

## MANAGING MEDICATIONS

# 11 Steps to Prescribing and Using ADHD Medication Effectively

Medical school doesn't teach it. The research can be confusing. Every patient is different. But physicians can help their patients effectively treat symptoms with ADHD medication using these concepts.

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The most recent *Practice Parameters* update on ADHD from the [American Academy of Child and Adolescent Psychiatry](#) (AACAP) recommends medication as a primary therapy for ADHD because it shows detectable, lasting benefit over multi-modal treatment. In other words, [ADHD medication](#) works. Yet, 93% of psychiatry residencies don't mention ADHD in four years of training, and a full 50% of pediatric residencies don't mention ADHD, despite its prevalence in the U.S. So how is a physician supposed to understand and adjust treatment plans without a rich background in ADHD? That's where the following guidelines come in.

## #1: Share the Facts About Medication and Its Alternatives

Medication is the primary treatment of choice for ADHD. It is not the treatment of last resort when a person has tried literally everything else they can think of. Or at least it shouldn't be — except for someone who has very recent or unstable substance abuse problems, or a medical condition including uncontrolled seizures, untreated cardiovascular disease, or an unmanaged mood disorder. However, once these conditions are under control, medication is the treatment of choice.

This is not to say that alternative therapies and behavior management techniques can't help, or that coaching isn't valuable. Those strategies offer non-specific benefits. Anyone — with or without ADHD — would do better in a structured, predictable environment than they would in a random, chaotic one. Yet the AACAP reviewed 82 studies that treated ADHD without medication, and none were able to demonstrate a detectable, lasting benefit on the core symptoms of ADHD: inattention, impulsivity, and hyper-arousal.

## #2: Test One Methylphenidate and One Amphetamine

All of the 29 first-line FDA-approved formulations are just different ways of delivering only two molecules: methylphenidate and amphetamine. There is no evidence to indicate that one molecule is intrinsically better than the other. So how do physicians know which medication to prescribe? How can they be sure to match each patient with the best treatment possible?

One of the things that best informs the decision is a statistical calculation called effect size. It allows physicians to compare clinical experience and research done at different times, in different places. Effect size combines this information into a ratio that indicates how well this particular treatment works compared to all the others we might have tried.

*[Free Download: Your Expert Overview: Choosing the Right Professional to Treat ADHD]*

Most medications have an effect size between 0.4 (barely but consistently detectable results) and 1.0 (quite robust effectiveness). The effect size of stimulants in research is pretty close to 1.95, and in research, again, the dose is usually not fine-tuned to the individual. In dose-optimization studies when the stimulants are fine-tuned, they come in at 1.7 or above. In other words, what patients can expect from stimulant medications is nothing short of, “Wow, life changing and better than any other treatment in all of medicine.”

The side effect profiles are the same. Nothing can predict who will respond better to which medication, but most people have a preference for one. Which molecule works best does not appear to run in families (e.g., if a child or sibling does well on methylphenidate, it doesn't mean a relative is any more likely to respond to methylphenidate.) Patients just have to try both options and see which is more effective.

In my practice, I give a trial of both medications to make sure we have the best possible result. At the end, I have patients rate which medication they feel is best on a scale of one to ten. One is a nasty experience with no benefits and lots of side effects. Ten is the best result the patient can imagine. Anything six or below is a treatment failure, and physicians should keep looking for a better medication. Seven is acceptable, but the goal is between eight and ten.

It doesn't make sense to have multiple trials of different kinds of methylphenidate or amphetamine. One trial of the best medication of each kind is enough to determine which will work best for the patient.

### **#3: Choose the Smoothest Formulation**

Extended-release formulations are preferred, if available and covered by insurance, because people with ADHD generally have a poor sense of time. 85% of adults and 95% of late adolescents with ADHD don't own a watch. It's much more convenient and easier for them to remember to take one pill that releases medication throughout the day than it is to take three pills throughout the day.

Additionally, extended-release medications allow for privacy and confidentiality for kids who might otherwise have to take a second dose at school. In addition, patients report a more consistent, stable benefit: Extended-release formulations smooth out the rebound, the sudden drop off in medication levels that can make people weepy or irritable when taking an immediate-release formulation.

When stimulants medications are abused, 95% of the time it's the immediate-release format; just one more reason to use extended-release.

*[Use This Checklist to Assess ADHD Doctors and Clinicians]*

### **#4: Tailor the Dose to the Individual**

No test can predict what dose will give a patient the optimal level of benefits with no side effects. Every patient's dose is determined by trial and error.

Genetic testing to measure alleles that metabolize a medication cannot predict the dose a person will need. Many pediatricians are trained to give a certain number of milligrams per kilogram of a patient's body mass, but there is no evidence that dose is affected by size, age, gender, scale scores, or severity of impairment.

Here is what *does* determine dose:

- How it's absorbed by the GI tract (this changes constantly for kids under 16, so meds should be adjusted once a year in August just prior to the beginning of school).
- How efficiently that molecule crosses the blood-brain barrier (from the blood into the brain).
- The rate at which medications are metabolized or eliminated in urine.
- Vitamin C and citric acid block absorption of medication – so they shouldn't be taken with juice or soft drinks.

Think about [ADHD medications](#) as you would eyeglasses. I wear glasses because I can't focus my vision, in the way that someone with ADHD can't focus their attention span and impulse control. You and I cannot exchange glasses. We each need our prescription, the one that's right for us. The notion of a high-dose prescription glasses versus a low-dose is pretty nonsensical. What we want is the right dose for us, and when we have the right prescription for us as unique individuals, then we see 20/20, virtually without side effects.

## #5: Learn to Recognize the Wrong Dose

There is a tremendous variability of optimal dose. The dosage range approved by the [FDA](#) covers only about half of all people. About 6-8% of children, adolescents, and adults optimize at doses lower than the lowest dosage sizes made. As many as 40% of people optimize at doses higher than those studied and approved by the FDA.

Physicians have to stop looking at dosing from a high vs. low dose perspective, and focus on fine-tuning dose to the unique individual. By putting Vyvanse in water, for example, or using liquid formulations such as Quillivant XR, you can adjust the dose to lower than the lowest dose made if someone responds well to a small amount.

**Where Dosing Goes Wrong:** Patients expect that they should feel stimulated or different in some way.

**The Rule:** The right molecule at the right dose should return a person to normative levels of functioning, not to some artificial amped-up state, and without side effects.

If a person feels different, the dose is too high or too low. When the dose is off, hyperactive people tend to slow down to a crawl that's known as zombie syndrome. Other people get stimulated with the wrong dose, and this is called the Starbucks syndrome. If a patient is experiencing personality changes or feels revved up or slowed down, the dose is typically too high and needs to be decreased. Traditionally, physicians were trained to give the highest dose that a person could tolerate. Now research shows that this "highest dose" is too high; the optimum is typically is at least two dosage strengths weaker than this threshold.

## #6: Work with the Patient to Fine-Tune

Fine-tune the medication according to target symptom response. Doctors should educate their patients about how the medication can alleviate impairments of ADHD. Remember, these patients have always been ADHD. The way they are is their normal. They have no idea what is possible with medications, so it's important to tell them what to look for, what will change, what won't change, and what they get out of taking it.

Physicians can sit down with patients and say, "Let's make a list of the things about ADHD that you want to get rid of, that you don't like." There are lots ADHD characteristics that people do like — the cleverness, the problem-solving, the creativity, the wacky, zany sense of humor — and the nice thing is, all of those things stay when medication gets rid of the things that a person doesn't like. Then ask, "What is it about ADHD that bothers you the most?" The impairments that respond to medication are procrastination, distraction, finding it hard to stick with boring tasks, impatience, impulsivity, and restlessness. Symptoms that are not as affected by medication include disorganization, argumentativeness, and oppositional behavior.

Stimulant medications, with the exception of Concerta, are effective within one hour – including all of the benefits and all of the side effects. There are no late-appearing side effects. Stimulants are fast-acting, so adults can change the dose every day if the doctor and patient wish. Children and some adolescents who cannot communicate the effects of medication need a week between dosage adjustments. In these cases, if you have to choose one person to give feedback, pick the child's teacher. She knows what typical second-grade behavior looks like, and can help evaluate a child who is too young to report on how the medication works.

## #7: Find the Lowest Possible Dose

Emphasize that you will fine-tune to the lowest dose possible. Physicians can say, "Look at your target symptoms. Each time, when we raise the dose, you should see a clear, dramatic improvement in all your target symptoms, and no side effects other than a mild, transient loss of appetite." So long as you see things getting better and better, without side effects, physicians can keep raising the dose.

At some point though, physicians will raise the dose and the patient will say, "There weren't any further improvements. Every other time we raised the dose I could clearly see improvement. This time, this dose and the previous dose seem exactly the same to me." At that point, the previous dose is the very lowest dose that gives the patient 100% of what that medication has to offer. If the person is over the age of 16, that dose should work for the rest of their life. Tolerance is very rare to the benefits of these medications; tolerance develops very quickly to their side effects.

## #8: Don't Increase Dose to Boost Duration

Don't increase the dose just to increase the duration of the medication. Accept whatever duration of action is at that person's optimal stimulant dose. Increases past that will often push a person beyond her "sweet spot" dose to the point where she starts to have side effects. The increase in how long it lasts is very marginal.

Remember that even though extended-release is marketed as once-a-day or 24-hours, the longest duration is 10-11 hours of effectiveness, with the exception of [Daytrana](#). Most times, insurance will only cover one extended-release dose per day, so to have evening coverage many people use an immediate-release format for the second dose.

## **#9: Put It in Writing**

Write everything down for your patient. There is too much information to remember accurately and most people aren't really listening. Even people without ADHD have trouble remembering all the information needed to maintain a treatment plan. Remember that the parent accompanying a child could have ADHD, too.

Good medication outcomes require written, simplified instructions that the patient can follow step-by-step. I have developed forms for clinicians for such a purpose on a CD-ROM. If you would like a copy, contact me at [drdodson@dodsonadhdcenter.com](mailto:drdodson@dodsonadhdcenter.com) and I will mail a copy to physicians for free.

## **#10: Cover the Patient's Entire Day, Consistently**

After the age of 14, many people need 16 hours of coverage per day. This requires multiple doses of medication throughout the day. Patients should use medication at all times and in all situations where there is impairment from ADHD, including bedtime. It's more than just for school. Medication helps us to be social, get along with family, do homework at night, and drive a car safely.

Most clinicians don't offer a follow-up dose because they are worried it's going to keep patients awake, but we know that a nighttime dose can help people with ADHD slow down, and calms the chatter in their minds. After you've found the right dose, ask the patients to take a no-risk trial nap in the afternoon on their optimal stimulant dose to prove that evening doses will not keep them awake. 95% of people can nap on medication. When that happens, you know your patient can take a second dose to cover all the time they need.

There is no basis for a medication vacation. For children and teens, I recommend that they take the medication very consistently. Since medication is completely effective in one hour, adults don't have to take medication all day every day. They can use it for a specific task, if that's what they want.

However, it is worth noting that people who have ADHD and don't take medication have a higher risk of developing a substance abuse problem, being in an injury-producing accident severe enough to go to the hospital, having an unplanned child, or being involved in the juvenile justice system. On medication, the risks are the same as they are for the general population.

## **#11: Explore Second- and Third-Line Medications**

Fifteen percent of people do not respond to or tolerate the two standard molecules of methylphenidate and amphetamine. The second-line medications are Clonidine and Guanfacine. They work for about one in three people. They have a very robust effect size of about 1.3.

The only other FDA-approved medication for ADHD that has an effect size greater than 1.0 is methamphetamine. The mere mention of the drug makes many doctors, pharmacists, and patients uncomfortable, but it's probably the most effective medication for the treatment of ADHD.

The dosages of methamphetamine that are used to treat ADHD are extremely low. The average dose used to treat a person with ADHD is approximately 1/200 of the dose people abuse. Nonetheless, finding physicians who feel comfortable with the use of methamphetamine is somewhat rare.

The third-line agent is Strattera (atomoxetine). It has an effect size of 0.7 in elementary school-aged children. In high school students and above, and especially in adults, we see a barely detectable effect size

of 0.44. Even the barely detectable benefit is found in only about half of people. So that's why the American Academy of Child and Adolescent Psychiatry put it in a third-line, or alternative category.

There are other medications in the alternative, or off-label, group that include Bupropion ([Wellbutrin](#)), and [modafinil](#) (Provigil). These are not FDA-approved. They are not studied for ADHD, but there is some literature on their efficacy if everything else has failed.

I've never had a patient say, "Gee, I'm glad I waited a couple of extra years before trying medication." It's always the exact opposite. It's, "What would my life have been like if I had known how well these medications worked earlier?" There's a real period of grief about what might have been.

These medications don't produce an artificial state. They offer a return to normal functioning, often with no side effects other than maybe a mild loss of appetite that goes away for most people. With these steps, physicians can help more patients have that moment.

*[10 Things Your Doctor May Not Have Told You About ADHD Medications]*

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