

Help for the Struggling Student - Improving Memory with Lecithin

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Does your memory seem fuzzy at times? Do you have difficulties in remembering faces, facts, dates, or numbers? Do you experience memory lapses when your mind is just a blank? The cause could be traced to a nutritional deficiency. Your brain, like the rest of your body organs, requires a specific set of nutrients in order to function the way it should. This article will explore an important fatty acid, lecithin that helps the body digest and utilize the fats and oils that are so important to efficient brain and nerve function. Perhaps the greatest recent discovery is the use of lecithin to activate a sluggish mind, and improve memory. It accomplishes this by providing the body with the ingredients necessary to produce the vital neurotransmitter, acetylcholine. This is the neurotransmitter that is responsible for memory storage and retrieval, and the effectiveness of nerve signals in many areas of the brain. Your brain, if dried and analyzed (not easy to do while you're still alive), would show a composition of about 30% of lecithin.

What is Lecithin?

Lecithin is a fat-like substance known as a phospholipid. It is an excellent source of the B vitamins choline and inositol. Cell membranes, which allow nutrients to leave or enter a cell, are largely composed of lecithin. It is found in eggs and soybeans and, because of its "soap-like" characteristics, aids in the absorption and utilization of fats and important fat-containing vitamins by emulsifying them (breaking into tiny pieces) so they can be used by every cell. A fun "science experiment" you can do that demonstrates the unique fat dissolving ability of lecithin would be to sprinkle a tablespoon of lecithin granules on the cooled liquid from a beef roast. Soon you will see that the fat has been broken into many tiny particles as the lecithin emulsifies it. Because of the expense of egg-yolk-derived lecithin, for the past twenty years soybeans have been used as the almost exclusive source of lecithin. For years it has been effectively used by health practitioners to lower cholesterol, blood pressure, and inhibit the formation of gallstones in sensitive individuals. A breakthrough study done in 1975 at the Massachusetts Institute of Technology (MIT) found that a daily supply of lecithin "improves brain chemical activity." In particular, they found that memory it improved memory, speech, and motor problems that affected balance and movement.

Auditory Processing Problems in the Children

One of the most exciting areas in which I have seen lecithin make noticeable differences is in the improvement of auditory processing function in children. I have received many reports from speech pathologists and parents telling of greatly improved auditory processing (hearing and remembering) in children who take this natural soybean product. My experience is that when lecithin is taken alone, it is very helpful, but when taken along with the essential fatty acids (fish oil, flaxseed oil, evening primrose oil) and Vitamin E, it produces marked results. Because of its fat emulsifying properties it helps the child's body digest the extra oils, thereby making use of them properly. Many children who have suffered with numerous ear infections benefit from the regular use of lecithin. The "cilia of the ear," (the tiny hair-like parts of the ear) are frequently damaged when many ear infections have occurred. It is known that the highest concentration of Vitamin A in the whole body is in the "cilia" of the ear. Lecithin increases the body's absorption of this vital Vitamin A dramatically. Thus it is very healing to the areas in the ear structure and brain that affect efficient auditory processing function. In the MIT study referred to earlier, in testing adult subjects in learning and memory tasks, it was found that the subjects taking lecithin daily showed "improvement of thinking and intelligence." Since we know that the left hemisphere of the brain is responsible for auditory storage, and we often refer to it as the "thinking hemisphere," we can see how any substance that improves auditory processing would also affect the thinking ability of the brain. The MIT study also referred to substantial improvement in the area of speech. Again, this is mainly a left-brain function. This is a very exciting application of research, since auditory processing problems are historically difficult and lengthy to treat. Dr. Levinson, a neurologist from New York, in his book *Total Concentration*, states that he frequently uses lecithin to help both attention and learning in his young patients.

Hyperactivity

"Lecithin is very calming to the nervous system," according to Dr. Bernard Rimland, Director of the Center for Autism Research in San Diego. Dr. Feingold, author of the famous Feingold Diet, also used lecithin extensively in his supplemental program for children who were suffering with hyperactivity. The myelin sheath, the fatty covering that coats the nerve endings, is largely composed of lecithin. We often refer to the children who are hyperactive, as looking as though they are "wired." It's likely that we are unconsciously identifying a neurological process that is happening, as the nervous system is being affected by the breakdown of the fatty covering of the nerves. Lecithin serves to nourish the fatty sheaths covering these nerve fibers. In the book, *Emotions and Your Health*, it is stated that lecithin appears to calm "hypomania." This is a condition of heightened activity along with impulsivity and an endless energy that continues, and at times seems out of the control of the individual. Often it is accompanied by the lack of need for much sleep. This describes fairly accurately the children who are truly hyperactive. Lecithin does not act as a "magic bullet" in cases of hyperactivity, but can make a substantial difference when taken over a long period of time, in feeding the body what it needs to properly execute important nervous system functions.

Balance and Motor Coordination

"Acetylcholine is a neurotransmitter used by the brain to regulate and control motion and sensory activities," according to Carlson Wade's *Lecithin Book*. In this book he also states, "The use of lecithin is important in helping regenerate and revive sluggish brain cells. It appears to renew thought processes." He writes of informal studies done by family doctors who used lecithin to help their patients suffering with various motor disorders. These doctors found an average of 30% improvement in balance and movement while taking the lecithin. It was found that choline influences all nerve impulses (the very act of moving our eyes across the page). Because lecithin nourishes the fatty sheath covering the nerve fibers, it was found to be very helpful in reducing the involuntary movements in Tourette's Syndrome. It is also useful in conditions in which there is a muscle weakness. As the neurological process is improved, nerve signals are influenced, and weak muscles respond with greater strength. The MIT study found that the brain activities affected by lecithin include learning, memory, motor coordination, sensory feedback, and sleep patterns.

How to Supplement

Knowing the importance of lecithin in the efficient running of our nervous system, brain processes, memory and motor function, many of us would like to add this important food not only to our children's diet, but our own also. Lecithin is easily purchased in any health food store. It comes in many forms, such as liquid, capsules, and granules. By far the most potent, and easiest to use are the granules of lecithin. It takes ten capsules of lecithin to equal one tablespoon of lecithin granules. Also, the granules are easy to mix into a fruit smoothie, protein drink, or any kind of blender shake. It also can be stirred into a flavored yogurt or cereal. Many moms put it in their homemade bread and pancakes. Lecithin granules are sold in bulk form in plastic bags, or in cans. Be sure to read the labels. My experience has been that, although the granules sold in the plastic bags are less expensive, they also contain far less of the important ingredient phosphatidylcholine. Some brand names that have a high content of phosphatidylcholine are Carlson, Lewis Labs, and BioSan. The advantage of using the lecithin that is sold in cans, is that you are assured of freshness, and more importantly, calcium and magnesium have been added. Since high intake of phosphorus alone, can result in some urinary loss of calcium, the addition of calcium to the lecithin granules is very helpful in preventing that phenomenon. The most common recommendation for the amount of lecithin that is helpful to the body is one tablespoon for children and two tablespoons for adults, daily. Since this is a food, one does not have to worry about taking too much lecithin. Be sure to keep the lecithin refrigerated once you have opened the container to keep it from becoming rancid. Lecithin should have a sweet, "grainy" odor when it is fresh. If it smells sour, it is not fresh. One interesting little "side effect" of lecithin has been reported by several dads who started taking lecithin along with their child. They said that they began noticing that where their hairline had begun to recede, there now were little tufts of new hair appearing. This effect was first reported by Adelle Davis, fifty years ago, as a result of taking inositol, one of the vitamins that is abundant in lecithin. One main benefit of taking a natural product instead of a medicine is that the "side effects" are good.

Yes, you can improve emotional health, boost thinking powers of the brain, improve memory, and motor coordination by assuring that you and your children have an adequate amount of needed neurotransmitters available at all times. This is possible with the use of lecithin, the food your brain must have for total survival. We are so grateful to God for not only giving us wonderful foods to help our minds and bodies, but also for giving us the wisdom to know how to use these foods to help our children.

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