

# Restoring Memory

Age associated memory decline (AAMD) is the non-pathological decline in memory that happens normally with aging. Some declines in memory are associated with pathological diseases such as Alzheimer's. Another less well known memory stealing disease is multi-infarct dementia, often referred to as "mini-strokes".

AAMD is manifested by the decline in the ability to recall information such as phone numbers, people's names, and where objects have been placed. By age 40, a 35% decline occurs in the ability to remember a name an hour after an introduction. By age 60, the decline has reached 60%. This problem normally happens in everyone as they get older.

Nutritional and hormonal imbalances can also affect memory. Studies show, for instance, that women who have good levels of natural hormones after menopause suffer less memory impairment than their peers. These women also recover better from strokes. Many of the B vitamins and amino acids also play a role in maintaining optimal brain function. One of the key elements of memory, however, is the production of a brain chemical called **acetylcholine**.

**Acetylcholine** enables the brain to create and store pictures, much like camera film. Once pictures are created, they can be stored in the brain and recalled later. The picture also, can then be matched with other information that has been stored in the brain. The ability of the brain to create pictures and chemically transfer information from one cell to the next is critical to maintaining good memory. So, when we meet someone and learn their name, a picture of the face has to be stored in your brain at the same time the sound of their name has to be chemically stored in a different part of the brain. In order for you to recall who that person is the next time you see them, your brain has to "up-load the picture of the face and the name and match those two together.

Of course, information that doesn't get stored can't be recalled; or information that can't make it from one area of the brain to another can cause you to recognize the face but not be able to recall the person's name. This inability to move information fluidly through the brain can also manifest as not being able to complete a sentence because you can't come up with the right word.

The decline in mental function happens because of an imbalance in brain chemistry and deterioration of brain cells. Scientists have looked at the process of how we remember and several natural nutrients have been found to be effective in restoring the ability of the brain to make pictures and move information quickly from one part of the brain to another.

**Phosphatidylserine**-This nutrient is a fatty component of cell membranes that allows one cell to communicate to another by transmission and acceptance of chemicals called

neurotransmitters. These fats are like telephone wires in the brains, carrying messages from one cell to another efficiently.

**Ginkobiloba**-This natural substance has been shown to improve circulation to many parts of the body, especially the brain. The increase in circulation improves cell function. Ginko has also been found to be an effective anti-oxidant for brain cells. Diseases such as Alzheimer's are underwritten by oxidation (rusting) of brain cells. Studies are now being done to validate ginko's effectiveness in preventing brain degeneration. The brain deterioration that causes Alzheimer's is not easily reversed. It must be prevented.

**Huperzine**-This cutting edge nutrient has been shown to be as effective as prescription medication in restoring brain function in patients with impaired memory. Huperzine helps the brain maintain high levels of **acetylcholine**, the chemical responsible for creating and storing pictures in the brain. People with Alzheimer's have low levels of **acetylcholine**.

**Lipoic Acid**-Cells throughout the body, including the brain, decline in function due to damage done to them by destructive agents called free radicals. Free radicals are analogous to the black exhaust that comes from a car's tailpipe. The process by which they cause damage is called "oxidation". Substances that combat oxidation are called "anti-oxidants". Lipoic acid is one of the most potent anti-oxidants known. Also, it has the uncommon quality of being fat and water soluble. Most anti-oxidants don't dissolve in fat and therefore don't protect tissues with high fat content such as the brain and nerve cells. Lipoic acid has also been found to reduce the nerve pain suffered by many diabetics.

**DHA**-About 60% of the brain is composed of fat. Fat is an important structural component of cell membranes, which allows nutrients to enter and waste material to exit. The fats in the membrane also allow cells to communicate with each other. We now realize that there are good fats and bad fats. DHA (not to be confused with the hormone DHEA) is a type of good fat that comes from fish oil and improves brain function. DHA is now being added to baby formulas to ensure proper brain growth and function.

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