

Medications for the Treatment of ADD

A variety of medications have been used in ADHD treatment. They include: Stimulants, Antidepressants, and Clonidine. The antimanic/anticonvulsant Tegretol has also been used effectively.

Dexedrine Dexedrine (or Dextroamphetamine) is a stimulant used in the treatment of ADHD. It comes in both long and short acting forms. The short acting tablet comes in 5 mg dosages, and reaches a peak level two hours after administration. The longer acting spansule is available in 5 mg, 10 mg, and 15 mg sizes and reaches a peak blood level eight to 10 hours after administration. This permits once daily dosing with the spansule. The half life of dexedrine (tablet) is approximately 10 hours, significantly longer than Short Acting Ritalin

Short Acting Ritalin The short acting form generally starts working about a half hour after it is given, peaks at 2 hours and is gone at 4 hours. It has a half life of 2-3 hours. It must be taken several times daily to maintain effectiveness. It comes in 5 mg, 10 mg, and 20 mg tablets. The tablets tend to be bitter, and are best swallowed whole. Common side effects are headache or stomach ache, usually minimized by taking the medication after having food.

Sustained Release Ritalin The long acting form (Ritalin SR) comes only in a 20 mg tablet. It is designed to slowly release its contents from a series of "microchannels", and the tablet can not be cut. This dosage form is quite variable, working well for some people but poorly for others. It may be worth trying if a child on Ritalin is very resistant to taking medication at school. It tends to start acting more slowly than regular Ritalin, often taking 1.5 hours to start working. For this reason, it is often given with a small dose of regular Ritalin in the morning to provide initial coverage. Ritalin SR peaks at approximately 4.5 hours from the time it is administered. It is not uncommon to have parents report a "rebound hyperactivity" in the late afternoon as the long acting Ritalin wears off.

Cylert (Pemoline) Cylert appears to be less potent in its activity, and often takes several weeks to start working. It is probably best reserved for younger children who need a chewable medication, or for situations where the patient has had an "overreaction" to other stimulants. Pemoline is similar to the other stimulants in its side effects, tending to cause insomnia and decreased appetite. It reaches a peak two to four hours after it is taken, and has a half life of 12 hours. This relatively long half life means that it can be taken once daily. Pemoline is metabolized by the liver, and has been associated with some cases of liver inflammation. Liver function should be tested prior to starting this medication and done periodically during the course of therapy to monitor for inflammation of the liver. Pemoline is the only stimulant which comes in a chewable form, making it useful for small children who can not otherwise take a bitter tasting stimulant. Cylert comes in 18.75, 37.5 and 75 mg tablets and in a chewable tablet in 37.5 mg.

SSRI The SSRI's (Prozac, Paxil, and Zoloft) all act by blocking the reuptake of a chemical transmitter called serotonin into nerve cell endings. This keeps the concentration of serotonin higher. The net result of this is analogous to taking the static out of a static filled telephone system. Communication becomes easier and requires less effort. The SSRI's may produce some agitation or headache, and may decrease appetite. Unlike

the "00009.htm" Tricyclic Antidepressants , which are usually given at bedtime or in multiple doses, the SSRI's are usually given in the morning. All antidepressants are usually given with food. The SSRI's may take several weeks or more to start acting, as do the tricyclic antidepressants. There is insufficient information at present to determine which specific SSRI is best for a specific individual, although it is clear that some people respond better to one than another. [Zoloft 50,100 mg caplet scored, effective 26 hrs; Paxil 20,30,40 mg caplet scored, effective 21 hrs]

Atypical Anti-depressants

Bupropion (Wellbutrin) has been effective in treating ADHD in some children who have not responded to other medications. It is important to monitor the dosage carefully, as there is an increased risk of seizure when more than 150 mg /dose or 450 mg/day are used in adults. Monoamine Oxidase Inhibitors are rarely used to treat ADHD. They require a diet to control intake of tyramine which most children and many adults will not tolerate (who wants to give up pepperoni pizza?). Controlled studies have shown these medications to be beneficial, however, when other medications have been ineffective.

Tricyclic Anti-depressants

The Tricyclic (" three circles"...for the chemical structure of the molecule) antidepressants were once the mainstay of treatment in ADHD, but are used less frequently now. They have many side effects, especially dry mouth, dizziness when standing up quickly, blurring of vision, and constipation. They can be quite dangerous in overdose, especially compared to the newer SSRI's. Several cases of sudden death in children have been reported on the tricyclic antidepressant Desipramine. This should be taken seriously, but these medicines have been used for decades in children with good responses in many cases. An electrocardiogram is recommended prior to starting a tricyclic, and periodically while the medication is being given, or if the dose is raised significantly. There is not good evidence that this has any protective effect with regard to cardiac complications. [Imipramine 10,25,50 mg; Desipramine 10,25,50,75,100,150 mg; Nortriptyline 10,25,50,75 mg Capsules]

An excellent review of the use of medication in ADHD is found in Spencer, Thomas, et. al., *Pharmacotherapy of Attention-Deficit Hyperactivity Disorder across the Life Cycle* , Journal of the American Academy of Child Adolescent Psychiatry, 35:4, April 1996

