



The Psychostimulants



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The psychostimulants are also called central nervous system stimulants, but this term is usually shortened simply to stimulants. Psychostimulants are used for various psychiatric conditions, including narcolepsy. They are also occasionally used to treat involuntal, or so-called retarded, depression. In the former condition, psychostimulants are used to prevent sleep attacks during everyday activities, and in the latter they are used to improve attention and energy levels. Some stimulants have also been used to aid weight loss, but this is generally considered to be risky because of the medication's addiction potential. However, the best-known use of prescribed stimulants, in the United States at least, is undoubtedly for the treatment of Attention Deficit Hyperactivity Disorder (ADHD). In this instance, the attention-focusing effects of the stimulants are theorized to help with both attention problems and over-activity. ADHD is usually diagnosed and treated in childhood. Parental education and

counseling, school consultation, and other psychological and social therapies are well recognized as necessary elements for full control of the syndrome.

For many years, amphetamines (various compounds, such as Dexedrine™), methylphenidate (Ritalin™), and pemoline (Cylert™) were the mainstays of stimulant therapy. Ritalin may well be the most-recognized medicine used in child psychiatry today, with all of the ongoing controversy focused on whether there is really an increase in ADHD, or, alternatively, whether we are too quick to medicate "normal rowdiness" in our schools. However, the scientific truth is that reports from as early as the 1950s showed stimulants to be helpful for these children, and newer studies have continued to show that the ultimate outcome is better with these medicines if they are used along with other social and psychotherapeutic approaches. This is, of course, assuming that the ADHD diagnosis is accurate.

The side effects of all three of these medicines are similar, with the most common being decreased appetite, slowed growth, and insomnia. Drowsiness and sluggishness are seen at times, but less commonly. Increases in blood pressure and pulse rate are also possible. Physicians usually watch growth charts carefully when these medicines are used, but sometimes, if the medicine is working and nothing else seems to have helped, the medication cannot be stopped even if growth does seem altered. The use of pemoline has become very restricted lately due to an admitted few reports of serious liver problems in its users (15 cases since 1975). Methylphenidate is not intended for use in children younger than 6 years of age, so the amphetamines, which are approved in children as young as 3 years, are generally prescribed if ADHD is diagnosed in very young children. These medicines could worsen a coexisting psychotic or anxiety disorder, and all have potential for addiction in adults, though not so much in children. In any case, they are carefully regulated (Schedule-IV controlled substances; prescriptions cannot be phoned to the pharmacy or refilled) and require a Drug Enforcement Agency (DEA) certificate for prescription.

There are also some fairly new additions to this mix of medicines. Most similar to the older medication forms is Adderall™, a combination of several amphetamines that has essentially the same benefit and side-effect profile noted above. Modafinil (Provigil™) is another newer medicine that seems to work by a different mechanism, but it must be thought of as sufficiently similar to amphetamines in side effects and addiction potential to require careful regulation (Schedule IV). It is marketed for narcolepsy only, but it may be seen in some ways as another central nervous system stimulant. More recently still, atomoxetine (Strattera™) has been released as a non-stimulant treatment for ADHD. It can interact poorly with MAO-Inhibitors and should be avoided in patients with narrow-angle glaucoma (an eye disease). It can still decrease appetite and can also produce nausea, but it does not seem to have any potential for abuse or dependence. Bupropion (Wellbutrin™ or Zyban™) is an antidepressant that is also sometimes used in treating ADHD, although it is not actually approved for such use by the FDA. It is not habit forming either, so far as is known, and is actually used for the treatment of one form of substance dependence, that of nicotine addiction.

References

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