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### ABSTRACT

School professionals encountering students on medication are confronted with a variety of procedures and issues related to medication administration, monitoring, and effects. This resource aid is designed to provide a brief overview guide to this topic and some procedural tools. Section 1 provides an overview perspective, guidelines, and tools related to a school's role in administering and monitoring medication, educating school staff about medication, and providing guidance for students on medication. Section 2 highlights major medications and their side effects, with emphasis on those prescribed for prevalent diagnoses encountered in schools, such as attention deficit-hyperactivity disorders, conduct disorders, anxiety disorders, depression and bipolar disorders, Tourette's syndrome, psychoses, pervasive developmental disorders, functional enuresis, asthma, and epilepsy. The final section outlines resources for information and support, including Internet sites, centers, agencies, advocacy groups, and relevant publications. (MKA)

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# From the Center's Clearinghouse ...\*

A Resource Aid Packet on

# Students and Psychotropic Medication: The School's Role

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### UCLA CENTER FOR MENTAL HEALTH IN SCHOOLS



Under the auspices of the School Mental Health Project in the Department of Psychology at UCLA, our center approaches mental health and psychosocial concerns from the broad perspective of addressing barriers to learning and promoting healthy development. Specific attention is given policies and strategies that can counter fragmentation and enhance collaboration between school and community programs.

MISSION: To improve outcomes for young people by enhancing policies, programs, and practices relevant to mental health in schools.

Through collaboration, the center will

- enhance practitioner roles, functions and competence
- interface with systemic reform movements to strengthen mental health in schools
- assist localities in building and maintaining their own infrastructure for training, support, and continuing education that fosters integration of mental health in schools

Consultation Cadre Clearinghouse

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\*In 1996, two national training and technical assistance centers focused on mental health in schools were established with partial support from the U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Maternal and Child Health Bureau, Office of Adolescent Health. As indicated, one center is located at UCLA; the other is at the University of Maryland at Baltimore and can be contacted toll free at 1-(888) 706-0980.







# What is the Center's Clearinghouse?

The scope of the Center's Clearinghouse reflects the School Mental Health Project's mission -- to enhance the ability of schools and their surrounding communities to address mental health and psychosocial barriers to student learning and promote healthy development. Those of you working so hard to address these concerns need ready access to resource materials. The Center's Clearinghouse is your link to specialized resources, materials, and information. The staff supplements, compiles, and disseminates resources on topics fundamental to our mission. As we identify what is available across the country, we are building systems to connect you with a wide variety of resources. Whether your focus is on an individual, a family, a classroom, a school, or a school system, we intend to be of service to you. Our evolving catalogue is available on request; eventually it will be accessible electronically over the Internet.

### What kinds of resources, materials, and information are available?

We can provide or direct you to a variety of resources, materials, and information that we have categorized under three areas of concern:

- Specific psychosocial problems
- Programs and processes
- System and policy concerns

Among the various ways we package resources are our *Introductory Packets, Resource Aid Packets, special reports, guidebooks*, and *continuing education units*. These encompass overview discussions of major topics, descriptions of model programs, references to publications, access information to other relevant centers, organizations, advocacy groups, and Internet links, and specific tools that can guide and assist with training activity and student/family interventions (such as outlines, checklists, instruments, and other resources that can be copied and used as information handouts and aids for practice).

### Accessing the Clearinghouse

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 (310) 206-8716
 (310) 825-3634

• Write School Mental Health Project/Center for Mental Health in Schools,

Dept. of Psychology, Los Angeles, CA 90095-1563

Check out recent additions to the Clearinghouse on our Web site

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All materials from the Center's Clearinghouse are available for a minimal fee to cover the cost of copying, handling, and postage. Eventually, we plan to have some of this material and other Clearinghouse documents available, at no-cost, on-line for those with Internet access.

If you know of something we should have in the clearinghouse, let us know.





### **Preface**

Those of you working so hard to address barriers to student learning and promote healthy development need ready access to resource materials. The Center's Clearinghouse supplements, compiles, and disseminates resources on topics fundamental to enabling students to learn. Among the various ways we package resources are our *Resource Aid Packets*.

Resource Aid Packets are designed to complement our series of Introductory Packets. These resource aids are a form of tool kit related to a fairly circumscribed area of practice. The packets contain materials to guide and assist with staff training and student/family interventions. They include overviews, outlines, checklists, instruments, and other resources that can be reproduced and used as information handouts and aids for training and practice.

This Resource Aid on *Students and Psychotropic Medication: The School's Role* is divided into three sections:

Section I provides an overview perspective, guidelines, and tools related to a school's role in administering and monitoring medication, educating school staff about medication, and providing guidance for students on medication.

The next section highlights major medications and their side effects, with emphasis on those prescribed for prevalent diagnoses encountered in schools, such as attention deficit-hyperactivity disorders, conduct disorder, anxiety disorders, and so forth.

The final section outlines resources for more information and support, including Internet sites, centers, agencies, advocacy groups, and relevant publications.



# Students and Psychotropic Medication: The School's Role

School professionals encountering students on medication are confronted with a variety of procedures and issues related to medication administration, monitoring, and effects. This resource aid is designed to provide a brief overview guide to this topic and some procedural tools.

### **Section I**

### Overview Guide to a School's Role

In this section, you will find brief guides discussing the importance of (1) helping students and families understand medication and what is involved in safeguarding the school and students from issues that arise when schools are involved in administering medication, (2) monitoring and record keeping, (3) educating school staff and getting their feedback on medication effects and providing support and guidance for students on medication. Specific tools are included.

### Section II

### Brief Information on Medications and Their Side Effects

In this section, you will find guides outlining purposes, negative effects, and some related considerations with respect to major medications used with students diagnosed as having (1) attention deficit-hyperactivity disorder (2) conduct disorder, (3) anxiety disorders, (4) depression and bipolar disorders, (5) Tourette's syndrome, (6) psychoses, (7) pervasive developmental disorders, functional enuresis, (9) asthma, (10) epilepsy.

### **Section III**

### Places to Go for More Information & Support

In this section, we provide guides to

- Internet Resources
- · Centers, Agencies, and Advocacy Groups
- References



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### PSYCHOTROPIC MEDICATION: Q & A

- **Q.** What is psychotropic medication?
  - A. They are a class of drugs that are prescribed for persons whose symptoms are viewed as having a psychological base. Most such medications act on the central nervous system, although some work on the peripheral nervous system..
- Q. What type of problems are they used to treat?
  - A. They are prescribed for various emotional/behavioral problems and psychopathological conditions -- ranging from bedwetting and hyperactivity to psychoses.
- **Q.** How is it decided that a youngster needs medication?
  - A. Appropriate standards for practice stress that psychotropic medication should only be prescribed after a careful assessment of need by a mental health professional and analysis of potential benefits and risks. Medication should only be used when the benefits clearly outweigh the risks and, in almost all cases, should not be the sole treatment. In many cases, they should be added only after other interventions are found to be insufficient.
- Q. What types of medication are prescribed?
  - A. The American Academy of Child and Adolescent Psychiatry groups psychotropic medication into the following five categories
  - stimulant medication (e.g., dextroamphetamine [Dexedrine], methylphenidate hydrochloride [Ritalin], magnesium pemoline [Cylert])
  - anti-depressants (e.g., trycyclic drugs such as imipramine hydrochloride [Tofranil,]; other antidepressants such as fluoxetine [Prozac] and sertaline hydrochloride [Zoloft])
  - antipsychotic medication (e.g., major tranquilizers such as haloperidol lactate [Haldol], chlorpromazine [Thorazine], trifluoperazine hydrochloride [Stelazine], clozopine [Clozaril], thioridazine hydrochloride [Mellaril], and benzisoxazole [Risperdal])
  - lithium and anticonvulsants (e.g., antimanic drugs such as lithium carbonate [Lithium, Lithane], lithium citrate [Cibalith]; anticonvulsants such as carbamazepine [Tegretol, Mazepine, Epitol]; valproic acid [Depakene])
  - anti-anxiety medications (e.g., besides anti-depressants and antipsychotic medication, prescribers use anxiolytics such as chlordiazepoxide [Librium], alprazolam [Xanax] and buspirone hydrochloride [BuSpar], as well as antihistamines such as diphenydramine [Benedryl] and hydroxyzine hydrochloride [Atarax])

(continued)



### Q. How effective is such medication?

A. As the American Academy of Child and Adolescent Psychiatry cautions, the usefulness of most psychotropic medications for children has not been well documented. This is also the case with regard to clarifying the unwanted side effects that range from just annoying to very serious. And, data on long-term effects on development are sparse. The FDA does not sanction the use of many psychotropic medications for the treatment of children. Prescribers should fully explain why any medication is needed, its potential benefits and costs (including unwanted effects or dangers), and treatment alternatives.

### Q. Is there a withdrawal problem when medication is terminated?

A. With the exception of a few rapidly metabolized drugs, the standard for practice is to reduce use gradually to minimize withdrawal symptoms.

### No Magic Bullets

Medical researchers warn that it is a mistake to think about medication as if it worked like a magic bullet. They say many people tend to think that, once administered. a drug speeds directly to its target and cures the problem. Medication is imagined to disappear upon entering the body and to reappear magically at its goal where it performs its work and again disappears. This belief fosters a tendency to ignore such facts as (1) drugs can cause damage as they go through the body, and (2) drugs don't necessarily stop having effects as soon as they have done the work they are intended to do. This is not an argument against using medication when it is appropriate to do so. It is a caution against using any medication injudiciously; it is a reason to monitor use carefully to determine that benefits are outweighing costs; it is grounds for stopping the use of medication as soon as it is no longer needed.

We all dream of miracle cures. But most of us recognize that quick and easy treatments for difficult problems are rare. Still, when we are involved, the hope for a miracle is strong. This makes us a bit too receptive to those claiming to have an effective answer and bit too ready to ignore possible harmful effects of treatments. A youngster on medication to control behavior may be less of a behavior problem, but may be so sedated that s/he does not learn any better (and perhaps may learn less) than before the pills were prescribed. It is essential to monitor all facets of medication effects to decide whether the benefits are outweighing the costs.

When it comes to the psychosocial and mental health problems experienced by children and adolescents, interventions must be carefully planned and usually must be multifaceted. Medication may be a component for some. Whatever the course of action, it is likely to take time and a great deal of effort on the part of mental health practitioners, teachers, parents, and the youngster. When all work together, there is every reason to be optimistic.



# **Section I**

### Overview Guide to a School's Role

In this section, you will find brief guides discussing the importance of (1) helping students and families understand medication and what is involved in safeguarding the school and students from issues that arise when schools are involved in administering medication, (2) monitoring and record keeping, (3) educating school staff and getting their feedback on medication effects and providing support and guidance for students on medication. Specific tools are included.



### Overview Guide to a School's Role

Increasing numbers of students are on regimens of medication to treat a variety of symptoms and conditions. Although use of drugs to treat some conditions is essential, prescribing psychotropic medication for children who manifest common behavioral, emotional, and learning problems is highly controversial.

School staff play two major roles with respect to medication: (1) they often are asked to provide information to assist prescribers in deciding whether to place a student on medication and (2) prescribers want feedback from school personnel as to drug effects.

In the first instance, school staff need to address a variety of factors in the school environment before they suggest that there is something wrong inside the student. That is, in keeping with the principle of using the least intervention needed, significant efforts must be made to improve the student's functioning at school through personalizing the classroom program -- before any conclusion is reached about the locus of the problem. Such personalization encompasses a host of prereferral interventions.

In the second instance, school staff must operate within a set of policies and procedures clarifying the school's role in administering medication, protecting a student's rights, and providing feedback to prescribers. It is these matters that are our focus here.

### Safeguarding the School and the Student

School staff must be clear as to the district's policies and procedures regarding administering medication. The basics here include that

- there must be signed permission from the legal guardian and the prescriber, along with information about the prescribed medication, such as why it is needed, guidelines for administration, indications of side effects, and a termination date -all of which is to be updated at a designated interval (see attached example from one school district),
- 2. medication is to be provided the school in the original, officially labeled container,
- 3. medication is appropriately stored and safeguarded,
- 4. administration and refills are documented,
- 5. there is a plan by which refills will be provided in a timely fashion,
- 6. there is clear identification of who is authorized to administer medication (e.g., school nurse, health aide, teacher, office staff),
- 7. there is a plan for how to deal with negative effects.



# LOS ANGELES UNIFIED SCHOOL DISTRICT SCHOOL MENTAL HEALTH SERVICES

# REQUEST FOR MEDICATION TO BE TAKEN DURING SCHOOL HOURS (To be completed by a licensed physician)

Last Name of Student	First Name	Sex	Birth Date	School
Purpose of Medication	or Diagnosis	_	Name of Medi	cation
Dosage Prescribed	Time Sc	hedule at Schoo	Dose from(Tablet/Liquid)	Color
Date of Prescription		Length of Tir	ne This Medication Will Be Nec	cessary
Physician's Recommen	dations (Check whe	ere applicable):		
Please notify t	his office if my patie	ent misses medic	ation at school.	
Medication ma	y have adverse effe	cts (explain)		
Special instru	ctions and/or comme			
The Student for whom	this medication is p			
Print Name of License	1 Physician	Sig	gnature of Licensed Physician	
Address		Telephone No	Date	
REQUEST FOR MED		TAKEN DURIN completed by pa		
I request that my child, prescribed medication a district.	nt school. I will con	nply with the po	, be assisted/supervised in ta licies and procedures determine	king the above d by the school
Date	Home Telepho	ne	Emergency Tele	phone
Sig	nature of Parent/Gu	ardian/Student	8 years or older	

### Do the Student and Family Understand the Medication?

The school can play a role in ensuring that the student and family understand what has been prescribed and why. In particular, the school can play a role in being certain that explanations are provided children and adolescents in ways they can comprehend.

Most basically, the student and family must understand that psychotropic medication is only one facet of a comprehensive intervention plan. They also need to be cautioned about side effects and the importance of continuous monitoring.

As an aid to families, the American Academy of Child and Adolescent Psychiatry suggests the following set of questions to ask about psychiatric medications for children and adolescents.

- 1. What is the name of the medication? Is it known by other names?
- 2. What is known about its helpfulness with other children who have a similar condition to my child?
- 3. How will the medication help my child? How long before I see improvement? When will it work?
- 4. What are the side effects which commonly occur with this medication?
- 5. What are the rare or serious side effects, if any, which can occur?
- 6. Is this medication addictive? Can it be abused?
- 7. What is the recommended dosage? How often will the medication be taken?
- 8. Are there any laboratory tests (e.g. heart tests, blood test, etc.) which need to be done before my child begins taking the medication? Will any tests need to be done while my child is taking the medication?
- 9. Will a child and adolescent psychiatrist be monitoring my child's response to medication and make dosage changes if necessary? How often will progress be checked and by whom?
- 10. Are there any other medications or foods which my child should avoid while taking the medication?
- 11. Are there any activities that my child should avoid while taking the medication? Are any precautions recommended for other activities?
- 12. How long will my child need to take this medication? How will the decision be made to stop this medication?
- 13. What do I do if a problem develops (e.g. if my child becomes ill, doses are missed, or side effects develop)?
- 14. What is the cost of the medication (generic vs. brand name)?
- 15. Does my child's school nurse need to be informed about this medication?

Providing such information serves several functions. It helps bolster due process and informed consent. It also can help the student and family become partners in the process of dealing with a student's problems and in planning to minimize negative effects and their consequences.

### **Administration Record Keeping**

Keeping records need not be complicated (see the attached sample form). The real problem is setting up a system to be certain that entries are made at the time of administration so they are not forgotten.



### MEDICATION MONITORING AND RECORD KEEPING

Student_		Birthdate	Home Room_	
Name of I	Parent	Phone	Prescriber	
Medicatio	n plan: Medica	tion to be dispensed	dosage	times
Date	Time	Person dispensing	Comments	
<del></del>				
	_		<u>_</u>	
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	<u>_</u>			
		<del></del>		



### **Educating School Staff and Getting Feedback on Medication Effects**

If school staff are to play an appropriate role in providing feedback on medication effects, they must be provided with a variety of learning opportunities. A simple first step is to provide them with some written information (see attached example).

Those asked to provide feedback about drug effects, of course, must learn a good deal more about the effects of the specific medication that a student is taking. In particular they must be reasonably informed about the temporal course of the medication. The effects (positive and negative) increase, peak, and usually are expected to wane somewhat between administrations. Prescribers should provide information on when the strongest effects are likely to occur and what "withdrawal" symptoms are likely to be seen in the waning period, especially rebound effects (such as the increased irritability, activity, and inattentiveness seen in some children taking stimulant medication). It is also important to alert staff that in the early stages of the treatment, the dosage may have to be varied until the right amount for the individual is determined. Such information will allow them to make better judgments about whether what they are observing is to be expected or not.

Because school staff already are overburdened with paperwork, it is imperative to use a simple feedback report (see attached example).

Part of providing feedback is to convey observations about the student's feelings about taking the medication. Students may dislike medication because they are embarrassed for others to know they are doing so or because of the way it makes them feel or because it interferes with doing something they want to do. Such psychological reactions can influence the apparent effects of the medication and can even lead to students finding surreptitious ways to avoid digesting pills. (If a youngster is strongly avoidant about taking medication, the prescriber, parents, and youngster need to discuss the matter thoroughly.)

Another concern to watch for and report is parent mismanagement of the prescription. Parents may overdose a youngster in hopes of accelerating the treatment or may withhold medication when symptoms subside. Those with scheduling problems may double the dosage because they won't be around when for the next scheduled administration. Some may fail to get refills. The reasons for all this vary, and school staff often aren't in a position to know the "whys and wherefors." But, information of misuse of prescriptions often arise from discussions with the student or parents.

And, of course, it is imperative to watch for any indications that prescribed medications are being used for substance abuse.

### Supportive Guidance and Counseling

Students on medication often need ongoing information and support to better understand what they are experiencing related to medication effects and the problem for which the medication is prescribed. One approach is to establish a support group for such students at the school or to connect students with such a group in the community.



### Example of Memo for School Staff re. Psychotropic Medication

To: School Staff

From:

Re: Information on Students and Medication

Some students take medication for physical or mental health problems that may effect their classroom behaviors. You may also note changes that are the result of changes in dosage or failure to take medication on a regular basis.

While we all have good and bad days, if you notice students whose behavior changes dramatically (seems lethargic, irritable, jumpy, or complains of stomach aches or headaches), you may want to check with parents to let them know. In some cases, families and students want to keep medication use confidential. In other cases, parents and prescribers will want feedback from the school to decide on effective dosage and time of administration.

Psychotropic medications commonly taken that may effect classroom behavior have been grouped by the American Academy of Child and Adolescent Psychiatry into the following five categories:

- stimulant medication (e.g., dextroamphetamine [Dexedrine], methylphenidate hydrochloride [Ritalin], magnesium pemoline [Cylert])
- anti-depressants (e.g., trycyclic drugs such as imipramine hydrochloride [Tofranil, ]; other antidepressants such as fluoxetine [Prozac] and sertaline hydrochloride [Zoloft])
- antipsychotic medication (e.g., major tranquilizers such as haloperidol lactate [Haldol], chlorpromazine [Thorazine], trifluoperazine hydrochloride [Stelazine], clozopine [Clozaril], thioridazine hydrochloride [Mellaril], and benzisoxazole [Risperdal])
- lithium and carbamazepine (e.g., antimanic drugs such as lithium carbonate [Lithium, Lithane], lithium citrate [Cibalith]; anticonvulsants such as carbamazepine [Tegretol, Mazepine, Epitol], and valproic acid [Depakene]
- anti-anxiety medications (e.g., besides anti-depressants and antipsychotic medication, prescribers use anxiolytics such as chlordiazepoxide [Librium], alprazolam [Xanax] and buspirone hydrochloride [BuSpar], as well as antihistamines such as diphenydramine [Benedryl] and hydroxyzine hydrochloride [Atarax])

Other medications taken for asthma and epilepsy may also affect classroom functioning.

If you are interested in more information about medication or have students whose behavior concerns you, please let me know.

The procedures at the school are to dispense medication only with a prescribing physicians instructions and parent consent. If you are asked to dispense, please parents of our policy.



# Feedback Report Related to Student Taking Medication

This report of a student's behavior is needed by the prescribing physician to monitor dosage and effectiveness. A parent/student form consenting to your providing this feedback is on file. If you have questions or concerns, you may want to talk with the student's parents. Thanks for your help.

Name of Student	Birthdate	Ā	Your Name		Rc	Room	
How many hours/day do you spend with	with this student?	ı					
Brief description of attributable		Poor	Average	Good	In your ju	In your judgment, is this	
Behavior				to the medication?	ication? Yes	No	
Attention to task				ı	Yes	No	
Completion of work			1	1	Yes	No	
Physical changes			1	ı	Yes	No	
Other (specify)				Yes	Z		

If you answered no to any of the above, please explain briefly.

Briefly note any positive or negative changes in behavior and attitude you have noticed in the past 2 weeks.

negative neutral Return to positive What is the student's attitude about taking the medication? Please complete by



# **Section II**

# Brief Information on Medications and Their Side Effects

In this section, you will find guides outlining the purposes, negative effects, and some related considerations with respect to major medications used with students diagnosed as having (1) attention deficit-hyperactivity disorders, (2) conduct disorder, (3) anxiety disorders, (4) depression and bipolar disorders, (5) Tourette's syndrome, (6) psychoses, (7) pervasive developmental disorders,

(6) psychoses, (7) pervasive developmental disorders,(8) functional enuresis, (9) asthma, and (10) epilepsy.



### PSYCHOTROPIC MEDICATION FOR CHILDREN AND ADOLESCENTS

Recommendations to use medication raise concerns. Prescribers should fully explain why it is needed, potential benefits and costs (including unwanted effects or dangers), and treatment alternatives. Appropriate standards for practice stress that psychotropic medication should only be prescribed after a careful determination of need and should not be the sole treatment for emotional or behavioral problems or psychopathology.

As part of its *Facts for Families* series,\* the American Academy of Child and Adolescent Psychiatry states that medication is prescribed for the following problems (ranked from less to more serious:

- 1. Bedwetting -- if it persists regularly after age 5 and causes serious problems in low self-esteem and social interaction.
- 2. Specific fears (phobias) or general anxiety -- that keep a youngster from normal activities.
- 3. Attention deficit-hyperactivity disorder -- got those with a short attention span, trouble concentrating, easily upset and frustrated, and usually in trouble at school.
- 4. School phobia (separation anxiety) -- fear of leaving home, refuses to go to school or repeatedly feels too sick to go.
- 5. Depression -- lasting feelings of sadness, helplessness, hopelessness, unworthiness, guilt, inability to feel pleasure, decline in school work, changes in sleeping and eating habits.
- 6. Eating disorder -- either self-starvation (anorexia nervosa) or binge eating and vomiting (bulimia), or a combination of the two.
- 7. Manic-depressive condition -- periods of depression alternating with manic periods, which may include irritability, "high" or happy mood, excessive energy, behavior problems, staying up late at night, and grand plans.
- 8. Psychosis -- symptoms include irrational beliefs, paranoia, hallucinations (seeing things or hearing sounds that don't exist) social withdrawal, clinging, strange behavior, extreme stubbornness, persistent rituals, deterioration of personal habits.

The Academy groups medication for such problems into five categories

- Stimulant medication -- such as dexedrine or methylphenidate (e.g., Ritalin) -- which is frequently prescribed when attention deficit-hyperactivity disorder is diagnosed.
  - Anti-depressants -- used to treat serious depression, school phobias and other serious anxiety disorders, bedwetting, some bulimic-type eating disorders, and attention deficithyperactivity disorder.
  - Antipsychotic medication ("major tranquilizers")-- such as Haldol, Stelazine, or Thorazine reduces irrational beliefs/hallucinations and related panic and sense of loss of control.
  - Lithium and anti-convulsants such as carbamazepine (Tegretol) and valproic acid (Depakene) -- used in treating those experiencing manic-depressive episodes.
  - Anti-anxiety medications -- short-term use for conditions associated with high anxiety.

The Academy cautions that the usefulness of most of psychotropic medications for children has not been well documented. Moreover, those that appear to have beneficial effects also have unwanted side effects, ranging from just annoying to very serious. All such medication should be used as part of a comprehensive plan of treatment, with ongoing evaluation.

<sup>\*</sup>The American Academy of Child and Adolescent Psychiatry provides its Facts for Families series as a public service and the material may be duplicated and distributed free of charge as long as the Academy is propely credited and no profit is gained from the use. The documents can be obtained by writing the Academy or by downloading them from the Academy website: http://www.aacap.org/factsfam/psychmed.htm



# PSYCHOTROPIC MEDICATIONS CATEGORIZED BY CHILD/ADOLESCENT DIAGNOSES\*

This chart provides some brief information on psychotropic medications frequently prescribed for students. The medications are listed with respect to the diagnosis that leads to their prescription. For more information, see the *Physicians Desk Reference*.

### I. Diagnosis: Attention Deficit-Hyperactivity Disorder (ADHD)

### **Medication Types and Treatment Effects**

### A. Stimulants

Used as one part of a total treatment regimen that typically includes other remedial measures (psychological, educational, social) to address a behavioral syndrome characterized in terms of developmentally inappropriate symptoms including moderate-to-severe distractibility, short attention span, hyperactivity, emotional lability, and impulsivity. Stimulants are used with youngsters six years and older to improve attention span and decrease hyperactivity and impulsivity.

### B. Anti-depressants

Anti-depressants such as imipramine are approved for use in treating symptoms of depression in adolescents and adults. Use with children is restricted to treatment of enuresis of those at least 6 years old. Manufacturers state that a maximum dose of 2.5 mg/kg should not be exceeded in children (PDR, 1997). Although imipramine does not have FDA approval for use in ADHD, some clinicians consider it the next drug of choice for those not responding to stimulants; thus they prescribe it to improve mood and decrease hyperactivity. The effects usually are sedating and do not appear to improve concentration (Green, 1995).

### C. Adenergic antagonists

These are centrally acting antihypertensive agents. The only therapeutic indication that has been approved by the FDA for advertising is treatment of hypertension in older adolescents and adults; its safety and efficacy in children have not been established. Some physicians regard adenergic antagonists such as clonidine as a possible alternative treatment for ADHD for those who do not respond well or who develop severe negative side effects when using stimulants (Green, 1995).

<sup>\*</sup>Because many side effects are not predictable, all psychotropic medication requires careful, ongoing monitoring of psychological and physical conditions. Pulse, blood pressure, and signs of allergic reactions need to be monitored frequently, and when medication is taken for prolonged periods, periodic testing of hematological, renal, hepatic, and cardiac functions are essential. Prior to any other physical treatment (surgery, dentistry, etc.), it is important to inform physicians/dentists that psychotropic medication is being taken. Finally, common side effects of many medications are drowsiness/insomnia and related factors that can interfere with effective school performance.



### I. Diagnosis: Attention Deficit-Hyperactivity Disorder (cont.)

# Names: Generic [Commercial]

### Some Side Effects and Related Considerations

### A. Stimulants

• methylphenidate hydrochloride [Ritalin]

May manifest nervousness, dizziness, insomnia or drowsiness, tics, palpitations, loss of appetite, nausea, dermatitis, mood changes, growth suppression.

If loss of appetite is a problem, administration of medication is recommended after meals. The last dose for a day is to be taken before 6 p.m. to prevent insomnia. Discontinuation is recommended if no improvement in one month. Periodic drug-free periods are recommended to assess efficacy.

• dextroamphetamine sulfate [Dexedrine, Ferndex, Dexampex]

May manifest restlessness, nervousness, hyperactivity, dizziness, insomnia, unusual fatigue, headache, palpitations, loss of appetite, weight loss, nausea, dry mouth, mood changes, hypersensitivity.

The last dose for a day is to be taken before 6 p.m. to prevent insomnia. Periodic reductions in dosage or drug-free periods are recommended to assess efficacy. Gradual discontinuation is recommended if the medication has been used for a long-period.

 magnesium pemoline [Cylert])

May manifest dizziness, irritability, insomnia, fatigue, tics, loss of appetite, nausea, weight loss, mild depression, seizures headache, abdominal discomfort. Long-term use may affect the liver and can produce physical and psychological dependence.

Administration of medication is recommended for the morning to avoid insomnia. Periodic reductions in dosage or drug-free periods are recommended to assess efficacy. Liver function studies are recommended for long-term users.

### B. Anti-depressants

• imipramine hydrochloride [Tofranil]

May manifest sedation, drowsiness, dizziness, headache, nausea, fatigue, dry mouth, constipation, heartburn, excessive weight gain, rash, excessive sweating, photosensitivity.

Youngster is to move slowly from sitting or lying down positions. Care must be taken to minimize exposure to strong sun. Gradual discontinuation is recommended if the medication has been used for a long period.

### C. Adenergic antagonists

• clonidine hyperchloride [Catapres]

May manifest sedation, dizziness, headache, nausea, anxiety, restlessness, nightmares, dry mouth, weight gain, constipation.

Sudden discontinuation may cause blood pressure to shoot up.

• Guanfacine [Tenex]

Use may lead to tiredness, headaches, stomachaches, and decreased appetite. Not recommended under age 12 as safety and efficacy have not been proven.



II. Diagnosis: Conduct Disorder (There continues to be controversy over whether medication is indicated for this diagnosis. However, because it is prescribed widely for such cases, it is included here.)

### **Medication Types and Treatment Effects**

### A. Anti-psychotics

Used to treat severe behavioral problems in children marked by combativeness and/or explosive hyperexcitable behavior (out of proportion to immediate provocations). Also used in short-term treatment of children diagnosed with conduct disorders who show excessive motor activity, impulsivity, difficulty sustaining attention, aggressivity, mood lability and poor frustration tolerance.

### B. Anti-manic

Used to reduce the frequency and intensity of manic episodes. Typical symptoms of mania include pressure of speech, motor hyperactivity, reduced need for sleep, flight of ideas, grandiosity, or poor judgment, aggressiveness, and possibly hostility.

### C. Beta-adenergic antagonists

Although primarily used in controlling hypertension and cardiac problems, beta-adenergic antagonists such as propranolol hydrochloride are used to reduce somatic symptoms of anxiety such as palpitations, tremulousness, perspiration, and blushing. In some studies, propranolol is reported as reducing uncontrolled rage outbursts and/or aggressiveness among children and adolescents (Green, 1995).

# Names: Generic [Commercial]

# Some Side Effects and Related Considerations

### A. Anti-psychotics

- thioridazine hydrochloride [Mellaril, Mellaril-S]
- chlorpromazine hydrochloride [Thorazine; Thor-Pram]
- haloperidol [Haldol]

### B. Anti-manic

 lithium carbonate/citrate [Lithium, Lithane, Lithobid, Lithotabs, Lithonate, Eskalith, Cibalith]

### C. Beta-adenergic antagonists

• propranolol hydrochloride [Inderal]

May manifest sedation, drowsiness, dizziness, fatigue, weight gain, blurred vision, rash, dermatitis, extrapyramidal syndrome (e.g., pseudo-Parkinson, lardive dyskinesia, hyperactivity), respiratory distress, constipation, photosensitivity.

Medication is to be taken with food or a full glass of water or milk. Care to avoid contact with skin because of the danger of contact dermatitis. Gradual discontinuation is recommended. Drowsiness can be reduced with decreased dosage. Youngster is to move slowly from sitting or lying down positions. Care must be taken to minimize exposure to strong sun.

May manifest insomnia, restlessness, fatigue, weight gain, dry mouth, constipation, extrapyramidal reactions (e.g., pseudo-Parkinson, lardive dyskinesia, dystonia, muscle spasms in neck and back, trembling hands), blurred vision, photosensitivity, decreased sweating leading to overheating, menstrual irreg.

Avoid sun and overheating. Discontinue gradually.

Safety and effectiveness have not been established for those under 15 years of age. May manifest tremor, drowsiness, dizziness, nausea, vomiting, fatigue, irritability, clumsiness, slurred speech, diarrhea, increased thirst, excessive weight gain, acne, rash.

Serum levels must be monitored carefully because of therapeutic dose is close to toxic level. Care must be taken to maintain normal fluid and salt levels.

May manifest sleep disturbance, drowsiness, confusion, depression, light headedness, nausea, vomiting, fatigue, dry mouth, heartburn, weight gain, leg fatigue. Administer before meals and bed. Avoid having extremities exposed to cold for long periods. Discontinue gradually. over a two week period.



### III. Diagnosis: Tourette's Syndrome

### **Medication Types and Treatment Effects**

### A. Adenergic antagonists

A centrally acting antihypertensive agent. The only therapeutic use approved by the FDA for advertising is treatment of hypertension in older adolescents and adults; safety and efficacy in children not established. In some studies, adenergic antagonists such as clonidine are reported to ameliorate oppositional, confrontative, and obsessive-compulsive behaviors and symptoms of ADHD and Tourettes when also present. Currently regarded as a possible treatment for Tourette's disorder for those who not responding satisfactorily or having intolerable untoward effects to standard treatments.

### B. Anti-psychotics

Used to suppress motor tics and vocal utterances of children and adults whose development and/or daily life function is severely compromised by their presence and who fail to respond satisfactorily to standard treatment. Not intended as a treatment of first choice nor for the treatment of tics that are merely annoying or cosmetically troublesome.

Names: Generic [Commercial]

### Some Side Effects and Related Considerations

### A. Adenergic antagonists

 clonidine hydrochloride [Catapres, Catapres -TTS] May manifest sedation, dizziness, anxiety, restlessness, nightmares, headache nausea, dry mouth, weight gain, constipation.

Discontinue gradually to avoid sudden rebound of blood pressure. Care must be taken when transdermal system is used to apply in different areas of skin.

• Guanfacine [Tenex]

Use may lead to tiredness, headaches, stomachaches, and decreased appetite. Not recommended under age 12 as safety and efficacy have not been proven.

### B. Anti-psychotics

 haloperidol lactate [Haldol] May manifest insomnia, restlessness, fatigue, weight gain, dry mouth, constipation, extrapyramidal reactions (e.g., pseudo-Parkinson, lardive dyskinesia, dystonia, muscle spasms in back, trembling hands), blurred vision, photosensitivity, decreased sweating leading to overheating, menstrual irregularity.

Avoid sun and overheating. Discontinue gradually.

pimozide [Orap] Only to be used in extreme cases. May manifest irritability, restlessness, drowsiness, dizziness, difficulty speaking and swallowing, tremor, akinesia, dry mouth, constipation, rash, itchiness.

Discontinue gradually.



### IV. Diagnosis: Pervasive Developmental Disorders

### **Medication Types and Treatment Effects**

### A. Anti-psychotics

Used for treatment of severe behavioral problems in children marked by combativeness and/or explosive hyperexcitable behavior (out of proportion to immediate provocations). Also used in short-term treatment of children who show excessive motor activity with accompanying conduct disorders consisting of some or all of the following symptoms: impulsivity, difficulty sustaining attention, aggressivity, mood lability and poor frustration tolerance.

### **B.** Stimulants

Used to decrease serotonin levels, which have been found elevated in about 30% of mentally retarded and autistic children. A review of 25 studies of fenfluramine used with autistic disorders concluded it may improve social relatedness and attention span and decrease stereotypies and excessive motor activity in some cases. However, broader areas of functioning, as measured by IQ tests and assessment of communicative abilities, did not appear affected (Green, 1995).

### C. Opiate antagonists

Are regarded as potentially useful agents in reducing endorphins in a subgroup of autistic children who have elevated endorphin (opiod peptides) levels.

# Names: Generic [Commercial]

### A. Anti-psychotics

- thioridazine hydrochloride [Mellaril, Mellaril-S]
- trifluoperazine hydrochloride [Stelazine]
- chlorpromazine hydrochloride [Thorazine; Thor-Pram]
- haloperidol [Haldol]

### B. Stimulants

fenfluramine [Pondimin]

### C. Opiate antagonist

• naltrexone hydrochloride [Trexan]

### Some Side Effects and Related Considerations

May manifest sedation, drowsiness, dizziness, fatigue, weight gain, blurred vision, rash, dermatitis, extrapyramidal syndrome (e.g., pseudo-Parkinson, lardive dyskinesia, hyperactivity), respiratory distress, constipation, photosensitivity

Medication is to be taken with food or a full glass of water or milk. Care to avoid contact with skin because of the danger of contact dermatitis. Gradual discontinuation is recommended. Drowsiness can be reduced with decreased dosage. Youngster is to move slowly from sitting or lying down positions. Care must be taken to minimize exposure to strong sun.

May manifest insomnia, restlessness, fatigue, weight gain, dry mouth, constipation, extrapyramidal reactions (e.g., pseudo-Parkinson, lardive dyskinesia, dystonia, muscle spasms in neck and back, trembling hands), blurred vision, photosensitivity, decreased sweating leading to overheating, menstrual irregularity.

Avoid sun and overheating. Discontinue gradually.

Used with autistic children with increased serotonin blood levels. May manifest dizziness, insomnia or drowsiness, palpitations, nausea, vomiting, constipation, dry mouth, blurred vision, rash, menstrual irregularity. Administration of medication is recommended on empty stomach. Discontinue gradually to avoid acute depressive reaction.

Used with autistic children with elevated endorphin levels. May manifest insomnia, nightmares, anxiety, nervousness, depression, headache, changes in energy level, dry mouth, nausea, increased thirst, vomiting, cramps, runny nose or nasal congestion, burred vision, rash, liver function problems.



### V. Diagnosis: Bipolar Disorder

### **Medication and Treatment Effects**

### A. Anti-manic

Used to reduce frequency and intensity of manic episodes. Typical symptoms of mania include pressure of speech, motor hyperactivity, reduced need for sleep, flight of ideas, grandiosity, or poor judgment, aggressiveness, and possibly hostility.

### B. Anti-convulsant

Approved to treat various seizure types among those at least 6 years of age. Carbamazepine is regarded as most beneficial for persons diagnosed with partial seizures with complex symptomatology (psychomotor or temporal lobe), but those with generalized tonic-clonic seizures or a mixed seizure pattern also may benefit (Green, 1995).

# Names: Generic [Commercial]

### Some Side Effects and Related Considerations

### A. Anti-manic

• lithium carbonate/citrate [Lithium, Lithane, Lithobid, Lithotabs, Lithonate, Eskalith, Cibalith]

Safety and effectiveness have not been established for those under 15 years of age. May manifest tremor, drowsiness, dizziness, nausea, vomiting, fatigue, irritability, clumsiness, slurred speech, diarrhea, increased thirst, excessive weight gain, acne, rash,

Serum levels must be monitored carefully because of therapeutic dose is close to toxic level. Care must be taken to maintain normal fluid and salt levels.

### B. Anti-convulsants

• carbamazepine [Tegretol, Mazepine, Epitol]

May manifest drowsiness, dizziness, fatigue, coordination problems, respiratory depression, edema, nausea, vomiting, hepatitis, nystagmus, and various negative effects associated with trycyclic antidepressants.

Parents are instructed to withhold and notify physician immediately if signs of toxicity (e.g., anorexia, fever, unusual fatigue, bruising, bleeding). Females using oral contraceptives are informed that reliability of contraceptive may be reduced.

 valproic acid [Depakene] Most serious side effect is hepatic failure which can be fatal. It occurs most frequently within the first six months of treatment. Children under two years of age are at increased risk; the risk of hepatoxicity decreases considerably as patients become progressively older. Hence, liver function must be monitored carefully and frequently, especially during the first six months.

Nausea, vomiting, and indigestion may occur early in treatment and usually are transient. Sedation may occur, and untoward psychiatric effects such as emotional upset, depression, psychosis, aggression, hyperactivity, and behavioral deterioration have been reported.

### References

Green, W.H. (1995). Child and adolescent clinical psychopharmacology. Baltimore, MD: Williams & Wilkins.

Physicians' Desk Reference (1997). Montvale, NJ: Medical Economics Co.



The preceding chart provides a brief perspective on many psychotropic medications. As can be seen below, many other common diagnoses use the same medications:

### Diagnosis

### Medication

Major depression/dysthymia

trycyclic antidepressants:
imipramine [Tofranil]
imipramine pamoate [Tofranil-PM]
nortriptyline hydrochloride [Pamelor, Aventyl]
amitriptyline hydrochloride [Elavil, Endep, Elovil]
desipramine hydrochloride [Norpramin, Pertofrane]
clomipramine hydrochloride [Anafranil]

other anti-depressants:
fluoxetine [Prozac]
buproplon hydrochloride [Wellbutrin]
sertraline hydrochloride [Zoloft]
trazodone {Dysrel]

Anxiety Disorders

anti-depressants imipramine [Tofranil]

anxiolytics
buspirone hydrochloride [BuSpar]
chlordiazepoxide [Librium]
alprazolam [Xanax]

anti-histamines
diphenhydramine [Benedryl]
hydroxyzine hydrochloride [Atarax]
hydroxyzine pamoate [Vistaril]

School Phobia

anti-depressants imipramine [Tofranil]

anxiolytics
chlordiazepoxide [Librium]
alprazolam [Xanax]
buspirone hydrochloride [BuSpar]

Obsessive-Compulsive Disorder

anti-depressants:
fluoxetine [Prozac]
clomipramine hydrochloride [Anafranil]

Functional Enuresis

anti-depressants
imipramine [Tofranil]
imipramine pamoate [Tofranil-PM]
desipramine hydrochloride [Norpramin,
Pertofrane]

Schizophrenia

anti-psychotics
clozapine [Clozaril]
loxapine succinate [Loxitane]
thiothixene [Navane]



# MEDICATION AND ATTENTION DEFICIT-HYPERACTIVITY DISORDER

From the National Institute of Mental Health Website: Http://www.nimh.nih.gov/publicat/ The material has been abridged for use here to highlight information about psychotropic medication frequently prescribed for children and adolescents.

Cylert is available in one form, which naturally lasts 5 to 10 hours. Ritalin and Dexedrine come in short-term tablets that last about 4 hours, as well as longer-term preparations that last through the school day. The short-term dose is often more practical for children who need medication only during the school day or for special situations, like attending church or a prom, or studying for an important exam. The sustained-release dosage frees the child from the inconvenience or embarrassment of going to the office or school nurse every day for a pill. The doctor can help decide which preparation to use, and whether a child needs to take the medicine during school hours only or in the evenings and on weekends, too.

Other types of medication may be used if stimulants don't work or if the ADHD occurs with another disorder. Antidepressants and other medications may be used to help control accompanying depression or anxiety. Clonidine, a drug normally used to treat hypertension, may be helpful in people with both ADHD and Tourette's syndrome. Although stimulants tend to be more effective for some forms of the problem, clonidine may be used when stimulants don't work or can't be used. Clonidine can be administered either by pill or by skin patch and has different side effects than stimulants. The doctor works closely with each patient to find the most appropriate medication.

Some doctors recommend that children be taken off a medication now and then to see if the child still needs it. They recommend temporarily stopping the drug during school breaks and summer vacations, when focused attention and calm behavior are usually not as crucial. These "drug holidays" work well if the child can still participate at camp or other activities without medication.

Children on medications should have regular checkups. Parents should also talk regularly with the child's teachers and doctor about how the child is doing. This is especially important when a medication is first started, re-started, or when the dosage is changed.

### The Medication Debate

As useful as these drugs may be, Ritalin and the other stimulants have sparked a great deal of controversy. Most doctors feel the potential side effects should be carefully weighed against the benefits before prescribing the drugs. While on these medications, some children may lose weight, have less appetite, and temporarily grow more slowly. Others may have problems falling asleep. Some doctors believe that stimulants may also make the symptoms of Tourette's syndrome worse, although recent research suggests this may not be true. Other doctors say if they carefully watch the child's height, weight, and overall development, the benefits of medication far outweigh the potential side effects. Side effects that do occur can often be handled by reducing the dosage.

It's natural for parents to be concerned about whether taking a medicine is in their child's best interests. Parents need to be clear about the benefits and potential risks of using these drugs. The child's pediatrician or psychiatrist can provide advice and answer questions.

Another debate is whether Ritalin and other stimulant drugs are prescribed unnecessarily for too many children. Remember that many things, including anxiety, depression, allergies, seizures, or problems with the home or school environment can make children seem overactive, impulsive, or inattentive. Critics argue that many children who do not have a true attention disorder are medicated as a way to control their disruptive behaviors. Careful assessment and ongoing monitoring by a mental health professional may help to counter these concerns.

(A variety of resources are listed on the reverse side of this handout.)



### Resources for School Staff:

- Barkley, R. Attention Deficit Hyperactivity Disorder (four 40-minute videocassettes in VHS format). New York: Guilford Publications, 1990.
- Copeland, E., and Love, V. Attention Without Tension: A Teacher's Handbook on Attention Disorders. Atlanta, GA: 3 C's of Childhood, 1992.
- Johnson, D. I Can't Sit Still -- Educating and Affirming Inattentive and Hyperactive Children: Suggestions for Parents, Teachers, and Other Care Providers of Children to Age 10. Santa Cruz, CA: ETR, 1992.
- Parker, H. The ADD Hyperactivity Handbook for Schools. Plantation, FL: Impact Publications, 1992.

### **Books for Children and Teens:**

Galvin, M. Otto Learns about his Medication. New York: Magination Press, 1988. (for young children) Gordon, M. Jumpin' Johnny, Get Back to Work! A Child's Guide to ADHD/Hyperactivity. DeWitt, New York: GSI Publications, 1991. (for ages 7-12)

Meyer, D.; Vadasy, P.; and Fewell, R. Living with a Brother or Sister with Special Needs: A Book for Sibs. Seattle: University of Washington Press, 1985.

Moss, D. Shelly the Hyperactive Turtle. Rockville, MD: Woodbine House, 1989. (for young children) Nadeau, K., and Dixon, E. Learning to Slow Down and Pay Attention. Annandale, VA: Chesapeake Psychological Publications, 1993.

Parker, R. Making the Grade: An Adolescent's Struggle with ADD. Plantation, FL: Impact, 1992. Quinn, P., and Stern, J. Putting on the Brakes: Young People's Guide to Understanding Attention Deficit Hyperactivity Disorder. New York: Magination Press, 1991. (for ages 8-12)

Thompson, M. My Brother Matthew. Rockville, MD: Woodbine House, 1992.

### **Books for Parents:**

Anderson, W.; Chitwood, S.; and Hayden, D. Negotiating the Special Education Maze: A Guide for Parents and Teachers. 2d ed. Rockville, MD: Woodbine House, 1990.

Bain, L. A Parent's Guide to Attention Deficit Disorders. New York: Dell Publishing, 1991.

Child Psychopharmacy Center, University of Wisconsin. Stimulants and Hyperactive Children. Madison: 1990. (Order by calling (608) 263-6171.)

Copeland, E., and Love, V. Attention, Please!: A Comprehensive Guide for Successfully Parenting Children with Attention Disorders and Hyperactivity. Atlanta, GA: SPI Press, 1991.

Fowler, M. Maybe You Know My Kid: A Parent's Guide to Identifying, Understanding, and Helping your Child with ADHD. New York: Birch Lane Press, 1990.

Goldstein, S., and Goldstein, M. Hyperactivity: Why Won't My Child Pay Attention? New York:. Wiley, 1992.

Greenberg, G.; Horn, S.; and Wade F. Attention Deficit Hyperactivity Disorder: Questions & Answers for Parents. Champaign, IL: Research Press, 1991.

Ingersoll, B., and Goldstein, S. Attention Deficit Disorder and Learning Disabilities: Realities, Myths, and Controversial Treatments. New York: Doubleday, 1993.

Wilson, N. Optimizing Special Education: How Parents Can Make a Difference. New York: Insight Books, 1992.

Windell, J. Discipline: A Sourcebook of 50 Failsafe Techniques for Parents. New York: Collier Books, 1991.

### Other Resources:

For individuals with a computer and modem, there are on-line bulletin boards where parents, adults with ADHD, and medical professionals share experiences, offer emotional support, and ask and respond to questions.

Two such on-line services include CompuServe [(800) 848-8990] and America Online [(800) 827-6364]. You may also wish to check with other national and local on-line communications companies to see if they offer similar services.



### MEDICATION AND ANXIETY DISORDERS

From the National Institute of Mental Health Website: Http://www.nimh.nih.gov/publicat/ The material has been abridged for use here to highlight information about psychotropic medication frequently prescribed for children and adolescents.

Individuals with anxiety disorders may feel anxious most of the time, without any apparent reason. Or the anxious feelings may be so uncomfortable that to avoid them the individual may stop some everyday activities. Some individuals have occasional bouts of anxiety so intense they terrify and immobilize them.

Anxiety disorders are the most common of all the mental disorders. At the National Institute of Mental Health (NIMH), the Federal agency that conducts and supports research related to mental disorders, mental health, and the brain, scientists are learning more and more about the nature of anxiety disorders, their causes, and how to alleviate them. NIMH also conducts educational outreach activities about anxiety disorders and other mental illnesses.

### Generalized Anxiety Disorder

Generalized anxiety disorder (GAD) is much more than the normal anxiety people experience day to day. It's chronic and exaggerated worry and tension, even though nothing seems to provoke it. Having this disorder means always anticipating disaster, often worrying excessively about health, money, family, or work. Sometimes, though, the source of the worry is hard to pinpoint. Simply the thought of getting through the day provokes anxiety.

### Panic Disorder

People with panic disorder have feelings of terror that strike suddenly and repeatedly with no warning. They can't predict when an attack will occur, and many develop intense anxiety between episodes, worrying when and where the next one will strike. In between times there is a persistent, lingering worry that another attack could come any minute.

Panic disorder is often accompanied by other conditions such as depression or alcoholism, and may spawn phobias, which can develop in places or situations where panic attacks have occurred. For example, if a panic attack strikes while you're riding an elevator, you may develop a fear of elevators and perhaps start avoiding them. Some people find the greatest relief from panic disorder symptoms when they take certain prescription medications. Such medications, like cognitive-behavioral therapy, can help to prevent panic attacks or reduce their frequency and severity. Two types of medications that have been shown to be safe and effective in the treatment of panic disorder are antidepressants and benzodiazepines.

### **Phobias**

Phobias occur in several forms. A specific phobia is a fear of a particular object or situation. Social phobia is a fear of being painfully embarrassed in a social setting. And agoraphobia, which often accompanies panic disorder, is a fear of being in any situation that might provoke a panic attack, or from which escape might be difficult if one occurred.

About 80 percent of people who suffer from social phobia find relief from their symptoms when treated with cognitive-behavioral therapy or medications or a combination of the two. Therapy may involve learning to view social events differently; being exposed to a seemingly threatening social situation in such a way that it becomes easier to face; and learning anxiety-reducing techniques, social skills, and relaxation techniques. The medications that have proven effective include antidepressants called MAO inhibitors. People with a specific form of social phobia called performance phobia have been helped by drugs called beta-blockers. For example, musicians or others with this anxiety may be prescribed a beta-blocker for use on the day of a performance.



### **Obsessive-Compulsive Disorder**

Obsessive-compulsive disorder is characterized by anxious thoughts or rituals you feel you can't control. If you have OCD, as it's called, you may be plagued by persistent, unwelcome thoughts or images, or by the urgent need to engage in certain rituals.

Research by NIMH-funded scientists and other investigators has led to the development of medications and behavioral treatments that can benefit people with OCD. A combination of the two treatments is often helpful for most patients. Some individuals respond best to one therapy, some to another. Two medications that have been found effective in treating OCD are clomipramine and fluoxetine.

### Post-Traumatic Stress Disorder

Post-Traumatic Stress Disorder (PTSD) is a debilitating condition that follows a terrifying event. Often, people with PTSD have persistent frightening thoughts and memories of their ordeal and feel emotionally numb, especially with people they were once close to. PTSD, once referred to as shell shock or battle fatigue, was first brought to public attention by war veterans, but it can result from any number of traumatic incidents

Antidepressants and anxiety-reducing medications can ease the symptoms of depression and sleep problems, and psychotherapy, including cognitive-behavioral therapy, is an integral part of treatment. Being exposed to a reminder of the trauma as part of therapy -- such as returning to the scene of a rape -- sometimes helps. And, support from family and friends can help speed recovery.



# **Section III**

# Places to Go for More Information & Support

In this section, we provide guides to

- Internet Resources
- Centers, Agencies, and Advocacy Groups
- References



### Annotated References

Krener, P., & Mancina, R. (1994). Informed consent or informed coercion?

Decison-making in pediatric psychopharmacology. *Journal of Child & Adolescent Psychopharmacology*, 4(3), 183-200.

This article examines questions raised by the clinical consent process in child and adolescent psychopharmacology. A new theoretical model of informed consent and assent for children is presented and pertinent legal literature is reviewed. This model recognizes different components and levels of consent. Attention is given to clinical problems resulting from the influence of multiple persons: the communication between them; the involved individuals' understandings of, and feelings about, the treatment; their actions in the treatment; and changes occurring over time. These factors carry the risk of child coercion and may run counter to therapeutic goals and to the developmental interests of the child.

Popper, C., & Zimnitzky, B. (1994). Child and adolescent psychopharmacology update: October 1992-December 1993. Journal of Child and Adolescent Psychopharmacology, 4(1), 9-29.

This reviews articles on child and adolescent psychopharmacology published from October 1992 to December 1993. The articles have direct implications for clinical management, and topics include medication, pathological presentation, and patient education.

DeMers, S. (1994). Legal and ethical issues in school psychologists' participation in psychopharmacological interventions with children. *School Psychology Quarterly*, 9(1), 41-52.

This article discusses legal and ethical issues faced by psychologists in general, and school psychologists in particular, as they consider increased participation in the use of psychopharmacological interventions with clients. Such increased participation can vary from increased knowledge about psychopharmacology, to collaborative practice with the prescribing physician, to obtaining limited independent prescription privileges. The legal issues discussed pertain to credentialing concerns, malpractice liability, and record keeping/access. Ethical issues considered include training for competent practice, confidentiality, relationships with other professionals and welfare of the client.

Carlson, G., Ranade, L., & Qadir, A. (1992).

Management of psychopharmacologic agents in children and adolescents.

Special Issue: Statewide Grand
Rounds. *Psychiatric Quarterly*, 63(4), 391-411.

This article summarizes the ways in which a clinician should think about medication use in children and describes practical usage of the most frequently used child psychopharmacologic agents. General issues in pediatric pharmacology are also discussed, including drug holidays, polypharmacy, psychiatrist-mediated psychoeducation, and procedures for administering medication.



## Centers, Agencies, and Advocacy

### National Institute of Mental Health (NIMH)

Information Resources and Public Inquiries 5600 Fishers Lane, Room 7C-02 Rockville, MD 20857 (301)443-4513

Website: http://www.nimh.nih.gov/publicat/

### National Institutes of Health (NIH) **Neurological Institute**

P.O. Box 5801 Bethesda, MD 20824 (800)352-9424

### Center for Mental Health Services Office of Consumer, Family and Public Information

5600 Fishers Lane, Room 15-105 Rockville, MD 20857 (301)443-2792

### Children and Adults with Attention **Deficit Disorders (CH.A.D.D.)**

499 NW 70th Avenue, Suite 109 Plantation, FL 33317 (305)587-3700

Website: http://www.catalog.com/chadd/

### American Psychiatric Association

1400 K Street, N.W. Washington, DC 20005 (202)682-6220

### American Psychological Association

750 First Street, N.E. Washington, DC 20002-4242 (202)336-5500 Website: http://www.apa.org/

### **National Depressive and Manic** Depressive Association

730 Franklin Street, Suite 501 Chicago, IL 60610 (800)826-3632 (312)642-0049 (312)642-0049/fax

### National Center for Mental Health

1021 Prince Street Alexandria, VA 22314 (703)684-7722

### Federation of Families for Children's Mental Health

1021 Prince Street Alexandria, VA 22314 (703)684-7710

### American Academy of Child & Adolescent Psychiatry (AACAP)

3615 Wisconsin Avenue, NW Washington, DC 20016-3007 (202)966-7300 (202)966-2891/fax http://www.aacap.org/

### **National Attention Deficit Disorder** Association (ADDA)

P.O.Box 972 Mentor, OH 44061 (800)487-2282 (216)350-9595 (216)350-0223/fax

Website: http://www.add.org/

### **Tourette Syndrome Association**

42-30 Bell Boulevard Bayside, New York 11361 (718)224-2999

### Center for the Study of Autism (CSA)

P.O. Box 4538 Salem, OR 97302



### INTERNET RESOURCES OFFERING ASSISTANCE RELATED TO PSYCHOTROPIC MEDICATION ON CHILDREN & ADOLESCENTS

The following is a list of sites on the World Wide Web that offer information and resources related to psychotropic medication on children and adolescents. This list is not comprehensive, but is meant to highlight some premier resources and serve as a beginning for your search. Oftentimes, the site will further link you to other relevant websites, centers, and/or organizations.

### National Institute of Mental Health (NIMH)

Address: http://www.nimh.nih.gov/publicat/

Description: This site gives access to NIMH publications on topics such as medications, anxiety disorders, ADHD, bipolar disorder, etc. The articles contain information about etiology, symptoms, psychopharmacological and psychotherapeutic treatments and issues on the various mental health problems. Other related resources such as publications, organizations, advocacy/support groups are also included in these articles.

### American Academy of Child and Adolescent Psychiatry (AACAP)

Address: http://www.aacap.org/web/aacap

Description: This website contains award-winning series of fact sheets written to help children and their families on various mental health issues. In particular, it contains two articles entitled Psychiatric Medication for Children and Questions To Ask About Psychiatric Medications for Children and Adolescents.

### Mental Health Internet

Address: http://www.mentalhealth.com/

Description: This webpage is an excellent source of internet links to other websites, organizations & institutes, journals & newspapers, universities, etc. that mainly deal with mental health related problems and treatment issues on topics such as ADHD, Tourette syndrome, pervasive developmental disorders, major depression, bipolar disorders, conduct disorder, anxiety disorders, etc.

### Children and Adults with Attention Deficit Disorders (CH.A.D.D.)

Address: http://www.catalog.com/chadd/doe/doe myth.htm

Description: This site contains an article entitled *Attention Deficit Disorder Beyond the Myths* published by Division of Innovation and Development Office of Special Education Programs Office of Special Education and Rehabilitative Services U.S. Department of Education.



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Counselor's resource on psychiatric medications: Issues of treatment and referral. G.Buelow & S. Hebert (1996). Pacific Grove, CA: Brooks/Cole Publishing Co.

Attention deficit disorder, VoL3: New research in attention, treatment, and psychopharmacology.

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T. R. Kratochwill (1994). School Psychology Quarterly, 9(1), 53-59.

Informed consent or informed coercion? Decision-making in pediatric psychopharmacology. P. K. Krener & R.A. Mancina (1994). *Journal of Child & Adolescent Psychopharmacology*, 4(3), 183-200.

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Developmental perspectives in pediatric psychopharmacology. B. Vitello & P. Jensen (1995). *Psychopharmacology Bulletin*, 31(1), 75-81.

Child and adolescent clinical psychopharmacology. W.H. Green (1995). Baltimore, MD: Williams & Wilkins.



# Asthma and Epilepsy Medications May Affect Classroom Behavior

From Understanding and managing children's classroom behavior (1995). M. Goldstein, and colleagues. New York: John Wiley & Sons, Inc.

### Asthma Medications

### Theophylline

Two medications commonly used to treat asthma, theophilline and cortisone derivations, have been studied extensively as to their effects on behavior. Earlier studies suggested that treating asthma with theophylline does not cause behavior and learning problems. Theophylline is one of the mainstays of asthma treatment. It works by helping to relax smooth muscle contractions that cause narrowing of the breathing tubes during an asthma attack. Most authors studying the behavioral effects of theophylline have found no changes in school performance. Based on a review of the literature, Duhamel and Furukawa (1989) suggested theophylline usage might be related with problems of visual spatial planning, concentration, hyperactivity, depression or anxiety. They concluded that theophylline does not play a major role in determining academic performance in children receiving treatment even when multiple medications are prescribed for the control of asthma.....

### Oral Corticosteroids

Oral corticosteroids duplicate the normal adrenal hormone cortisone in higher dosage than the body normally produces. These medications decrease inflammation and are especially helpful in children when inflammation triggers the constriction of the breathing passages, producing symptoms of difficult breathing. Corticosteroids are used to treat asthma, arthritis, and allergies. Prednisone and methlprednisolone are some of the most commonly prescribed corticosteroids . . . .

At this time, it is not possible to determine from available, published research what effects oral corticosteroids such as prednisone and methlprednisolone will have on the behavior of a particular child. Again, consultants should make certain they are aware of all medications being prescribed to children targeted for behavior change in the classroom . . . . .

### **Epilepsy Medications**

Medications commonly prescribed to control epileptic seizures include phenobarbital (Luminal), carbamazepine (Tegretol), phenytoin (Dilantin), and valproate (Depakote). Teachers are rarely provided with sufficient information concerning epilepsy and its treatment. Based on interview data, Gadow (1982) concluded that teachers were often poorly informed of the overt features of seizures, size effects of medication, or seizure management. Even when dealing with students who experienced seizures or side effects at school, teachers were often poorly informed. In 70% of the children in this study, teachers were involved either in evaluating the response to treatment, administering medication, or managing and coping with seizures in the classroom. Side effects of these anticonvulsants are common. Over one third of the children in this study were rated as more drowsy or sleepy than their peers and according to teachers, drug-induced impairments in adaptive behavior were common problems . . . . .

Children treated with phenobarbital for febrile seizures frequently develop a reversible pattern of hyperactivity. Often this problem includes irritability, tantrums, disobedience, lethargy, or insomnia. The behavioral effects appear unrelated ro blood drug levels, and many of these children demonstrated behavioral problems prior to their initial convulsion. Some concern has been raised, however, that these effects, including low IQ, may not resolve after the medication is discontinued.

It has been commonly reported that mental slowing occurs with the treatment of valproate, phenytoin, and phenobarbital.



Simeon, J. (1990). Child and adolescent psychopharmacology. In J. Simeon & H.B. Ferguson (Eds.), *Treatment strategies in child and adolescent psychiatry* (pp. 133-150). New York: Plenum Press.

(From the chapter) pediatric psychopharmacology is a rapidly growing new field linking medicine, behavioral sciences, and neurosciences to child psychiatry; the widening acceptance of drug therapy in pediatric psychiatry by psychiatrists, pediatricians, and general practitioners has been accompanied by increasing concerns among therapists, parents, educators, and the public over the potential hazards of medications and their prolonged use ... general guidelines of prescribing; stimulants; antidepressants (enuresis, attention deficit and conduct disorders, separation anxiety and school phobia, depression, obsessive-compulsive disorder, eating disorders); antipsychotics (infantile autism, Tourette's syndrome); anxiolytics; antiaggressive drugs.

Bloomingdale, L. (Ed.). (1988). Attention deficit disorder, Vol. 3: New research in attention, treatment, and psychopharmacology. Oxford: Pergamon Press, Inc.

The papers presented here are a collection of contemporary, ongoing research by a highly intelligent group of investigators into the syndrome of attention deficit disorder. The purpose of this volume is to increase the knowledge base and ultimately benefit the large number of children who present this syndrome, and who seem at risk for psychopathology in later life... For psychologists, psychiatrists, neurologists, pharmacologists, pediatricians and educators.

Bernstein, G.(1994).

Psychopharmacological interventions. In T. Ollendick; N. King; & W. Yule (Eds.), International handbook of phobic and anxiety disorders in children and adolescents. Issues in clinical child psychology (pp. 439-451). New York: Plenum Press.

(From the chapter) focuses on the psychopharmacological studies involving children and adolescents with anxiety disorders; the shortcomings of the psychopharmacological research be will presented, so that results of the scientific studies can be placed into perspective; (examines) each class of medications that have been used to treat children and adolescents with juvenile anxiety disorders; (presents) a clinical guide to initiation of antianxiety medication treatment in children and adolescents; (describes an illustrative case study of an imipramine treated 8 yr. old boy with separation anxiety disorder).

Campbell, M., & Cueva, J. (1995).

Psychopharmacology in child and adolescent psychiatry: A review of the past seven years: II. Journal of the American Academy of Child & Adolescent Psychiatry, 34(10), 1262-1272.

This article reviews literature (1964-95) on the efficacy and safety of psychoactive agents in treating children and adolescents with schizophrenia, selective mutism, or conduct, separation anxiety, obsessive-compulsive, panic, major depressive, bipolar, sleep or eating disorder. Studies with sophisticated design and methodology show that lithium is useful in reducing aggression. More evidence is required to confirm the efficacy of use of the rational treatment approach, especially in depression and conduct disorder.



### **Revisiting Medication for Kids**

Psychiatrist Glen Pearson is president of the American Society for Adolescent Psychiatry (ASAP). The following is republished with his permission from the society's newsletter.

It happens several times a week in my practice of community child and adolescent psychiatry: Our society's overwhelming belief in medically controlling our kids' behavior finds expression in ever more Huxleyesque demands on the psychiatrist to prescribe. This week's winners are the school district, the juvenile court, and a religious shelter for homeless families with children. Their respective would-be victims are LaShondra, Trevor, and Jimmy.

Jimmy is a 9 year old boy with a long history of treatment for severe emotional disturbance. He's in a school-based day treatment program and seems to be making terrific progress on self-managing his behavior. This turnaround has occurred just in the past few weeks, following an acute psychiatric hospital stay during which the many psychotropic medications he'd been taking without apparent benefit were tapered and discontinued. He was discharged to the day treatment facility and is receiving case management and therapeutic services at home in the community. Unfortunately, the grandmother with whom he lives has been evicted from her residence, and has applied for assistance to a homeless family program. She and Jimmy are scheduled to be admitted to a shelter program next week, but the shelter has made it a condition that Jimmy be on medication.

LaShondra is 14. She is in special education classes at her junior high school because of mild mental retardation and emotional disturbance. She bears both physical and psychic scars of early prolonged abuse, and has symptoms of borderline personality pathology and PTSD. She likes school and wants to learn, but keeps getting expelled for behavioral outbursts. The school, too, has made it a condition of her readmittance to classes that she be on medication. LaShondra experiences psychotropic medication as inimical to her emerging adolescent autonomy, and has had negative therapeutic effects during past trials of treatment.

Trevor, at 15, is incarcerated in the Juvenile Detention Center, awaiting a hearing on certification to stand trial as an adult on two charges of capital murder. We have evaluated him for fitness to proceed and determined that he's not mentally ill, but are involved in providing services to Trevor in consultation with the juvenile authorities because he is persistently threatening suicide. We think the best plan is to keep him closely supervised in detention, but the juvenile department is concerned about their liability and petition the court to transfer him to a psychiatric hospital. Two hearings are held on the same day. At the first hearing Trevor is committed to a private facility, on condition that the facility accepts the admission. The facility refuses. At the second hearing, Trevor is committed to the state hospital on condition that the hospital certifies that

they can guarantee security. The hospital can't. The Court then orders that Trevor be involuntarily administered unspecified psychotropic agents by injection.

I am not making these things up. These three cases have so far occupied the last three days of my week, and I'm telling you about them not to garner sympathy for the kids (only two of whom have any sympathy coming in any case), or for me (despite my clearly deserving some), but to focus attention on the astonishing degree to which everyone in our society has come to believe in the prescribing of psychotropic medication as a cure, or at least a control, for disturbing behavior in kids.

How did we arrive at this state of affairs? Though a very complex interaction among a myriad of scientific, social, and historical factors, of which I want to mention just two of the scientific ones: progress in psychiatric nosology, and progress in biological psychiatry.

Since 1980, we've trained a generation or two of psychiatrists in the phenomenological approach to diagnosis. The last three editions of the DSM (III-R, and IV) are determinedly atheoretical and empirical in their approach (the majority of members of the Work Groups on Child and Adolescent Disorders for the last three DSM's have been pediatric psychopharmacology researchers), and I think we have long since abandoned trying to teach residents to think about the meanings of symptoms to patients (and ourselves), about the dynamics of intrapsychic structure and interpersonal process. During the same time, the explosive growth of neuroscience and pharmacology has given us new tools with which to work (if only we knew how: my friend and teacher Bob Beavers used to say, "if the only tool you have is a hammer, everything looks like a nail to you!").

In short, I think we've unwittingly relinquished our most powerful and proven tool: appropriately affectionate, professionally respectful, intimate personal engagement of the patient in mutual exploration of inner meanings. We're frittering our therapeutic potency away on serial trials of psychotropic drugs, and we're prescribing for patients when we don't know the person. There are too many kids on too many drugs, and many of the kids have been given medication as a substitute for engagement and exploration of personal issues.

The point I'm trying to make is that every sector of today's society contributes to this pressure to prescribe. Parents believe medication will cure, schools believe it, courts believe it. even nonpsychiatric mental health professionals believe it. Well, I don't believe it, and it's been my experience with ASAP that most of our members don't believe it either. And, if not only do we not believe that medicine cures, but also we do believe that we have a more powerful and effective treatment which provides an essential context for medication to be helpful, let's stand up and say so. I look forward to hearing from y'all: agree or disagree.



# We hope you found this to be a useful resource. There's more where this came from!

This packet has been specially prepared by our Clearinghouse. Other Introductory Packets and materials are available. Resources in the Clearinghouse are organized around the following categories.

### **CLEARINGHOUSE CATEGORIES**

### **Systemic Concerns**

- Policy issues related to mental health in schools
- Mechanisms and procedures for program/service coordination
  - Collaborative Teams
  - School-community service linkages
  - Cross disciplinary training and interprofessional education
- Comprehensive, integrated programmatic approaches (as contrasted with high categorical, specialist oriented services) approaches (as contrasted with fragmented,
- Other System Topics:

- Issues related to working in rural, urban, and suburban areas
- Restructuring school support service
  - Systemic change strategies
  - Involving stakeholders in decisions
  - Staffing patterns
  - Financing
  - Evaluation, Quality Assurance
- Evaluation,
   Legal Issues Professional standards

### **Programs and Process Concerns:**

- Clustering activities into a cohesive, programmatic approach
  - Support for transitions
  - Mental health education to enhance healthy development & prevent problems
  - Parent/home involvement
  - Enhancing classrooms to reduce referrals (including prereferral interventions)
  - Use of volunteers/trainees
  - Outreach to community
  - Crisis response
  - Crisis and violence prevention (including safe schools)

- Staff capacity building & support
  - Cultural competence
  - Minimizing burnout
- Interventions for student and family assistance
  - Screening/Assessment
  - Enhancing triage & ref. processes
  - Least Intervention Needed
  - Short-term student counseling
  - Family counseling and support
  - Case monitoring/management
  - Confidentiality
  - Record keeping and reporting
  - School-based Clinics
- Other program and process concerns:

### **Psychosocial Problems**

- Drug/alcoh. abuse
- Depression/suicide
- Grief
- Dropout prevention
- Learning Problems
- Pregnancy prevention/support
- Eating problems (anorexia, bulim.)
- Physical/Sexual Abuse
- Neglect
  - Gangs
- •School Adjustment (including newcomer acculturation)

- Self-esteem
- Relationship problems
- Anxiety
- Disabilities
- Gender and sexuality
- Reactions to chronic illness







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