immature—“an impulsive, aggressive, thrill-seeking brain,” he said. “There are simple reflective exercises that this brain has limited capacity to accomplish.”

The DSM uses a categorical classification for diagnosis of depression, and Dr. Eist said he does not necessarily agree with the DSM-IV criteria. “Most clinicians add a dimensional element,” he said.

For example, in a dimensional classifi-

cation, symptom intensity would also be taken into consideration in making a diagnosis. Also, the DSM requirement that the symptoms continue for a 2-week period seems inappropriate for diagnosis of mood disorders in teenagers, since mood changes in this age group are normal.

“I would recommend avoiding the trap of an arbitrary time limit,” Dr. Eist said. “I have examined and treated thousands of adolescents over the years, and I do not remember one who has remained in a dark mood for 2 weeks—other than a few who were seriously suicidal and hopeless.”

Adolescents require more sleep than do adults, and insomnia can be a sign of a mood disorder in an adolescent. It is critical to take a careful sleep history with all patients, but particularly with adolescents, Dr. Eist said. The number of hours that the adolescent sleeps each night is less important for diagnosis of depression than the amount of time it takes to fall asleep. Inability to fall asleep within 30 minutes is a sign of depression.

Major depression in adolescents often goes undetected because the rapidly changing moods fool both the adolescent and family members into believing that the adolescent is just “being a teenager.” In other cases, negativism and pessimism may be hidden by perfectionism. A chronically dissatisfied youngster is seen as not measuring up to his own high standards, rather than as having depression. ■

## Remission Rate of 66% Seen After 12 Weeks of Fluoxetine

BY DOUG BRUNK  
San Diego Bureau

SAN DIEGO — More than two-thirds of children and adolescents with major depressive disorder who were treated with fluoxetine were in remission by week 12 of treatment, yet almost half of remitters had at least one residual symptom by week 12.

The findings are important because “knowing how early clinicians may expect response or remission in their patients is clinically valuable,” Dr. Rongrong Tao said at the annual meeting of the American Academy of Child and Adolescent Psychiatry.

“It may improve [drug] adherence. Knowing the time course of depressive symptom improvement may be helpful in guiding” treatment decisions, Dr. Tao said.

In an open-label study funded by the National Institute of Mental Health, Dr. Tao and her associates in the department of psychiatry at the University of Texas Southwestern Medical Center at Dallas enrolled 168 outpatients aged 7-18 years who had a diagnosis of nonpsychotic major depressive disorder.

Patients with a diagnosis of bipolar I or II disorder were excluded from the study, as were those with anorexia nervosa or bulimia and those with a history of alcohol or substance abuse dependence within 6 months of study entry.

Between 1999 and 2005, the patients re-

ceived 12 weeks of fluoxetine, starting with a dosage of 10 mg/day for week 1 and increased to 20 mg/day for week 2. Nonresponders received a dosage of 40 mg/day at week 6. The average age of the 168 patients was 12 years, 30% had a recurrent major depressive disorder, and their mean Children's Depression Rating Scale-Revised (CDRS-R) score was 57.57. In addition, 40% had attention-deficit hyperactivity disorder, 32% had dysthymia, and 14% had generalized anxiety disorder.

Study visits occurred weekly for the first 4 weeks and biweekly for the remaining 2 months. During study visits, the researchers administered a battery of tests to assess clinical response, including the Kiddie Schedule for Affective Disorders and Schizophrenia—Present and Lifetime version (K-SADS-PL), the CDRS-R, and the Clinical Global Impression scale.

Dr. Tao reported that the rates of remission were 35% by week 4, 48% by week 6, and 66% by week 12. However, 47% of remitters had at least one residual symptom by the end of 12 weeks, most commonly impaired school performance (19%), impaired sleep (12%), irritability (11%), and low self-esteem (9%).

Clinical response also improved in a stepwise fashion, to rates of 68% by week 4, 76% by week 6, and 81% by week 12. Children aged 11 and younger had earlier responses than their older counterparts did, but by week 12, “their response rates were almost identical,” she said. ■