

## ADHD MEDICATION INFORMATION SHEET

You have recently been diagnosed as having Attention Deficit Hyperactivity Disorder. Ninety-five percent of people get the best and fastest relief of symptoms from a group of medications called the psychostimulants. Although they have been used for more than one hundred years with good results, no one has a clear idea of how or why they are so effective with this condition. What we do know is that they have demonstrated remarkable effectiveness and safety for more than a century.

Although all of the psychostimulant class medications are in the highly restricted Schedule II classification of medications due to the abuse potential of a similar drug, meth-amphetamine, most people with ADHD do not experience them in the same way that other people do. Specifically, they do not get “high”. When an individual’s therapeutic dosage is exceeded, most people complain of being confused, sedated, and “dopey”. Consequently, there is a very low potential for abuse of these medications by people with demonstrable ADHD. Most people get used to the minimal stimulation side effects in only a few days, but the medication’s benefits for inattention and impulsivity are lifelong. The medications are not addicting. Because these medications are completely eliminated from the body within a few hours, people stop their use of these psychostimulants with negligible withdrawal symptoms every night when they go to sleep.

### Finding the Best Medication and Dose

Perhaps the most important discovery in the last decade is that the stimulant class medications used to treat ADHD must be fine-tuned both in dose and timing of dose to the needs of the unique individual. Often the dose of medication that provides optimal performance is only one dosage level away from a dose that produces side effects that will ultimately become intolerable. Nothing predicts which medication or the dose at which a given individual will get optimal benefit and relief of symptoms. They must be fine tuned to your unique needs

The optimal dose and timing of dose can usually be determined by trial and error. Sometimes, however, computerized continuous performance testing is helpful and necessary. Most late adolescents and adults are quite sensitive to the dose of medication and can clearly tell the difference of just 2-3 mgs of medication high or low. The dose of medication is started low and then increased each day for adolescents and adults (one increase per week for children). With each increase the individual should notice a clear improvement in their ability to maintain their focus of attention, be productive and efficient, have a stable mood, and control their impulses and emotions. At some point, however, the person will increase the dose but they will not see a clear increase in performance...the two doses will appear the same in their ability to correct the impairments of ADHD. At that point *the lower of the two doses* will be that individual’s optimal dose for the rest of their life. Tolerance to the ADHD benefits of these medications is very rare. The optimal dose can vary tremendously from person to person

from as low as 1 mg per dose to as high as 100 mg per dose. Just as there is no typical pair of eyeglasses, there is no typical dose of ADHD medication.

Only two minor stimulant class medications are considered first line treatments for ADHD...amphetamine and methylphenidate. All of the 26 or so brand name products on the market are just different ways of delivering these two molecules consistently over an extended period of time. There is no one right medication for everyone with ADHD. The duration of action of a particular delivery system also varies from person to person. You will need to figure out the duration of action of the particular medication based on your real life experience with that particular formulation. You will need to determine your own unique schedule for taking the ADHD medication that works best for you.

The medications will be fine tuned to your unique needs according to four factors. You will need to give your clinician clear feedback about how each medication and dose affects you. The four factors we need to determine are:

1. The optimal *molecule* for you as a unique individual.
2. The optimal *delivery system* that best fits your needs, lifestyle, and insurance.
3. The optimal *dose* that gives best performance without side effects.
4. The *duration of action* of that medication.

You will be given detailed instructions on how to adjust your medication dose. There are three goals of this process:

1. **Find your best dose** that provides optimal performance with no side effects by trial and error.
2. **Find the duration of action** of that particular dose of medication that provides optimal benefits for your ADHD symptoms.
3. **Take a nap** while on your optimal dose. This “no-risk trial” helps to demonstrate that when these medications are fine tuned, they do not have significant side effects and do not disturb sleep. Once you can sleep on the medication you will know that you can take it as many times each day as you need without worry about it keeping you awake.

This practice usually offers a trial on the most reliable formulations currently available of both methylphenidate and amphetamine so that you can judge for yourself which molecule works best for you. ***This will mean that you will do two separate medication trials. Do not take both medications at the same time.***

**Food restrictions:** All of the first line medications for the treatment of ADHD are moderately strong bases (pH of 12-13). If they are present in the small bowel at the same time as a weak organic acid (citric acid or ascorbic acid/Vitamin C) the medication forms an insoluble salt and can not be absorbed into the body. You may have swallowed your medication but, if you washed it down with orange juice or a soda, none of the medication actually gets into your blood stream. Therefore, avoid the following foods for an hour before and after your dose. Once you feel the benefits of the medication, you may eat or drink anything you wish.

Executive  
Summary

**FOODS TO AVOID WITHIN 1 HOUR BEFORE AND AFTER TAKING MEDICATIONS INCLUDE:** (Two formulations are not affected by the food you eat...Vyvanse and the skin patch, Daytrana.)

**1) Natural and artificial juices:**

Citrus fruit and juice (orange, grapefruit, lemon, lime, pineapple)

Artificial juice products – Gatorade, Kool-Aid, Tang

Other juices to which citric acid is added as a preservative – tomato juice, apple, grape, and cranberry juices.

**2) Soft drinks** and especially Mountain Dew, 7-Up, and Sprite. Only four soft drinks do not use citric acid – Classic Coke, regular and diet Dr. Pepper, and A&W brand root beer.

**3) Poptarts, granola bars, Power Bars – anything that comes in a foil packet**, can sit on your shelf for months without going stale and be eaten without cooking must have high levels of preservatives such as citric acid.

**4) High vitamin cereals** (Product 19, Total, Life, etc.). Most breakfast cereals contain some citric acid but not in amounts high enough to interfere with the absorption of ADHD medications.

**5) Vitamins and nutritional supplements containing Vitamin C** – most vitamins and minerals are best absorbed while you are sleeping so take your vitamins at bedtime.

High Doses of Vitamin C (1000 mg; EmergenC, Airborne) will completely remove amphetamine-based medications even once absorbed in to the body. High doses of vitamin C act as an “off switch” with amphetamine medications. Humans can only use 60 mg of ascorbic acid and any more just undermines your amphetamine medication.

**6) Oral suspension medications** and antibiotics commonly used with children who have trouble swallowing pills.

Several years ago drug holidays were recommended due to studies that seemed to indicate that methylphenidate and amphetamine stunted growth in children. Subsequent studies have proven that this is not the case. Consequently, the recommendation is for a person to take the medication all day, every day, and seven days a week. This includes weekends, holidays, and summertime. ADHD impairs more than just school performance. The medication helps in picking up social cues necessary to navigate within the culture and within relationships. Additionally, recent research has shown that people with ADHD who do not take medication are four times more likely to have an injury producing accident or be diagnosed with a substance use disorder than someone with equally severe ADHD who does take their medication.

## EXPECTATIONS

Many people anticipate that they may get high or euphoric from the medication. When the medication is properly adjusted to each person’s individual needs, what is

reported instead is that they are calmer, think more clearly, and have more focused attention and concentration. People report that they are not as distractible and therefore are much more efficient in their activities of daily living. Many people report that they are not as easily overwhelmed by life stresses as they had been prior to starting on their medication.

It is vitally important to remember that **more is not better**. This is one of the most frequent causes of medication failure... because these medications happen to have stimulant properties, people believe that they should feel stimulated. At the right molecule and dose you should not feel “revved up.” If you do, your dose is too high and you will experience increasing side effects and a decrease in your ability to function, pay attention, and control impulsivity.

There is also the hope in many people that merely identifying the disorder and effectively reversing its many manifestations with a medicine will solve all their problems. This is not the case. Your life will be the same as it was before you started taking medicine for your ADHD. *Pills don't give skills*. You will still have to do a large amount of work to undo all the coping mechanisms that you have developed over the years to contend with your poor attention and impulsivity. What these medications can be expected to do is level the neurologic playing field so that your efforts to solve your problems can now succeed.

## SIDE EFFECTS

For most people, the psychostimulants are the first medication of choice for the treatment of ADHD. These medications are usually well tolerated when taken in exactly the right dose for each unique individual. Most people can tell the difference of just two or three milligrams too high or too low. The stimulant class of medications is extremely safe. They were available without prescription until the mid-1950's. Nonetheless, minor side effects can occur but can be removed by minor changes in the dose or timing of dose.

**\*SEIZURES-** Although the FDA warns against the use of stimulant class medications for people who have seizure disorders, there is no known basis for this recommendation in either research or in clinical practice. Almost all patients with controlled seizure disorders can be safely and successfully treated with the standard ADHD stimulant medications.

**\*CARDIAC EFFECTS-** All psychostimulants can increase the blood pressure and pulse rate of most individuals. This is only occasionally a problem. People who have pre-existing borderline high blood pressure may find that they need to start anti-hypertensive medications since stimulants can increase resting blood pressure by five to ten points. People who have odd heart rhythms might find that the slightly increased pulse rate may cause some problems. The problem can be compensated for with the use of lower dosages or by combining medications.

**\*EYE PROBLEMS-** All stimulant medications will also increase eye pressure slightly. People with glaucoma may be very sensitive to this slight increase in pressure. Consequently, should you have severe eye pain, you should stop the medication and immediately contact your physician or go to an emergency room. Some people report mildly blurred vision while taking the stimulants, but this side effect usually resolves within a few weeks.

**\*GASTROINTESTINAL DISTURBANCES-** Some people note a loss of appetite that leads to weight loss while taking these medications. Taking the medication with food helps if you find you suffer from cramps after taking the medicine on an empty stomach. Other people report mild constipation. Like most other symptoms, these side effects usually resolve within a few weeks.

**\*SLEEP PROBLEMS-** Many people with ADHD have a long history of difficulty falling asleep and unrefreshing sleep. Since the source of the insomnia is often due to the hyperactivity of ADHD, the initiation of stimulant medication during the day often completely regularizes sleep patterns at night and patients report a deep and restful sleep, sometimes for the first time in their lives. A few people may report having trouble initiating sleep if their dose of psychostimulants is taken too close to bedtime. Should this occur, consult your physician about taking the last dose of medication earlier in the day or perhaps using a half dose as the last dose of the day. Most people, however, find that the medications help them to “shut off my mind so I can fall asleep” and an extra dose at bedtime is very helpful. Children sometimes report an increased number of nightmares while on stimulant medication. This is usually associated with a poorly adjusted dose of medication and can usually be reversed after re-evaluation to determine the proper dosage.

**\*HEADACHES-** There is an increased incidence of headache usually at the end of a dose as the medication is being eliminated from the body. These headaches may be relieved by moving the dosages closer together. More severe headaches that occur all the way through the dose of ADHD medication are usually found in persons with a family or personal history of vascular (migraine) headaches. A short course of a calcium channel blocker medication usually removes these headaches completely. Consult your clinician.

**\*TREMOR OR FACIAL TICS-** Initially some patients will report a mild, fine hand tremor or an increase in involuntary muscle twitches called tics. Because tics naturally wax and wane the tic will commonly resolve spontaneously. Eliminating caffeine from the diet will remove more than 50% of tics. Should they continue, consult your physician.

**\*STIMULATION SIDE EFFECTS-** Some people report initially feeling “wired”, jittery, anxious, or having heart palpitations. This usually means that your dose is too high, you are taking it too frequently, or that you are receiving additional stimulation from other sources such as caffeine, Sudafed, etc. (see below). Talk to your doctor if this persists more than one day.

\*INTERACTION WITH OTHER MEDICATIONS- Psychostimulant medications interact with very few other medications. You can take most over-the-counter medications without difficulty. Once you are regulated on your stimulant class medication, any other medicine with stimulant properties may give you a mildly unpleasant “buzz”. In particular, you will need to avoid the following types of medications:

- 1) **Caffeine** beverages (coffee, tea, Red Bull, etc.) and large amounts of chocolate may make some people jittery. You will need to experiment to see if you need to modify your caffeine intake.
- 2) Cold/sinus/hay fever medications that contain **decongestants**, which are nothing more than mild stimulant medications used for their ability to dry mucus membranes. Both methylphenidate and amphetamine were brought to the market over 100 years ago as OTC decongestants. **You will not need to take a decongestant...your ADHD medication will act as a better decongestant than any you can buy over-the-counter.** Consequently, you can take any anti-histamine medication as long as it is not combined with a decongestant. (For example, you can take *Allegra* but not *Allegra-D*; *Claritin* but not *Claritin-D*.) Avoid all combination multi-symptom products such as Nyquil, Dristan, Contac, etc. that have decongestant medications “hidden” in them.
- 3) **Nicotine** containing products will suddenly raise both blood pressure and pulse rate. Early studies demonstrated that nicotine and several of its analogs had minor benefits for ADHD but these benefits were far outweighed by the severe cardiovascular and cancer consequences of tobacco use. Medication treatment of ADHD is just one more reason to discontinue tobacco use.
- 4) All medications for **weight control** with the exception of Meridia (Alii), whether prescribed or over-the-counter. In particular, Metabolife and its many clones may contain significant amounts of ephedrine, caffeine, or other stimulants. The composition of these products changes from time to time so you will need to read the contents every time you use such products.
- 5) **Steroids, taken orally or injected.** You can still use inhaled steroids (ex. Flonase, Flovent, Vancinase AQ) if you follow your physician’s instructions. If you must take steroids by mouth or by injection, discontinue your stimulant medication for ADHD during the entire course of steroid treatment.
- 6) Certain oral **asthma medications containing albuterol** (Proventil, Ventolin) or theophylline. Inhaled medications are usually not a problem. If you need medication to break an asthma attack, discontinue your ADHD medication until the day after the asthma attack has fully resolved.

## PRESCRIPTION HASSLES

As mentioned above, these medications are Schedule II drugs due mostly to other drugs in the same class and due to their minor potential for abuse in people who do not have ADHD. Consequently, the prescription and dispensing of these medications is highly regulated by federal and state law.

- 1) Starting in 2015 the DEA has allowed controlled substances to be submitted electronically to your local pharmacy and to some mail order pharmacies. If your pharmacy is not set up for electronic submission, you will need to take the written prescription to your pharmacy. Refills are not ever permitted. You must have a new written prescription each time you get the medication. The prescriptions cannot be faxed in or phoned in due to state and Federal regulations. **You will need to allow at least three working days to get a refill prescription from this office.**
- 2) Only three months worth of medication may be prescribed without being physically seen and evaluated by a physician. Most managed care companies only allow thirty days supply to be dispensed at one time.
- 3) If you are an adult, you may be required to pick the prescription up in person and/or sign for it. You may also be asked to present photo I.D.
- 4) In Colorado, you have 182 days to fill a prescription before it becomes invalid. Other states have different laws that govern the dispensing of ADHD medications. Check with your pharmacist for the rules where you live. If your prescription goes out of date before you have it filled, **DO NOT** throw the prescription away. You must return that written prescription to your physician before a replacement prescription may be filled.
- 5) The prescription can be filled in some other states at the discretion of the local pharmacist. You should check with your pharmacist immediately and, if your state does not allow out-of-state prescriptions, make other arrangements. Prescriptions for ADHD medications can be filled through mail order and this is often the cheapest way to buy the medication.

**Generics:** This practice requests that people who take immediate release stimulant medications initially start out on name brand (ex. Focalin XR, Ritalin LA, Vyvanse) medication if possible. By law, generic formulations are allowed to vary in their potency 25% either high or low. For example, a person who takes 20 mg tablets of generic methylphenidate can get anywhere from 15 to 25 mg in a generic 20 mg tablet. This variation of 50% occurs from pill to pill. Most patients are much too sensitive to dose fluctuations to tolerate this variation. Due to this highly individualized dose to which many people respond, we ask our patients to use name brand medications during the first two months while the medication is being stabilized. After that time, you may experiment with the use of generic medications. If you do not notice a difference in your performance, you may continue with the use of generic methylphenidate or amphetamine.