

CHILD PSYCHIATRY: WHEN TO CONSIDER MEDICATION TO TREAT BEHAVIORAL DIFFICULTIES

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Children's mental health is a very important subject, not only for kids, but also for their families and schools. Between 10 and 20 percent of children meet criteria for a mental illness depending upon which source of data is reviewed. For example, the American Academy of Pediatrics has indicated almost 10 percent of children may meet criteria for Attention Deficit Hyperactivity Disorder (ADHD). Many others experience depression, anxiety, other mood or developmental disorders.

A recent controversy has arisen regarding psychiatric medication use in children, particularly given the increase in pediatric prescriptions. In short, if a medication is considered it should be for a well-documented condition, and given at a dose that is effective with few or no side-effects.

CAUSES OF MENTAL ILLNESS:

Four primary causes of mental illness include:

- A genetic predisposition to a condition, that is "it runs in families"
- Biological factors such as a decrease in certain chemical neurotransmitters in the brain
- Current stressors
- Prior stressors which may impact here and now

PSYCHOTHERAPY:

For most conditions, there is value to psychotherapy, which may include individual, group or family therapy. Strategies used include cognitive, behavioral, play and interpersonal therapy. They are designed to give the child tools for helping to address mood and anxiety and behavioral symptoms.

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HEADACHES DURING CHILDHOOD AND THROUGHOUT LIFE

by MARILYN A. KUBICHEK, M.D., F.A.A.P.
Attending Neurologist

Headaches are a very common childhood complaint that can continue to be a lifelong issue. Frequently, these events are rare and usually self resolve. However, some children do experience frequent, recurrent, and severe episodes that may require intervention.

Mechanism

The brain itself is insensitive to pain. Structures associated with the brain that are pain-sensitive include some of the large blood vessels, the scalp, sinuses, teeth, face, eyes and ears.

Very often the nerves that control these areas also supply the cerebral blood vessels and the tissue that surrounds the brain. As a result, pain from these extra cerebral sources is perceived by the body as headaches.

TYPES OF HEADACHES

Migraine

This type of headache is the result of a sensitivity of the blood vessels that culminates with a narrowing and/or dilation of the arteries that supply the brain. It can occur at any age and in either sex. Usually, there is a positive family history.

The paroxysmal events are separated by pain-free periods. The pain is usually unilateral, but can switch sides, is throbbing in nature, with nausea and occasional vomiting. Some people have a warning or "aura" prior to the headache. They can also have visual disturbances, such as blurry vision, sparkles, lights, colors or have an area of visual loss called a "scotoma."

These events can occur at any time of day. They can be very brief or last for days. Precipitating factors include certain foods, dehydration, skipping meals, stress, changes in the weather, illness (especially with fever, hormonal changes) and lack of sleep.

Some children experience a migraine variant that can consist of periodic complaints of abdominal pain, vomiting or dizziness that can occur with or without a headache. A family history may be present for migraine and these patients can respond to migraine therapies. They can also go on to develop migraine headaches later in life.

Cluster headaches

This form of headache is more common in males. It usually does not occur prior to age 10. The event consists of a one-sided headache that is localized to the area surrounding the eye. Patients can also experience eye redness, tearing, and nasal congestion.

The attacks are usually short, lasting 30 minutes to one hour and occur in clusters for 1-3 days over a 6-12 week period. They will then resolve with remissions lasting years. They typically do not respond to the standard therapies for migraine headaches.

Muscle tension headaches

These occur as a result of contraction of the muscles of the scalp and neck. This is a very common form of headache in adolescents and adults. The patient usually describes a "band" or pressure-like sensation. On physical exam, the muscles may be tender and spasm can be appreciated. These headaches do not typically interfere with the patient's activities. They also respond well to acetaminophen or ibuprofen.

Posttraumatic headaches

These can occur after some form of a concussion or head trauma. This can be as simple as heading the ball during soccer practice to a severe injury after a car accident. They can last days to months depending on the severity of the initial trauma. They can also self resolve. Other associated symptoms include sleep problems, behavioral changes and changes in school performance with memory and concentration problems.



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Headaches with Depression

A symptom of childhood depression can be chronic headaches. This can be associated by school problems, mood disorders, weight loss or gain, sleep problems and social withdrawal.

Traction Headaches

This category encompasses the more severe causes for headaches such as a brain tumor, a collection of blood or infected fluid, such as an abscess, or an elevation in intracranial pressure. These headaches can occur at any time. However, they are usually more chronic and progressive in nature. They can be exacerbated by coughing or sneezing and usually have associated vomiting. The patient will also not seem like themselves, even between attacks. Other physical signs can include weakness, double vision, changes in balance or gait and personality changes.

Evaluation of Headaches

A history regarding the frequency, nature, severity, triggers, associated symptoms and family history is very important in determining the headache type and appropriate evaluation and treatment. The patient may be asked to keep a diary regarding these symptoms. Very often a headache patient can experience different types of headaches.

Blood testing, EEG and neuroimaging, which may consist of a CT scan or MRI of the brain, may also be performed as part of the diagnostic process in addition to the physical examination.

Treatment of Headaches

The goal of headache management is to relieve the symptoms, allowing the patient to participate in their usual activities at a normal level and decrease the frequency and severity of attacks as well as preventing further episodes.

Abortive Therapy

Over-the-counter drugs, such as Advil and Tylenol, may be used. Prescription analgesics include Lorcet and Fioricet. Triptans, such as Imitrex, and DHEA products such as Migrinal are also prescribed. It is important to use these early in a headache, at the appropriate dose, and not to overuse these medications. Misuse can actually lead to a worsening or rebound headache.

Prophylactic Medications

These are medication used to block the neurochemical cascade that creates the headaches. They are used for a period of time to interrupt the headache cycle when

the events are too frequent and/or severe. These can include antidepressants, anticonvulsants, beta blockers, calcium channel blockers and vitamin supplements.

Lifestyle Issues

Good health habits impact headache sufferers. Daily exercise, adequate rest, stress management, hydration and diet all play a major role in preventative measures that can aid the headache patient.

Diet

Diet is probably the single best way to tackle common headache triggers. These are **not** food allergies. The body reacts to chemicals in the food, which then triggers a headache. By identifying your trigger and simply eliminating the food, you can significantly decrease or eliminate your headaches.

HEADACHE HAZARDS	CHEMICAL TRIGGER	SUBSTITUTE
Cola Soda	caffeine	caffeine free colas, Ginger Ale, Sprite, Seven Up
Diet products	Nutrasweet	Splenda
Chocolate	theobromine Phenylethylamine	carob white chocolate (without cocoa)
Nuts (Including peanut butter)	tyramine	sunflower or pumpkin seeds
Sharp/aged cheese	tyramine	American cheese
Citrus fruits	unknown	apples, melon, peaches, berries

Headache management is a combination of stress management, good eating habits, and appropriate sleep patterns along with drug therapy. Eliminate the triggers you can. Perform 30 minutes of aerobic exercise at least three times a week and be aware of hormonal influences and environmental factors. Today we have many lifestyle, dietary, and pharmacological options that can aid the headache patient toward a pain free life.

For a referral to a neurologist, please call the Saint Barnabas Physician Referral Service at 1-888-SBHS-123.



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In many cases, however, psychotherapy in combination with medication does provide the best response. This is particularly true in mood and anxiety disorders and ADHD.

MEDICATION TREATMENT FOR ADHD:

ADHD begins before age seven, includes distractibility, impulsivity and/or hyperactivity and occurs in multiple settings (home, school, socially). It persists in 50 to 80 percent of children into adolescence and adulthood.

Treatments include stimulant and nonstimulant medications, which increase norepinephrine and dopamine in the brain. A recent National Institutes of Health study showed medication is a primary treatment for ADHD.

Long-acting stimulants, such as Concerta® and Adderall XR®, prevent the need for in-school dosing. Common side-effects include decreased appetite, stomach upset and difficulty with sleep. These medications have a 70 to 90 percent rate of success.

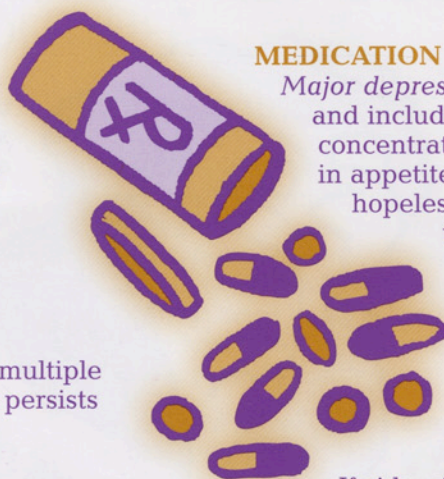
Strattera® is a new FDA-approved treatment for ADHD (age six and above). It requires three to four weeks to take effect once it is at a therapeutic dose (1-1.4 mg/kg/day). Common side-effects include fatigue, gastrointestinal symptoms and headache. These side-effects can be minimized by starting Strattera® at dinnertime. Unlike stimulants, Strattera® may be effective during the day and evening.

Clonidine® and Tenex® may decrease impulsivity, hyperactivity, tics and outbursts, but will not increase attention. These medications may decrease blood pressure and pulse and cause sleepiness. In adults they are used to decrease blood pressure.

MEDICATION TREATMENT FOR ANXIETY:

Anxiety disorders include separation anxiety, obsessive-compulsive (OCD), panic, posttraumatic stress disorder (PTSD), generalized anxiety and social anxiety. Zoloft® is FDA approved age six and above for OCD. It has also been used to treat other anxiety disorders and depression. This and other "serotonin selective reuptake inhibitors" (SSRI's) include Luvox®, Prozac®, and at times, Celexa®. Paxil® and Effexor® are not currently recommended for children, although their use on an individual basis may be evaluated with a psychiatrist.

The best treatment approach is often a combination of a serotonin medication and cognitive behavioral therapy.



MEDICATION TREATMENT FOR DEPRESSION:

Major depression lasts for at least two weeks and includes decreased energy, interest and concentration as well as an increase or decrease in appetite and sleep. It may also include hopelessness, helplessness and suicidal thoughts. *Dysthymia* lasts for one year and is a feeling of "the blahs," not as severe as major depression and with brief periods of stable mood.

These may also be treated with SSRI's. Prozac® has the longest "half-life" in the body and has drug interaction with certain medications.

If side-effects develop, they may continue up to one week after the medicine is stopped. Paxil® has the shortest half-life in the body, but, due to recent concerns, it is not currently recommended for children. Zoloft® and Celexa® have minimal drug interaction and an intermediate half life. Lexapro® is a more potent version of Celexa®. Wellbutrin® has sometimes been used and it increases norepinephrine and dopamine. Wellbutrin® should not be given in those with an eating or seizure disorder and may also cause a rash.

Common SSRI side-effects include headache, stomach upset, and decreased sleep. Unusual side effects include restlessness and agitation, which may be seen with impulsivity. Close monitoring is essential.

MEDICATION TREATMENT FOR BIPOLAR DISORDER:

Bipolar disorder is found in one percent of our population and has been a topic of much discussion when evaluating children. Some have stated that up to 20 percent of children with ADHD have bipolar disorder, but this has been called into question by the NIMH.

Children with bipolar disorder typically demonstrate euphoria, a decreased need for sleep and cyclicity of mood. A family history, major outbursts, racing thoughts, rapid speech, grandiose and sexual thoughts may also be seen. Sometimes an antidepressant medication may trigger mania. Treatment includes "mood stabilizing" medication. Lithium is effective, but may decrease thyroid functioning, increase urination and thirst, increase tremors and increase fluid retention. It does require a blood level and lab work.

Depakote® is also used, but in overweight girls with significant hair growth on their arms and legs it may contribute to polycystic ovaries. It requires a blood level and lab follow-up including liver enzymes. Trileptal® has shown promise and requires a check of serum sodium during early treatment (it may decrease sodium). Lamictal® is being used for bipolar depression, but has a high rate of rash, which, though rare, may be serious.

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SPECIALIZED CARE FOR ADULT AND PEDIATRIC EPILEPSY

When Julie Budd, age 12, began to have bouts of pain in her abdomen, her parents assumed it was a problem with her stomach. But, after a variety of tests and visits to a gastroenterologist and a pediatric urologist, they were no closer to a diagnosis. Soon Julie was doubling over from the pain and waking up six to eight times a night. When the spasms increased to 20 times a night, with no medical explanation, the family became frantic for an answer.

"I took her Girl Scout troop to Radio City Music Hall and as we came off the ferry she had another episode," recalls Mrs. Budd. "It was terrible. She was on her hands and knees crawling on the dock."

The final clue to the cause of her condition came from an episode Julie had after a visit to a physician. She ran out into traffic, narrowly missing a car, and then had no memory of the incident. The family would later learn that memory lapse is one of the hallmarks of epilepsy.

At The Institute of Neurology and Neurosurgery at Saint Barnabas, Julie was diagnosed with a rare condition called abdominal seizure disorder. She spent several nights in the Institute's video-electroencephalography (video-E.E.G.) monitoring area for intensive diagnostic testing.

"Everyone there was just wonderful," Mrs. Budd says. "From the physicians, to the technologist who applied the patches, to the volunteer who played games with her, they all did a great job. I could not have been more pleased."

Julie was placed on a medication that completely eliminated her seizures. Now, two years later, she is a happy, resilient young woman who speaks to other families with children who are experiencing seizures.

Complete Care for Seizure Disorders

The Adult and Pediatric Comprehensive Epilepsy Centers at The Institute of Neurology and Neurosurgery offer complete care in eliminating or reducing seizures in adults and children with

epilepsy and other seizure disorders. Under the direction of internationally renowned neurologist Orrin Devinsky, M.D., a dedicated team of physicians works with patients. The team members are Eric Geller, M.D., Aviva Bojko, M.D., Mangala Nakarni, M.D., and Rina Goldberg, M.D.

The Centers offers routine E.E.G., ambulatory E.E.G., and video-E.E.G. testing, as well as brain mapping, neuroimaging (including MRI and PET) and surgical treatment of epilepsy. Video-E.E.G. is described as a "brain stress test" that records a patient's seizures during testing so that a definitive diagnosis can be made. The test is performed in a newly expanded 16-bed unit at Saint Barnabas with state-of-the-art equipment. The unit is staffed by a neuropsychologist, a full-time nurse practitioner, E.E.G. technologists, and a specially-trained nursing staff.

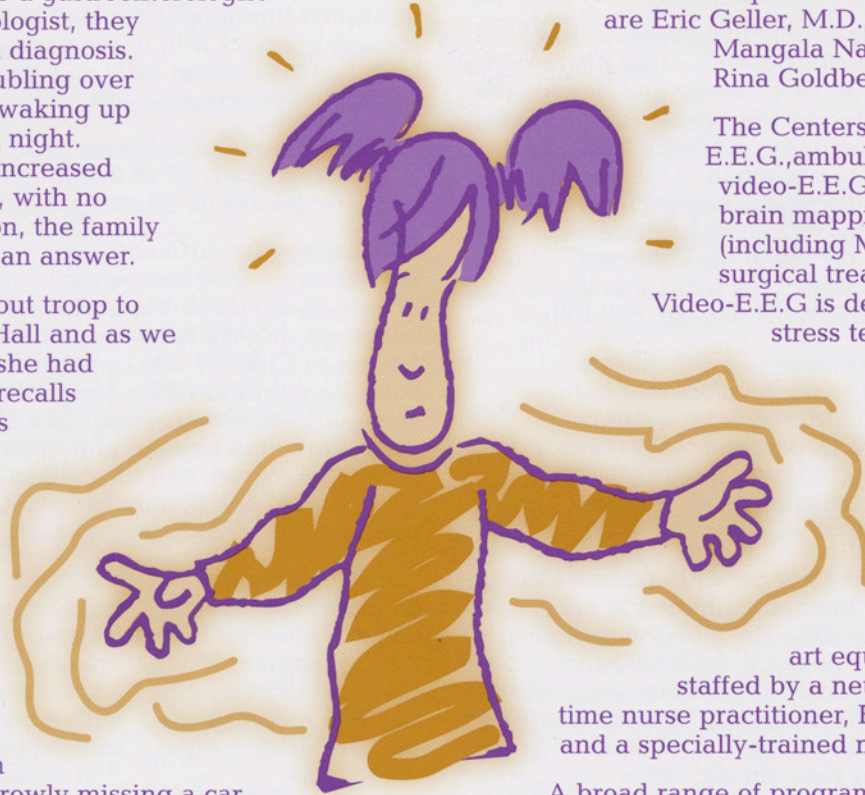
A broad range of programs meet the needs of patients and their families, including intervention for memory disorders, developmental delays in both children and adults, as well as social, occupational, behavioral and psychological issues.

Complete and Accurate Diagnosis and Treatment

Seizures vary widely in their features, ranging from mild sensations such as tingling in a finger to loss of consciousness. Making a complete and accurate epilepsy diagnosis is critical to providing effective treatment. Frequently people diagnosed with epilepsy prove to have other disorders.

Treatments include the use of medications and also the use of vagus nerve stimulation, a strategy for reducing the frequency and severity of seizures. For people who have not been able to achieve control with other treatments, epilepsy surgery may be an option. A full range of conventional epilepsy surgery procedures, together with new techniques pioneered by neurosurgeons at the Epilepsy Centers, offer an individual the potential for full seizure control.

For further information, please call the Adult and Pediatric Comprehensive Epilepsy Centers at (973) 322-6600.



QUESTIONS & ANSWERS

by SUSAN J. MARGOLIN, M.D., M.P.H.
CHIEF, GENERAL PEDIATRICS

If you have a question for the pediatrician, please e-mail it to ESALAMON@SBHCS.COM or mail it to Elizabeth Salamon, Public Relations, Saint Barnabas Medical Center, 95 Old Short Hills Road, West Orange, NJ 07052

Questions should be applicable to children in general, and not focused on the specific case of an individual child.

Dear Dr. Margolin,

Q. Is Chicken Pox Vaccine (Varicella Vaccine) now considered safe?

A. Before the varicella vaccine was introduced in the United States, there had been a 20 year experience with it in Japan. The vaccine is both safe and very effective. In fact the vaccine has been found to be so safe and effective that the New Jersey Department of Health has proposed a regulation that will require every child born after January 1, 1998 to have received one dose of the vaccine prior to entry into school. Chicken pox, although generally mild and self limiting, can have severe complications which include pneumonia, severe secondary bacterial infections and central nervous system involvement. The vaccine inhibits both the chicken pox and its complications.

Dear Dr. Margolin,

Q. Why would a child keep getting strep throat? Can you tell me more about this condition.

A. Strep throat is the most common illness produced by a bacterium called Group A Streptococcus. The illness is most common among school-aged children and adolescents. There are more than 100 distinct types of this bacterium, and although a child produces antibodies to a type by which he/she is infected and will not become infected by that type again, there can be a recurrence of strep throat when infected by another type. Transmission of the germ results from contact with another person who has a strep throat and has spread respiratory secretions (sputum, sneezing, etc). The close contact that children have in school promotes the spread of the bacterium.

Sore throats can also be caused by viruses. Your child's doctor will probably take a throat swab to differentiate a strep throat from a viral sore throat. Strep throats are treated with antibiotics to eradicate the germ. Sore throats do not need treatment with antibiotics.

Dear Dr. Margolin,

Q. My children, 2 and 5, never seem to stop eating. Both of them are thin, but I feel like the kitchen never closes. Do children need snacks to supplement meals? They also seem thirsty all the time.

A. Young children are what I call "grazers." They will eat just enough to satisfy hunger and then may be hungry again a short while later. Generally, a young child (under 3) will not eat beyond the point of fullness and they do best on many small meals a day (mealtime and snacks). Just make sure that the snacks are healthy. Cookies, candy and crackers are no substitute for protein, fruits and vegetables.

Children will often substitute liquid intake for food consumption and there is a tendency to want to give children a glass of milk if they have not eaten well. Please remember that three 8 ounce glasses of milk daily will suffice for a young child. We now recommend limiting ingestion of fruit juice also. Juice should not be introduced to infants before 6 months of age and intake of fruit juice should be limited to 4-6 ounces per day for children 1-6 and 8-12 ounces a day for children 7-18. Other liquid may be given as water. If your child seems to have excessive thirst, check with your physician.



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