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**FILE: ■Attention-deficit Hyperactivity Disorder (ADHD)
■Children**

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RE: Alternative Approaches for Attention-deficit Hyperactivity Disorder

White LB. Young and restless in America. Helping distractible, hyperactive kids. *Herbs for Health*. October 2004.

Attention-deficit hyperactivity disorder (ADHD) affects approximately two million American children. This is about one child per classroom. Boys are 3-5 times more likely to have ADHD. Symptoms begin before age 7 and often continue into adulthood. ADHD has nothing to do with intelligence or talent. The precise cause of ADHD is unknown, but it does evolve from an interaction between genetic, biological, and environmental factors. Symptoms vary between children so ADHD can be overdiagnosed. In addition, many psychiatric disorders interfere with a person's ability to pay attention and can confound diagnosis. Anxiety, depression, drug abuse, and stress can interfere with attention or cause hyperactivity and are often misdiagnosed as ADHD. Also, adults can have unrealistic expectations about behavior and erroneously label a child as having ADHD. If children who actually have ADHD are not appropriately treated they can experience academic and social failure, low self-esteem, drug addiction, and trouble with the law.

There are three subtypes of ADHD: (1) inattentive without much hyperactive behavior, (2) hyperactive and impulsive without attention problems, and (3) both inattentive and hyperactive/impulsive. There is no objective test for ADHD. Diagnosis takes time and expertise; therefore, a child psychologist or psychiatrist should be used. In the U.S., typical treatment involves drugs and therapy.

A recent survey found that 54% of parents used alternative therapies, including vitamins and dietary changes, for ADHD problems. A calm, orderly, predictable home, good diet, sleep, and exercise can help. A diet high in protein may help as well. Another study found that food with food colorings and the preservative sodium benzoate could stimulate ADHD symptoms.

Twenty percent of adult caregivers of children with ADHD or depression give their children herbs. However, the research on herbal treatment for ADHD is limited. Herbs

used for ADHD symptoms either enhance mental function or are sedatives. Six herbs utilized by parents in an attempt to manage ADHD include (1) ginkgo (*Ginkgo biloba*) which increases circulation to the brain and has nerve-protective properties. Most of the research has investigated ginkgo's ability to delay the course of dementia or improve memory and other cognitive functions in healthy adults. (2) Asian ginseng (*Panax ginseng*) and American ginseng (*P. quinquefolius*) which are adaptogens—they improve the body's ability to cope with stress. Research suggests that ginseng can enhance both mental and physical functions under stress. Ginseng extracts have been shown to improve memory and attention in healthy adults and adults with age-related dementia. (3) bacopa (*Bacopa monnieri*) which is believed to help memory and learning in adults and children in preliminary studies. (4) gotu kola (*Centella asiatica*) which was found to improve memory and concentration in rats. (5) lemon balm (*Melissa officinalis*) which is perceived as useful and used as a tea to soothe agitated, hyperactive children. (6) oats (*Avena sativa*) which traditionally is believed to have a subtle, calming effect on the nervous system. Whole oat groats are better than cut oats. Children can eat oatmeal for breakfast (sweetened with fruit and/or honey). Tinctures and teas made from oatstraw and oat seed may also be useful.

There are two studies directly evaluating herbs in ADHD. In an open trial, a proprietary herbal formula (AD-FX) containing American ginseng and ginkgo was given to children between the ages of 3 and 17 who were already on medication for ADHD. The dosage of the herbs was 200 mg of American ginseng extract and 50 mg of ginkgo extract, twice a day at least 30 minutes before meals. Four weeks later, 74% of the children had improved. Another study investigated the use of an extract of Mexican valerian (*Valeriana edulis*) because children with ADHD tend to have trouble sleeping (lack of sleep exacerbates their symptoms). Some of the five learning-disabled boys in the study also had ADHD. The boys took a placebo for two weeks, nothing for seven days, then 500 mg of dried valerian root for two weeks. Valerian improved sleep and was particularly helpful for the boys with hyperactive behavior.

Research shows that children with ADHD may be deficient in essential fatty acids, particularly the omega-3 fatty acids, docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). Fish is a good source of omega-3s. The body also can create EPA and DHA from the alpha-linolenic acid found in green leafy vegetables, flaxseed, chia seeds, canola oil, pumpkin seeds, Brazil nuts, and walnuts. There are also dietary supplements of EPA and DHA. A blend of EPA and DHA at a dose of 250 mg for children 3 to 6; 500 mg for children 7 to 11; and 1,000 mg for children 12 and older has been recommended.

Children with ADHD symptoms often have low blood levels of magnesium and zinc. A study found that supplementing drug treatment with magnesium 200 mg daily for six months improved behavior more than standard therapy alone. Another study evaluated 400 children with ADHD and found that zinc sulfate (150 mg a day, approximately 45 mg elemental zinc) for 12 weeks significantly reduced hyperactive and impulsive behavior but not inattention compared to placebo. In a second study, 44 children with ADHD took Ritalin plus either a placebo or zinc sulfate (55 mg daily, approximately 15

mg of elemental zinc) for six weeks. The addition of zinc resulted in significant improvement.

Other ADHD treatments include deep breathing, meditation, massage, yoga, biofeedback-assisted relaxation and progressive muscle relaxation, and acupuncture.

The author concludes that there is not one cure-all. For milder cases, alternative therapies may be able to control symptoms. In more severe cases, alternative therapies may be able to augment conventional treatment. Either way, it is important to get a proper diagnosis and treatment so that children don't suffer.

—Heather S. Oliff, PhD

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