



SPECIAL TIMES

COMMUNITY THERAPEUTIC DAY SCHOOL

187 Spring Street, Lexington, MA 02421 781/861-7081

2009 Volume 20 #2



FROM THE EXECUTIVE DIRECTOR

Nancy Fuller

Our newsletters are intended to educate, inform and enlighten our community and keep us connected to what is important in the fields of medicine, science and education. This newsletter will focus on the very fast moving field of psychopharmacology. At CTDS the use of medication with children is only one aspect of the total therapeutic program. The overall intent of the program is to enhance the quality of lives of children and their families. We at CTDS attend to the questions of medication with respect and careful attention.

"Primum non nocere"
(first do no harm)
Hippocrates
(c. 460 - 400BC)

CLINICAL PSYCHOPHARMACOLOGY WITH CHILDREN

*Bruce Hauptman MD, Psychiatrist
Community Therapeutic Day School*



Pharmacology is that branch of medicine which treats illnesses or conditions with medication. Psychopharmacology is the use of medication to treat, ameliorate or diagnose clinical psychiatric states or illness. Medication may be used for diagnostic as well as therapeutic purposes, in an attempt to understand and mitigate a range of symptoms or conditions in children. Medication is rarely the definitive and complete 'treatment' of a clinical state which may have complex biologic, social and genetic components. Medication may be helpful, often improving the child's ability to function at home and at school, and in relationships with friends and family. At times, medication may decrease the potency of a symptom which is impeding the overall developmental process and, by gaining relief, the child's global development may proceed in a healthier and more functional and integrated manner.

When prescribing medication, the physician and family must review the risk-benefit paradigm and ask the following important question: does the potential benefit of the medication, i.e. the possibilities of improving the child's clinical and developmental status, outweigh the potential risks, i.e. side effects, which might arise from the use of the medication (including possible interactions with other medications the child might be taking). Towards this end, it is important to have some degree of conviction regarding the current diagnosis of the child's ailment, as well as awareness of the current status of the particular medication being considered.

Once medication has been decided upon as a treatment of choice, a plan for frequent follow up assessments are critical to ascertain the efficacy of the treatment, dosage adjustment and possible side-effect problems.

The medications to be discussed here are not intended as a comprehensive list, and the side effects mentioned are not intended to be all-inclusive. Such a discussion is well beyond the limits of this simple article. The intent here is to review some more commonly used medications, more common conditions, and to raise awareness regarding side effect potential. A further reference can be found online at the [American Academy of Child and Adolescent Psychiatry](http://www.aacap.org/cs/root/facts_for_families/facts_for_families) web site entitled **FACTS FOR FAMILIES:**

www.aacap.org/cs/root/facts_for_families/facts_for_families.



MEDICATION FOR ATTENTION DEFICIT HYPERACTIVITY DISORDER

Stimulant Medication - These come in short and long acting varieties

Methylphenidate: (Ritalin, Concerta, Metadate, Focalin, et al.)

Dextroamphetamine: (Dexadrine, Adderall, Vyvanse, et al.)

Side effects include headaches, stomach aches, sleep difficulties, loss of weight and loss of appetite.

These side effects are usually manageable through dosage modification or change in specific compound. Two more problematic side effects are long term growth suppression, and the development of tics, both of which warrant attention.

Non-stimulant medication

Atomoxetine (Strattera)

Side effects include stomach ache, nausea and vomiting, fatigue, dizziness and mood swings. There have been some reports of seizures and suicidal thoughts and rare liver injury.

Amantadine - This antiviral agent has been used (off label) for ADHD treatment. It has some potential central nervous system side effects.

ANTIDEPRESSANT MEDICATION

In this era the term “antidepressants” represents the several groups or classes of medicines used to typically treat depression in adults. It is important to note that several of those drugs are approved for child treatment by the FDA. In addition, several of those drugs are also used to treat a range of other conditions in adults and children such as, bedwetting (Tofranil), difficulty sleeping (Elavil), anxiety and obsessive compulsive disorders (Paxil, Celexa, and Zoloft) and occasionally eating disorders, post traumatic stress disorders and ADHD. There are four major groups of antidepressants which, more or less, correspond with major neurotransmitter systems in the brain.

The Serotonin Reuptake (SSRI) Inhibitor group: Prozac, Zoloft, Paxil, Luvox, Celexa, and Lexapro. Also with slightly different chemical structure we should include **Effexor and Cymbalta (SNRI) Serotonin and Norepinephrine and Reuptake Inhibitors.**

Some of the side effects of the SSRI group include somnolence, nausea, thoughts of suicide, tremors, changes in appetite, dizziness, changes in sexual behavior in adolescents and adults, diarrhea, and especially in children, a behavioral disinhibition, or a form of mania.

Tricyclic antidepressants (TCA'S): Tofranil, Elavil, Pamelor, Nortriptyline. Side effects include dry mouth, constipation, difficulty urinating, blurred vision, hypotension, some cognitive difficulties, and rarely, irregular heart rhythms. Seizures are another rare side effect.

MAO Inhibitors (Monamine Oxidase): Nardil and Parnate. Because of potentially lethal interactions between these drugs, other drugs and common food items, MAO Inhibitors are generally used when other antidepressant treatments have failed.

Atypical antidepressants: Includes Serzone, Wellbutrin and Remeron

ANTICONVULSANT / MOOD STABILIZING MEDICATION

This group of drugs has been useful in treating a wide range of conditions from bipolar (manic-depressive) disorder, to severe aggressive and impulsive behavior, as well as severe mood swings. Examples of these medications include Lithium, primarily used to treat manic behavior, Depakote, Tegretol, Trileptal and Lamictal. Other medications in this category include Neurontin and Topamax. This group of medications also treats seizure disorders with the exception of Lithium. Monitoring of blood levels is important because of potential toxic reactions. Lithium, in particular, needs frequent blood levels drawn.

ANTIPSYCHOTIC MEDICATION

These medications are used to treat (a) symptoms of psychoses (delusions, hallucinations, thought disorders) (b) tic disorders (Tourettes Syndrome) (c) severe anxiety and severe aggressive behavior. The medications are grouped in two large categories:

- (1) first generation antipsychotic drugs: Thorazine, Stelazine, Haldol, Mellaril, Trilafon, Moban.
- (2) second generation antipsychotic drugs: Risperidone, Serequel, Zyprexa, Geodone, Abilify and Clozaril.

Each of these medications has a slightly different profile in terms of therapeutic efficacy, and several have unique potential side effects. These side effect problems should be carefully reviewed in terms of risk benefit analysis with the prescribing psychiatrist. For example, several cause significant weight gain and may precipitate Diabetes. One, Clozaril, can cause a severe blood condition. Many can cause a Parkinsons Disease-like condition called Tardive Dyskenesia. There is a wide range of responses to these medications, and while they can often produce significant improvement in mental and behavioral functioning, they need to be carefully watched for side effects as well as maintaining optimal improvement in symptoms and relief.

MEDICATIONS FOR TREATMENT OF ANXIETY STATES

One major group of medications for treating anxiety is the Benzodiazepine group. This includes Valium, Xanax, Klonopin and Ativan. Other medications include Antihistamines (e.g. Benadryl) and Busbar.

OTHER MEDICATIONS CURRENTLY IN USE

- Catapres-** for treatment of impulsiveness
- Inderal** - sometimes used for ADHD and anxiety
- Anafranil** - treatment for Obsessive-Compulsive Disorders
- Trazadone** - used as a sedative

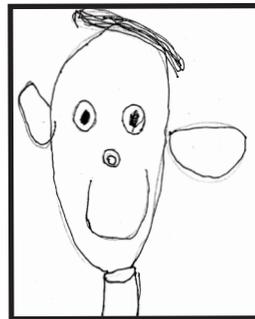
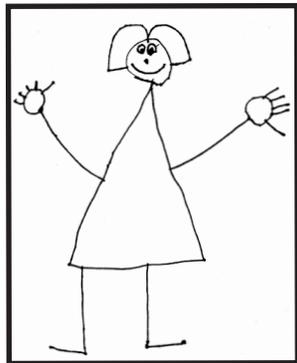
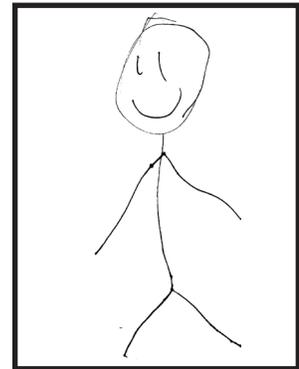
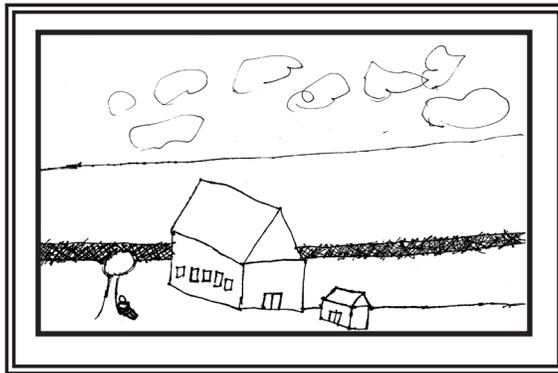
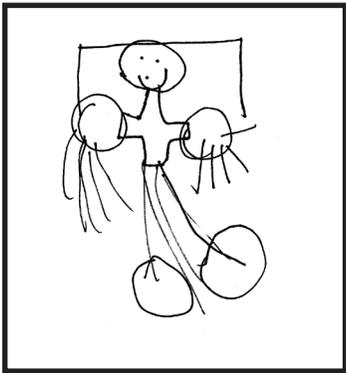
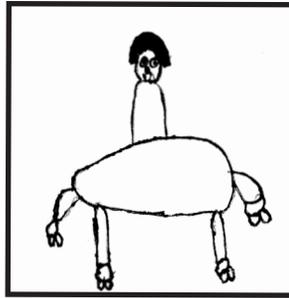
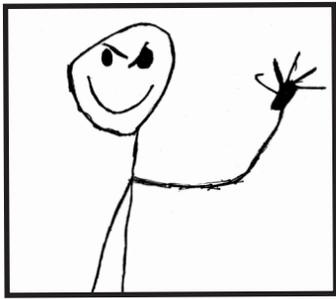
NON - "MEDICATION" AGENTS IN COMMON USE

- a. Melatonin for sleep
- b. Inositol for anxiety
- c. Omega 3 for learning and behavioral problems including improving depressed mood

This brief overview of some more commonly used medications is intended as an introduction. Many children at CTDS have complex profiles. Initially, the child's response to a specific medicine may give us clues to the nature of the child's condition. A stimulant medication which significantly improves a child's performance powerfully supports the diagnosis of ADHD. An antipsychotic (neuroleptic) medication which helps a child to emerge from an all-consuming fantasy world supports the diagnosis of a form of psychosis. A mood stabilizer or lithium that improves a child's state of impulsiveness and severe "moodiness" may support a diagnosis of bipolar disorder.

The complexity of children's conditions means that medication is only one part of a treatment plan, which often includes specialized education, psychotherapy, child guidance work, and may include detailed study of a child's medical, emotional, social, genetic, learning as well as family and social experience.

Medication is not for all. In spite of the aggressive hype we find in the media certain children respond well, others respond not at all, or badly. Perhaps someday we will have better answers. For now, we must rely on the entire range of available therapies in addition to medication.



Special Times Editors:

Nancy Fuller
Lisa O'Donnell

Photographer:

Kristie Borges

NONPROFIT ORG.
U.S. POSTAGE PAID
LEXINGTON, MA
PERMIT NO. 56707