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Psychostimulants and ADHD: An Update

Since our last issue on ADHD in April of 2005, two new psychostimulant formulations have been approved (Daytrana [the Ritalin patch] and Focalin XR), and one older medication received a new indication (Adderall XR is now indicated for adult ADHD).

The bigger news over the past year, however, was that two safety warnings were added to the product labeling of ADHD meds – a sudden cardiac death warning for stimulants and a suicidal ideation warning for Strattera.

In February of 2006, an FDA Advisory Committee voted 8 to 7 to recommend that all stimulant makers add a warning about the cardiovascular risks of these drugs. The action was based on data

from the Adverse Event Reporting System showing 25 cases of sudden death, mostly in children who had used either methylphenidate or amphetamine preparations.

This decision got plenty of flak from academic psychiatrists, who took issue with some of the statistics used and who worried that the warning, in the words of the *Journal of Clinical Psychopharmacology's* Richard Shader, M.D., would make it “more difficult to convince parents to allow children with ADHD to try these agents” (*J Clin Psychopharmacol* 2006;26(3):223-224). In fact, this was exactly the FDA's intention, since it was dismayed by a report that 10% of 10-year-old boys in the United States are

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Treatment of ADHD

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Daytrana: A Long and Winding Road to Approval

On April 6, 2006, the FDA announced the approval of Daytrana, a transdermal patch version of Ritalin (methylphenidate).

While you wouldn't know it by the gushy promotional copy on Daytrana's website (www.daytrana.com), the Ritalin patch just barely squeaked through the FDA approval process.

The product was originally submitted for FDA approval in June of 2002 by an obscure company called Novum Pharmaceuticals (which has since partnered with Shire to handle Daytrana's marketing chores). The application included data on children

with ADHD who wore the patch for 12 hours a day. While the patch effectively treated ADHD symptoms, the FDA rejected the application because it caused a very high rate of side effects – an astounding 61% rate of appetite loss and 47% rate of insomnia in one study (*J Am Acad Child Adolesc Psychiatry* 2005;44(6):522-529).

In frenetic post-rejection meetings, the FDA advised Novum to try again, but this time to test a wear time of 9 hours instead of 12. Two years later, the FDA reviewed the resubmitted application, and the chief medical reviewer, Robert Levin, M.D., still

didn't like it, and recommended that it be rejected all over again! (See http://www.fda.gov/ohrms/dockets/ac/05/briefing/2005-4195B1_02_02-FDA-Clinical-Review.pdf). Levin's problem with the new data was similar to the initial rejection – too many side effects, especially nausea, poor appetite, insomnia, and tics.

Luckily for Novum, less than a month later, at the crucial meeting of the Pharmacologic Drugs Advisory Committee, Levin changed his mind, testifying that the drug did not cause as many side effects as he thought.

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Learning objectives for this issue: 1. Distinguish the different stimulant formulations. 2. Describe the uses and potential side effects of Daytrana. 3. Outline the process culminating in the FDA rejection of Sparlon for ADHD.

This CME activity is intended for psychiatrists, psychiatric nurses, and other health-care professionals with an interest in the diagnosis and treatment of psychiatric disorders.

Psychostimulants and ADHD: An Update

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on stimulants, and that a total of 2.5 million children are taking these drugs.

If you peruse Adderall XR's updated insert, the actual warning is only a one-liner tucked underneath the drug abuse warning that these inserts have contained for years, and the controversial sentence reads: "Misuse of amphetamine may cause sudden death and serious cardiovascular adverse events." It's interesting that the companies got away with specifying "misuse," because the FDA's sudden death data gave no indication that the deaths were due to anything other than normal use.

At any rate, the death risk, if it truly exists, is miniscule, about 0.2-0.5 deaths per 100,000 patient years of exposure, which should be compared with the estimated baseline rate of 4.6 deaths per 100,000 person years in children (see *J Clin Psychopharmacol* article cited above for references).

The Strattera story is similar to the recent requirement that all anti-depressants must warn about an increased risk of suicidal ideation. Like antidepressants, the Strattera adverse events database revealed a very small number of children with suicidal ideation (five cases out of 1357 patients), but no actual suicides (see www.strattera.com).

Aside from these safety considerations, there's not much new to say about how to choose stimulants. There are two major decision points: first, methylphenidate vs. amphetamine; and

second, longer-acting vs. shorter-acting. Because methylphenidate preparations cause somewhat less insomnia and irritability than amphetamines (*Pediatrics* 1997;100(4):662-666), most clinicians will start with methylphenidate. Then, all you have to do is to choose among the *thirteen* versions of methylphenidate crowding the market (see the chart on page 6).

For kids who hate swallowing pills, there are now three methylphenidate options: Methylin CT (chewable tablet), Methylin Oral Solution, and the new Ritalin patch, Daytrana, which is officially known as the methylphenidate transdermal system, or MTS (see the related article in this issue).

Focalin is simply the dextro-isomer of methylphenidate. It is no more effective than Ritalin, though it lasts a little longer (*J Am Acad Child Adolesc Psychiatry* 2004;43(11):1406-1444). A long-acting version of Focalin, Focalin XR, was just approved for both pediatric and adult ADHD, but there is no evidence of any advantages over current meds.

Intermediate-acting methylphenidate comes in three versions. Ritalin SR was the original and is available generically. Metadate ER is the branded generic of methylphenidate SR and is essentially identical to Ritalin SR; they are both methylphenidate molecules mixed into a wax matrix. Methylin ER, also a branded generic, offers methylphenidate mixed into a hydrophilic polymer,

which, according to the manufacturer, may yield an advantage in terms of being more continuously released than its competitors – but who really knows?

The long-acting versions of methylphenidate are dominated these days by Concerta, which appears to last longer than either Metadate CD or Ritalin LA.

Metadate CD, Ritalin LA, and the new Focalin XR are capsules filled with beads, so they can be sprinkled over food for kids. They contain anywhere from 30% (Metadate CD) to 50% (Ritalin LA and Focalin XR) of their beads in immediate-release form, providing an extra stimulant punch in the morning, if that's what your patient needs.

If methylphenidate doesn't work or isn't tolerated, you'll move on to the amphetamine preparations. In this category, you have dextroamphetamine and its branded generics, such as Dexedrine and Dextrostat. Desoxyn (methamphetamine) is the prescription version of crystal meth, so most clinicians avoid it because of its particularly high abuse potential.

For intermediate and long-acting coverage, Shire's Adderall (available in both IR and XR forms) is heavily promoted, but may be no better than dirt-cheap Dexedrine SR in many patients. ❖

TCPR VERDICT: *Formulations are fancy, but it's basically Ritalin vs. Dexedrine.*

Daytrana: A Long and Winding Road to Approval

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At issue was whether Daytrana caused significantly more side effects than Concerta, which was the active comparator in one of the two trials. In fact, Daytrana did cause a somewhat higher rate of insomnia, appetite loss, and nausea than Concerta, but the differences weren't statistically significant. Of particular concern to Levin was Daytrana's 7% incidence of tics, vs. Concerta's 1%. But on closer review, some of the adverse events coded as tics may have been random tongue movements unrelated to the drug; and,

at any rate, most of the "tics" resolved on their own with continued treatment.

By the way, Novum/Shire never did get around to submitting the Daytrana vs. Concerta study for publication; given the damning side effect numbers, it's easy to see why! Interested readers can view the data by plowing through the 53-page clinical review on the FDA's website at the URL already cited above.

At any rate, despite Daytrana's checkered regulatory past, it's now a bona fide FDA approved medication, available for about \$170/month at your local pharmacy.

Should psychiatrists prescribe it?

Probably not, for a number of reasons. According to the package insert, it has a lag time of 3.1 hours between application to the hip and release of Ritalin into the serum. That means that Johnny will have to wake up very early in order to derive any benefits during the important morning school hours. Clinicians will be tempted to compensate for this failing by prescribing a small dose of oral Ritalin

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EDITORIAL INFORMATION

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Dr. Carlat, with editorial assistance from Dr. Zuckerman, is the author (unless other authorship is specified) of all articles and interviews for *The Carlat Psychiatry Report*. All editorial content is peer reviewed by the editorial board. Dr. Carlat, Dr. Goldberg, Dr. Lyman, Dr. Mick, Dr. Posternak and Dr. Zuckerman have disclosed that they have no significant relationships with or financial interests in any commercial companies pertaining to this educational activity.

Sparlon and ADHD: The Power of a 7-Year Old

Rarely has a 7-year old with a rash caused the stock price of a major corporation to gyrate so dramatically.

On March 23, 2006, the FDA rejected Cephalon's application for Sparlon, a renamed Provigil that is effective for treating ADHD. Immediately, the company's stock lost about 10% of its value, or about \$18 million overall; later in the day, it rebounded.

The debate centered on a single subject in one of the three clinical trials submitted in Cephalon's FDA application. In trial #311, a 7-year old who had been randomized to Sparlon developed a serious rash and fever that might have been the dreaded and potentially fatal Stevens Johnson Syndrome (SJS). The child recovered, and Cephalon argued that he might have had a viral rash instead of SJS. The FDA responded by asking Cephalon do an open-label study of at least 3,000 children in order to be certain of Sparlon's safety.

Not that SJS was the only concern raised by the FDA. There were a number of psychiatric adverse effects in young kids taking Sparlon, including suicidal ideation, psychosis, and agitation. Finally, rates of insomnia (27%) and

severe appetite loss (16%) were both higher than the FDA would have liked.

Efficacy was not the issue here. The committee unanimously voted that the efficacy data were good. The problem is that in order to achieve a good response in kids with ADHD, the dose has to be pushed up into the 400 mg range, leading to the high reported rate of side effects.

So, did Cephalon agree to do that safety trial on 3,000 kids? No. Instead, the company marshaled a team of dermatologic experts to review the records of the 7-year old and submitted a packet of "new information" to the FDA.

But it was all for naught. On August 9, 2006, just as we were going to press with this article, Cephalon announced that the FDA had rejected its dermatologic evidence, and had sent the company a second non-approvable letter. Rather than proceed with the requested safety trial, Cephalon has decided to completely drop development of Sparlon.

This is no huge tragedy for our patients, however, because "Sparlon" is nothing other than Provigil packed into a different-looking pill and with different dosing options. Sparlon was originally

created only because Provigil is about to go generic, and FDA rules allow companies to win new patents for expiring drugs if they can furnish evidence for a new indication.

With their Sparlon strategy moribund, Cephalon is moving on to its second attempt to protect itself from Provigil's impending loss of patent protection. They have introduced Nuvigil (armodafinil), the purified R-isomer extracted from racemic Provigil. Nuvigil just got the approvable letter from the FDA for all the same indications that Provigil currently has: sleepiness caused by narcolepsy, shift work disorder, and sleep apnea. Does it have any therapeutic advantages over Provigil? That's still unclear, but it may last a bit longer, as demonstrated in one study of healthy male volunteers (*Curr Med Res Opin* 2006;22(1):158-167); whether that's an advantage or disadvantage will depend on the particular patient. Regardless, you can be certain that Cephalon reps will soon be encouraging you to switch all your sleepy patients from Provigil to Nuvigil; we suggest you ask them to show you the hard data demonstrating any advantages before making the switch. ❖

Daytrana: A Long and Winding Road to Approval

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in the morning, defeating the whole purpose of the patch, which is marketed for kids who hate to take pills.

In addition, the patch's wear time of 9 hours means a trip to the nurse in the afternoon, depriving the student of one of the main benefits of long-acting agents – take it once in the morning

with no interruption of the school day for extra health visits.

Finally, there already exist several more convenient options for pill-phobic kids. These include extended-release Ritalin LA, Metadate CD, and Focalin XR, all of which are capsules filled with beads that can be sprinkled over food.

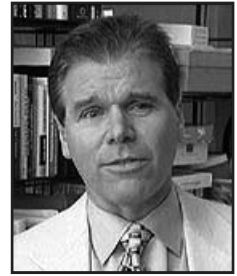
There are also two easily ingested versions of immediate-release Ritalin: Methylin CT (a chewable tablet) and Methylin Oral Solution. ❖



Daytrana: They shouldn't have bothered applying twice!



This Month's Expert:
**Lawrence H. Diller, M.D., on
Stimulants: The Case for Caution**



*Private Practice, Behavioral Pediatrics, Walnut Creek, California
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Author, The Last Normal Child, Running on Ritalin and Should I Medicate My Child?*

Dr. Diller has disclosed that he has no significant relationships with or financial interests in any commercial companies pertaining to this educational activity.

TCPR: Dr. Diller, as a behavioral pediatrician you certainly prescribe stimulants and other psychiatric medications to children, but at the same time you have spent much of your career speaking and writing about some the potential negative consequences of the excessive use of stimulants. You've also studied the history of stimulant use, and have thought about how this can inform our decisions now.

Dr. Diller: To quote Santayana, those who do not follow history are likely to repeat it. There are some interesting ironies in the history of stimulants in the United States. In 1937, Charles Bradley serendipitously discovered that Benzedrine, a racemic amphetamine very similar to current-day Adderall, could be a "brain medicine" for kids.

TCPR: How did he make that discovery?

Dr. Diller: Bradley was the pediatrician at a children's home for behaviorally disturbed and neurologically compromised children. A standard part of the diagnostic workup for these kids was a spinal tap. Many of them would complain about headache after the procedure, and Bradley suspected that amphetamine might improve the flow of spinal fluid and therefore replace the "missing" fluid that was thought to cause the headaches. Very quickly, he started getting reports from the teachers that these hyperactive kids were suddenly able to sit and do much better in the classroom. And Bradley also had a very modern insight into the action of stimulants, reflected in his initial article, in which he uses the phrase "appears to calm." While others felt that there was something "paradoxical" about a stimulant helping hyperactivity, Bradley was clear that it is not paradoxical; it really makes anyone who takes the medicine more deliberate and more methodical in what they do. The decrease in hyperactivity that you see is really the result of the kid sticking with something rather than quickly becoming bored and being attracted to nearly anything else but the math problem that he was supposed to be doing.

TCPR: So Benzedrine became a popular drug for treating these types of children?

Dr. Diller: Actually, Benzedrine remained a relatively a minor treatment used by a couple of Northeastern pediatricians and child psychiatrists, and the main treatment continued to be play therapy for children up to the 1960s. In 1955, Ciba-Geigy introduced Ritalin. It was initially indicated for narcolepsy and poor energy; but by 1961, it had received an FDA indication for ADHD, or what was then called "MBD," for minimal brain dysfunction or minimal brain damage. The new indication allowed Ciba to advertise Ritalin to doctors for the treatment of ADHD, and one of the major selling points of Ritalin, interestingly, was they could talk to doctors and doctors could talk to parents and say, "This ain't amphetamine."

TCPR: Why was that a selling point?

Dr. Diller: Because by the 1960s, there was a well-publicized epidemic of amphetamine abuse in the United States, Japan, and some European countries. Ritalin, being a synthetic analogue of amphetamine, did not have the same reputation. As it turns out, however, methylphenidate and amphetamine are very similar in terms of structure and abuse potential. In fact, one of the reasons why the DEA in 1972 made both methylphenidate and amphetamine Schedule II substances was the Swedish experience in the '60s, where the government banned amphetamine and then watched in horror as all the addicts switched quite happily to methylphenidate.

TCPR: So Ritalin became the major stimulant prescribed in the '70s and '80s. How did Adderall muscle into the scene?

Dr. Diller: Shire, based in the United Kingdom, had bought a U.S. company that had made a product called Obetral, a racemic amphetamine that had been FDA approved for weight loss. Eventually, the FDA withdrew the weight loss indication from amphetamines, because it was leading to so much drug abuse. So when Shire bought the company, the Obetral production

Bradley was clear that there is nothing "paradoxical" in a stimulant helping hyperactivity; it really makes anyone who takes the medicine more deliberate and more methodical in what they do.

– Lawrence H. Diller, M.D.

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Q & A With the Expert

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facility in New Jersey had been going unused for years. Shire reopened the factory, gave Obetral a new name – Adderall – and began marketing it as a product for ADHD. Ironically, the way they marketed it was by saying “this ain’t Ritalin,” which had a lot of appeal to doctors and parents because by that time, in the mid ’90s, Ritalin had become the well-recognized boogeyman drug for ADHD. So that is the story of how Ritalin replaced the dangerous amphetamine, and then amphetamine replaced “dangerous” Ritalin.

TCPR: Aside from the abuse dangers of stimulants, you’ve written about some of the more subtle ways in which the American “love affair” with stimulants may cause danger to our society. Can you give us a summary of these ideas?

Dr. Diller: First, I want to impress upon your readers that I am not against prescribing stimulants per se, and that as a behavioral pediatrician, I write stimulant prescriptions every day. But over the last 10-15 years, I have become concerned because I get referred children who are far less impaired than I would have seen 15 years ago. Parents bring their children in with the question, “Does my child have ADHD?” And as I prescribed all these stimulants, I began to wonder if I could be doing something which, while in the short-term might be good for the child, in the long-term may be bad for society. Initially, in *Running on Ritalin*, I focused on the inappropriate use of stimulants as performance-enhancement agents – these children become better performers in school so they can become good corporate consumer citizens.

TCPR: That’s when you introduced the idea of “Tom Sawyer ADHD?”

Dr. Diller: Right. Tom Sawyer ADHD refers to the child who is definitely struggling in school and has some problems with impulse control. His interests and talents are not necessarily what the adults want, but when he is interested in something he focuses fine. That kind of behavior has been redefined as pathology, and there is no question in my mind that Tom Sawyer and Huck Finn would be taking medication today.

TCPR: With your new book, *The Last Normal Child*, you take a slightly different approach.

Dr. Diller: One of my observations is that children with relatively minor misbehaviors are brought to an expert for a diagnosis and then are often treated with psychiatric drugs for years and years. What we fail to appreciate when we are worried about our children is that most of them are going to turn out like us, because that is what the genetic evidence suggests.

TCPR: Are you saying that when we jump to medications for children, we may be depriving them of the normal difficult experiences of growing up that help them to develop character and resilience?

Dr. Diller: I think the struggle of growing up, in and of itself, is not necessarily bad. One of the common arguments for jumping to meds in kids who are having relatively minor symptoms is that their self-image will be crushed if you don’t target their symptoms right away. But in many cases, there are very simple things that one can do before turning to meds. One of the simplest is to make sure that fathers are involved in evaluation and treatment as much as possible right from the beginning. In addition, every kid who is being considered for medication should have at least a cursory educational evaluation and have those learning issues addressed in the classroom before medicine is tried. And finally, child psychiatrists should become more involved in coordinating plans between school and home instead of just remaining at the office and diagnosing and medicating.

TCPR: I hear your point, but certainly in my practice many parents have already been through the educational evaluations and the therapy and come into my office at their wit’s end, saying that they want their child medicated.

Dr. Diller: I certainly get that kind of patient, and if the parents are very eager to use medicine, that will be one of the factors involved in my decision. But in doing my evaluations, I’m often frustrated by how inadequate and patchwork the previous interventions have been. In particular, virtually nobody is counseling the parents. Yes, they may get a brief parenting educational class in a group, but no one is really taking a look at how the parents can coordinate their parenting efforts with a good school plan.

TCPR: Most frequently, what are the interventions that you find yourself offering to these parents that have been missing in this kind of patchwork approach?

Dr. Diller: In terms of parenting approaches, I try to teach parents to move away from an overly cognitive style of parenting to the immediate-consequences approach embodied in books like *1-2-3 Magic* by Thomas Phelan. One of the basic deficits in ADHD as defined by Barkley is the relative inability to utilize knowledge of delayed consequence, and so the consequence must be brought to the act as quickly as possible.

TCPR: And what interventions have you found most helpful in the classroom?

Dr. Diller: A very simple but lovely intervention is the “on-task card.” It’s a card with 16 empty squares that the teacher puts on the kid’s desk everyday. Every time the child completes a task, he can get a check or a smiley face in one of the squares. Let’s say Johnny is 8 or 9 years old and each smiley face represents a nickel when he brings it home – that is 80 cents a day, and 4 dollars a week. That is starting to add up to a little bit of change for Johnny. Again, this is not revolutionary, but it can be a very effective alternative (or addition) to medications.



The Official TCPR ADHD Medication Comparison Chart

Medication	Dose	Available Doses	Duration of Action	Can be Split?	Generic Available?	Year FDA Approved	Company	Notes
Methylphenidates								
<i>Short-acting</i>								
Ritalin	5-30 mg BID	10, 20	3-4 h	yes	yes	1956	Novartis	
Focalin (dexmethylphenidate)	2.5-10 mg BID	2.5, 5, 10	3-4 h	yes	no	2001	Novartis	D-enantiomer of Ritalin
Methylin	5-30 mg BID	5, 10, 20	3-4 h	yes	"branded generic" of Ritalin	2000	Mallinckrodt	
Methylin CT	5-30 mg BID	2.5, 5, 10	3-4 h	yes	no	2004	Mallinckrodt	Chewable
Methylin Oral Solution	5-30 mg BID	5 mg/5ml, 10 mg/5ml	3-4 h	NA	no	2004	Mallinckrodt	Clear, grape-flavored liquid
<i>Intermediate-acting</i>								
Ritalin SR	20-60 mg q AM	20	4-8 h	no	yes	1960s	Novartis	Continuous release (less predictable because of wax matrix)
Metadate ER	20-60 mg q AM	10, 20	4-8 h	no	"branded generic" of Ritalin SR	1999	UCB	Continuous release (less predictable because of wax matrix)
Methylin ER	20-60 mg q AM	10, 20	4-8 h	no	"branded generic" of Ritalin SR	2000	Mallinckrodt	Hydrophilic polymer, so possibly more continuous than others in category
<i>Long-acting</i>								
Concerta	18-56 mg q AM	18, 27, 36, 54	12 h	no	no	2000	Alza	Initial release, then continuous
Daytrana (methylphenidate transdermal system)	10-30 mg q day	10, 15, 20, 30	8-12h	no	no	2006	Novum/Shire	Continuous-release patch; duration can be shortened by decreasing wear time
Focalin XR (dexmethylphenidate XR)	10-30 mg q AM	5, 10, 15, 20	8-12h	no	no	2005	Novartis	Mimics BID dosing; beads
Metadate CD	20-60 mg q AM	10, 20, 30	8 h	can be sprinkled	no	2001	UCB	Mimics BID dosing; beads
Ritalin LA	20-60 mg q AM	20, 30, 40	8-12 h	can be sprinkled	no	2002	Novartis	Mimics BID dosing; beads
Amphetamines								
<i>Short-acting</i>								
Dexedrine	5-20 mg BID	5	3-5 h	yes	yes	1958	GSK	dextroamphetamine
Dexrostat	5-20 mg BID	5, 10	3-5 h	yes	"branded generic" of Dexedrine	1960s	Shire	dextroamphetamine
Desoxyn	5-10 mg BID	5	3-5 h	yes	yes	1943	Abbott	methamphetamine
<i>Intermediate-acting</i>								
Adderall	5-30 mg BID or 5-60 mg q AM	5, 10, 20, 30	4-8 h	yes, can be crushed	yes	1996	Shire	Mixed salt of l- and d-amphetamine
<i>Long-acting</i>								
Dexedrine Spansules	20 mg q AM	5, 10, 15	8-12 h	no	yes	1960s	GSK	Beads; initial release, then continuous
Adderall XR	5-30 mg q AM	5, 10, 15, 20, 25, 30	8-12 h	no	no	2001	Shire	Mixed salt of l- and d-amphetamine; beads; mimics BID dosing
Non-stimulant								
Strattera	0.5 mg/kg- 1.2 mg/kg	5, 10, 18, 25, 40, 60	24 h	no	no	2003	Lilly	atomoxetine

CME Post-Test

To earn CME credit, you must read the articles and complete the quiz below, answering at least four of the questions correctly. Mail a photocopy or fax the completed page (no cover sheet required) to **Clearview CME Institute, P.O. Box 626, Newburyport, MA 01950; fax: (978) 499-2201**. For customer service, please call (978) 499-0583. Only the first entry will be considered for credit and must be received by Clearview CME Institute by August 31, 2007. Acknowledgment will be sent to you within six to eight weeks of participation.

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the sponsorship of the Clearview CME Institute. Clearview CME Institute is accredited by the ACCME to provide continuing medical education for physicians.

Clearview CME Institute designates this educational activity for a maximum of one (1) AMA PRA Category 1 Credit™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Please identify your answer by placing a checkmark or an "X" in the box accompanying the appropriate letter.

1. The FDA warning on sudden death and stimulants is based on
 - a. Data limited to Adderall and Adderall XR.
 - b. 25 cases of sudden death in patients taking stimulants.
 - c. A theoretical risk of death because so many children take stimulants.
 - d. Extrapolation from the antidepressant data in children.

2. Daytrana, the methylphenidate transdermal system, is approved for use
 - a. Only in children who refuse oral medication.
 - b. In adults who have a history of oral stimulant abuse.
 - c. In children for a maximum wear time of 9 hours.
 - d. In children for a maximum wear time of 12 hours.

3. Daytrana is the only stimulant formulation currently available for children who will not swallow pills.
 - a. True b. False

4. A true statement about Sparlon (modafinil) is:
 - a. It was recently rejected by the FDA for the treatment of ADHD.
 - b. It is the active metabolite of Provigil.
 - c. It is approved for ADHD in doses under 400 mg only.
 - d. It was rejected due to a 10% incidence of Stevens Johnson Syndrome.

5. According to Dr. Diller, Adderall was originally indicated for weight loss under the name Obetral.
 - a. True b. False

Correction

In the September 2005 issue the dose range of Sonata (zaleplon) was misstated as "5 mg-10 mg." The actual dose range is 5 mg-20 mg.

First Name	Last Name	
Street Address		
City	State	Zip
Phone	Fax	E-mail

Your evaluation of this CME activity (i.e., this issue) will help guide future planning. Please respond to the following questions:

1. Did the content of this activity meet the stated learning objectives? Yes No
 2. On a scale of 1 to 5, with 5 being the highest, how do you rank the overall quality of this educational activity? 5 4 3 2 1
 3. As a result of meeting the learning objectives of this educational activity, will you be changing your practice behavior in a manner that improves your patient care? Please explain. Yes No
-
4. Did you perceive any evidence of bias for or against any commercial products? Please explain. Yes No
-
5. How long did it take you to complete this CME activity? ___ hour(s) ___ minutes
6. **Important for our planning:** Please state one or two topics that you would like to see addressed in future issues.
-
-
-

A Patient's Perspective: The Value of an ADHD Diagnosis

Mr. H., now 49, was first diagnosed with ADHD at the age of 40, when he was evaluated at the suggestion of an old friend, a psychologist who had known him in grade school.

"I was a poster child for ADHD, but it took me a while to accept that ADHD was a real disease. Over time, it helped me see much more deeply into the problems I had as a kid, but being first diagnosed as an adult, it felt too late to relieve the guilt and shame of continually acting contrary to my desires, and so frequently failing." He was first treated with Ritalin. "For the first time in my life, I noticed that there was a brief gap between impulse and action, and I could add my intention, my personality to my actions, instead of just reacting." Unfortunately, the benefits of Ritalin waned over time, as did the effects of other medications. Mr. H. has come to recognize the importance of structure in managing his ADHD – "but I still have trouble setting it up for myself." He also points to some positive elements of ADHD: "I'm very present with children, and with other people who have ADHD. I don't have to edit myself – we interrupt each other and nobody minds. I feel like we have access to a different kind of creativity." ❖

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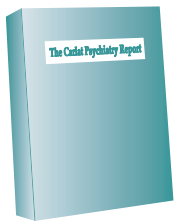
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