

## **ATTENTION DEFICIT DISORDER AND HYPERACTIVITY**

Attention deficit disorder (ADD) and hyperactivity are diagnosed in about 4 million children in America today. The standard medical treatment is the drug Ritalin, or an equivalent. Very little attention is given to nutritional and biochemical aspects of the disorder. However, in our experience, much can be done to help these children through scientifically designed nutrition programs.

### ***Fast oxidation and hyperactivity***

Most children with ADD and/or hyperactivity are fast oxidizers. Their hair analysis reveal low calcium and magnesium levels, in relation to the sodium and potassium levels that are off the chart. Sodium is called the *volatility element*, and this is a good description of many of these children.

According to research, fast oxidation indicates over activity of the adrenal and thyroid glands. It is a fight-flight response of the autonomic nervous system that these children have difficulty *turning off*. The result is that the child has difficulty sitting still and concentrating, and is often irritable. He may also be aggressive and even violent, especially when tired or feeling threatened. Often these children have difficulty going to sleep. They often wear out their parents to the point that the parents give up trying to discipline the child. This only makes the problem worse. It is no wonder that parents and teachers look for quick solutions.

### ***Low copper and unavailable copper***

Many fast oxidizers have a low copper level. Giving copper may be necessary to enhance calcium levels in fast oxidizers. However, many ADD and hyperactive children have a more complex situation. Their hair copper level may be elevated. In a fast oxidizer this can indicate an inability to utilize copper, or even a loss through the hair.

Do not be surprised if some copper is recommended for these children, even if copper is elevated. The biologically available copper in the tablet is needed for a while to retain calcium and help correct the fast oxidation pattern. As the metabolism comes into balance, the body is better able to utilize and remove excess copper.

### ***Other Toxic Metals***

Very commonly ADD children have elevated cadmium, elevated aluminum, and at times high lead, iron and mercury levels. All these toxic metals can contribute to fast oxidation, to emotional instability, and to other neurological dysfunctions. The nutrition program will slowly help remove these metals from the body.

### ***Low Sodium Potassium Ratio and ADD***

Many ADD children have a sodium/potassium ration less than 2.5:1, also called an inversion. This low ratio indicates chronic stress, chronic fatigue, and hidden

copper imbalance. This low rate is also associated with feelings of frustration, resentment and hostility.

### ***Deficiency of the Sedative Minerals***

A common finding in these children is a low hair level of calcium, magnesium and zinc. These are called the sedative minerals because they have a calming and relaxing effect upon the nervous system. Calcium and magnesium act as *psychological buffers* to help a person handle stress. When they are low, the person is more reactive to stress, and has difficulty remaining calm under stress. Some ADD children, for example, do fine at home, but have trouble in school when they are around others.

When assessing these minerals, it is necessary to assess them **in relation to other minerals**. Calcium and magnesium are not always below the normal level (40mg% and 6mg%), but they are usually low in relation to sodium and potassium. Zinc may not appear very low, but may be low in relation to copper or cadmium. Copper and cadmium are zinc antagonists.

Supplementing with then sedative minerals is often an important part of the nutritional correction of ADD and hyperactivity disorders. These minerals help slow the adrenal and thyroid glands, and reduce the fight-flight reaction. The exact dosage varies with the age of the child and other mineral levels and ratios. However, many young children can take extra amounts of calcium and magnesium if they remain irritable and hyperactive on the recommended program. Some children seem to need an adult dosage of these minerals. Fortunately, these minerals are safe. The only effects of excessive calcium and magnesium appear to be sleepiness and occasionally loose stools due to the magnesium.

### ***Inositol, Choline and ADD***

Other helpful nutrients for hyperactive and ADD children are inositol, choline, methionine and niacinamide (ICMN). These are methyl donors which alter the adrenal hormones. The choline also stimulates acetylcholine, a calming neurotransmitter. Once again, some hyperactive children may require an adult dosage of ICMN.

### ***Diet and ADD***

According to the research of Dr. George Watson and Dr. Paul Eck, fast oxidizers require more fat and oil in their diet. They feel worse on carbohydrates, particularly simple carbohydrates such as fruit, juices and all sweets. Many ADD and hyperactive children are eating precisely the wrong diet for their body type. Parents are afraid of cholesterol or their children gaining weight. They discourage or avoid giving the child butter, meat, cheese, eggs and other fatty foods. Instead the children fill up on cereal, bread, fruit, and often sweets. This only aggravates the symptoms of ADD and hyperactivity in some children.