# Yogic Therapy for Mild Cognitive Impairment and Early Stage of Alzheimer's Disease

## By Lydia Di Liello July 2010

## Description of Mild Cognitive Impairment (MCI) and Early Alzheimer's Disease

#### What is Mild Cognitive Impairment?

Mild cognitive impairment is a clinical label which includes elderly subjects with short term or long term memory impairment and with no significant daily functional disability. It can also be a transition stage between the cognitive decline of normal aging and the more serious problems caused by Alzheimer's disease.

The disorder can affect many areas of thought and action — such as language, attention, reasoning, judgment, reading and writing. However, the most common variety of mild cognitive impairment causes memory problems.

Many people with mild cognitive impairment eventually develop Alzheimer's disease, although some remain stable and others even return to normal.

#### What is Alzheimer's Disease (AD)

Alzheimer's Disease (AD) is a progressive, degenerative disease of the brain that destroys and damages brain cells. It results in impaired memory, thinking, judgement, and behaviour. It is **not** part of normal aging.

(AD) currently affects about 300 000 people in Canada. It is the tenth leading cause of death in the elderly Canadian population.

As the Canadian population grows older, AD is expected to become an even bigger problem tomorrow. By the year 2031, over 750 000 Canadians are expected to have Alzheimer's or a related disease.

Alzheimer's disease robs us of everything we take for granted: our memory, our judgment and reasoning, our ability to perform familiar tasks. It changes our mood and behaviour and, eventually causes death.

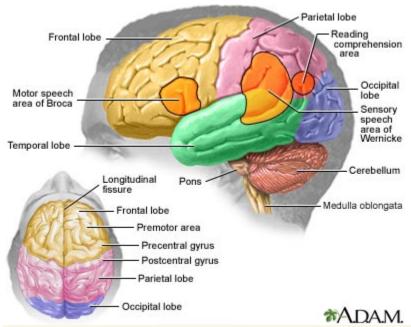
On average, a person will live 7 to 10 years after diagnosis with a growing dependence on others and ultimately a need for 24-hour care.

The emotional, physical and financial strain is significant, with 40 to 75% of caregivers developing psychological illnesses.

#### What happens to the brain?

There are three brain abnormalities that are the hallmarks of the Alzheimers disease process:

- Plaques. A protein called beta-amyloid accumulates and forms sticky clumps of amyloid plaque between nerve cells (neurons). High levels of beta amyloid as associated with reduced levels of the neurotransmitter acetylcholine. (Neurotransmitters are chemical messengers in the brain.) Acetylcholine is part of the cholinergic system, which is essential for memory and learning and is progressively destroyed in Alzheimers disease.
- Tangles. Neurofibrillary tangles are the damaged remains of macrotubules, the support structure that allows the flow of nutrients through the neurons. A key feature of these tangled fibers is an abnormal form of the tau protein, which in its normal version helps maintain healthy neurons.
- Loss of nerve cell connections. The tangles and plaques cause neurons to lose their connection to one another and die off. As the neurons die, brain tissue shrinks (atrophies).



The major areas of the brain have one or more specific functions.

#### Causes

Scientists do not know what causes Alzheimers disease. It may be a combination of various genetic and environmental factors that trigger the process in which brain nerve cells are destroyed.

#### **Genetic Factors**

Genetics certainly plays a role in early-onset Alzheimer's, a rare form of the disease that usually runs in families. Scientists are also investigating genetic targets for late-onset Alzheimer's, which is the more common form. At this time, only one gene, apolipoprotein E (ApoE) has been definitively linked to late-onset Alzheimer's disease. However, only a small percentage of people carry the form of ApoE that increases the risk of late-onset Alzheimer's. Other genes or combinations of genes may be involved.

#### **Environmental Factors**

Researchers have investigated various environmental factors that may play a role in Alzheimers disease or that trigger the disease process in people who have a genetic susceptibility. Some studies have suggested an association between serious head injuries in early adulthood and Alzheimers development. Lower educational level, which may decrease mental and activity and neuron stimulation, has also been investigated. To date, there does not appear to be any evidence that infections, metals, or industrial toxins cause Alzheimers disease.

#### **Risk Factors**

Alzheimer's disease (AD) is now the fourth leading cause of death in adults. It is estimated that 4.5 million Americans and eight million more people worldwide have it. Age is the biggest risk factor for Alzheimer's disease. The number of cases of Alzheimer's disease doubles every five years in people over 65. By age 85, almost half of all people are afflicted. People with AD survive, on average, half as long as similarly aged adults without the disease.

With the increasing numbers of aging adults, unless effective methods for prevention and treatment are developed, Alzheimer's disease will reach epidemic proportions, afflicting an estimated 14 million Americans within 50 years. To date, evidence points to high blood pressure, cholesterol levels, and a family history of the disease as independent risk factors for Alzheimer's disease.

#### Gender and Estrogen Loss

Several studies have reported that women have a much higher risk for Alzheimer's disease than men. (Most of these studies have been on European and Asian populations, however. Some studies in the US have found no significant differences.) If there is a gender difference, it is likely to be due estrogen, the primary female hormone,

which appears to have properties that protect against the memory loss and lower mental functioning associated with normal aging. Such actions include blocking production of beta amyloid, offering antioxidant protection, and regulating glucose (blood sugar) levels in the brain. The drop in estrogen levels after menopause, then, may explain that higher risk for Alzheimer's disease in older women than in men. (Some of testosterone, the male hormone, converts to estrogen, which may help protect them.)

#### Family History and Populations Differences

People with a family history of the disease are at higher than average risk for Alzheimer's disease. Researchers are identifying important genetic factors, notably the ApoE4 gene, that may be responsible for late- and early-onset cases.

Few well-conducted studies have been conducted on differences among population groups. Some have observed the following:

- African Americans and Hispanics may have a higher risk than caucasian Americans.
- Alzheimer's disease occurs less frequently in the Native American Crees and Cherokees and in Asians than in the general American population.

Genetic factors are at work in all groups but the same genes may have different effects depending on the ethnic population. Dietary and other cultural factors that increase the risk for hypertension and unhealthy cholesterol levels may also play a role. For example, a study of Japanese men showed that their risk increased if they emigrated to America. And the disease is much less common in West Africa than in African Americans, who share the same or higher risk with Caucasians Americans.

#### Risk Factors for Cardiovascular Disease

High blood pressure and unhealthy cholesterol levelers -- the same important risk factors for heart disease and stroke -- are also risk factors for Alzheimer's disease. In fact, they appear to be more important than ApoE4, the genetic factor most commonly associated with Alzheimer's disease.

High Homocysteine Levels. Homocysteine is an amino acid that has been identified as a modest risk factor in heart disease. Now, it has also been associated with a higher risk for Alzheimer's disease. High levels are general due to deficiencies of the B vitamins B6, B12, and folate. Such vitamins are also related to nerve protection. Researchers theorize that homocysteine impairs the ability of DNA to repair nerve cells. The weakened cells are then more vulnerable to the harmful effects of oxidized beta amyloid.

#### Other Risk Factors Associated with Alzheimer's Disease

Lower Education and Economic Groups. A number of studies have reported either a higher risk for Alzheimers disease in people with less education or a lower risk for

Alzheimer's disease in those who remain mentally active. Some experts speculate that learning itself may stimulate more neurons to grow and thus create a larger reserve in the brain so that it takes longer for brain cells to be destroyed. Some evidence suggests that early malnutrition, which is more likely to occur in lower income and educational groups, has been associated with smaller brains and with Alzheimer's disease in old age. Low-birth weight can cause problems in growth factors that could effect both mental and physical health later on in adulthood.

Some experts suggest that the relationship observed in other research may simply be due to social and economic factors, such as malnutrition or low birth weight, which have been associated with both Alzheimer's disease and small head size. Small head size independent of other factors, they argue, does not pose a higher risk for either Alzheimer's disease or low intelligence.(Of note, 30,000 years ago, the size of a human brain was 10% larger than it is now.)

Depression. There is a significant overlap between depression and dementia in the elderly. (In fact depression itself is often an early symptom of Alzheimer's disease.) In a 2002 study of Catholic nuns, for each of four depressive symptoms, the risk for developing Alzheimer's disease increased by an additional 19%. For example, for a woman with four depressive symptoms the risk increased by 76%. Some evidence suggests that there may even be common genetic factors in people who have both early depression and Alzheimer's disease.

### Signs and Symptoms of MCI vs Early Stage of AD

#### **Symptoms**

The early symptoms of Alzheimer's disease (AD) may be overlooked because they resemble signs of natural aging. However, extreme memory loss or other cognitive changes that disrupt normal life are not typical signs of aging.

Early Alzheimer's disease symptoms may include:

- Forgetfulness
- Loss of concentration
- Language problems
- Confusion about time and place
- Impaired judgment
- Loss of insight
- Impaired movement and coordination
- Mood and behavior changes
- Apathy and depression

Older adults who begin to notice a persistent mild memory loss of recent events may have a condition called mild cognitive impairment (MCI). MCI is now believed to be a significant sign of early-stage Alzheimer's in older people. Studies suggest that older individuals who experience such mild memory abnormalities can later develop Alzheimer's disease.

Patients may be aware of their symptoms or may be unaware that anything is wrong. The Alzheimers Association recommends that everyone learn these 10 warning signs of Alzheimers disease:

- Memory changes that disrupt daily life. Forgetfulness, particularly of recent events or information, or repeatedly asking for the same information
- Challenges in planning or solving problems. Loss of concentration (having trouble planning or completing familiar tasks, difficulty with abstract thinking such as simple arithmetic problems)
- Difficulty completing familiar tasks at home, at work, or at leisure
- Confusion about time or place. Difficulty recognizing familiar neighborhoods or remembering how you arrived at a location, confusion about months or seasons
- Trouble understanding visual images and spatial relationships. Difficulty reading, figuring out distance, or determining color.
- Language problems. Forgetting the names of objects, mixing up words, difficulty completing sentences or following conversations
- Misplacing things and losing the ability to retrace steps. Putting objects back in unusual places, losing things, accusing others of hiding or stealing.
- Impaired judgment and decision making. Dressing inappropriately or making poor financial decisions
- Withdrawal from work or social activities. No longer participating in familiar hobbies and interests.

*Mood and personality changes*. Confusion, increased fear or suspicion, apathy and depression, anxiety. Signs can be loss of interest in activities, increased sleeping, sitting in front of the television for long periods of time.

#### Diagnosis

Alzheimers disease can only be definitely diagnosed after death when an autopsy of the brain is performed. However, doctors use a variety of tests to make a probable diagnosis of Alzheimers.

#### Medical History and Physical Examination

The doctor will ask questions about the patients health history, including other medical conditions they patient has, recent or past illnesses, and progressive changes in mental function, behavior, or daily activities. The doctor will ask about use of prescription drugs (it is helpful to bring a complete list of the patients medications) and lifestyle factors,

including diet and use of alcohol. The doctor will evaluate the patients hearing and vision, and check blood pressure and other physical signs. A neurological test will also be conducted to check the patients reflexes, coordination, and eye movement.

#### **Laboratory Tests**

Blood, urine, and possibly spinal fluid samples are collected. They can help the doctor evaluate other possible causes of dementia, such as thyroid imbalances or vitamin deficiencies.

#### **Neuropsychological Tests**

A number of psychological tests are used to assess difficulties in attention, perception, memory, language, and problem-solving, social, and language skills. These tests can also be used to evaluate mood problems such as depression.

One commonly used test is the Mini-Mental State Exam (MMSE), which uses a series of questions and tasks to evaluate cognitive function. For example, the patient is given a series of words and asked to recall and repeat them a few minutes later. In the clock-drawing test, the patient is given a piece of paper with a circle on it and is asked to write the numbers in the face of a clock and then to show a specific time on the clock.

#### **Brain-Imaging Scans**

Imaging tests are useful for ruling out blood clots, tumors, or other structural abnormalities in the brain that may be causing signs of dementia. These tests include magnetic resonance imaging (MRI) or computed tomography (CT). Functional and volumetric MRIs, as well as positron-emission testing (PET) scans, have some ability to predict the future course of early Alzheimer disease. However, they are often not as good or no better than clinical exam and history in predicting the course of this disease

#### Ruling out Other Causes of Memory Loss or Dementia

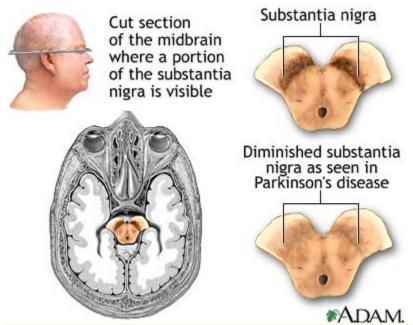
Alzheimers disease is the most common cause of dementia. However, other causes of dementia in the elderly can include:

- Vascular dementia (abnormalities in the vessels that carry blood to the brain)
- Lewy bodies variant (LBV), also called dementia with Lewy bodies
- Parkinson's disease
- Frontotemporal dementia

Vascular Dementia. Vascular dementia is primarily caused by either multi-infarct dementia (multiple small strokes) or Binswanger's disease (which affects tiny arteries in the midbrain).

Lewy Bodies Variant. Lewy bodies are abnormalities found in the brains of patients with both Parkinson's disease and Alzheimer's. They can also be present in the absence of either disease; in such cases, the condition is called Lewy bodies variant (LBV). In all cases, the presence of Lewy bodies is highly associated with dementia.

Parkinson's Disease. Some of the symptoms of Parkinsons disease and Alzheimers can be similar and the diseases may coexist. However, unlike in Alzheimer's, language is not usually affected in Parkinson's related dementia.



Parkinson's disease is a slowly progressive disorder that affects movement, muscle control, and balance. Part of the disease process develops as cells are destroyed in certain parts of the brain stem, particularly the crescent-shaped cell mass known as the substantia nigra. Nerve cells in the substantia nigra send out fibers to tissue located in both sides of the brain. There the cells release essential neurotransmitters that help control movement and coordination.

Frontotemporal Dementia. Frontotemporal dementia (FTD) is a term used to describe several different disorders that affect the frontal and temporal lobes of the brain Although some of the symptoms can overlap with Alzheimers, people who develop this condition tend to be younger than most patients with Alzheimers disease.

Other Conditions. A number of conditions, including many medications, can produce symptoms similar to Alzheimer's. These conditions include severe depression, drug abuse, thyroid disease, vitamin deficiencies, blood clots, infections, brain tumors, and various neurological or vascular disorders.

#### **Stages**

Alzheimers disease is classified into various stages that range from mild to moderate to severe. In the final stages of Alzheimers, the patient is unable to communicate and is completely dependent on others for care

The lifespan of patients with Alzheimer's is generally reduced, although a patient may live anywhere from 3 - 20 years after diagnosis. The final phase of the disease may last from a few months to several years, during which time the patient becomes increasingly immobile and dysfunctional.

#### **Treatment**

There is no cure for Alzheimers disease. Drug therapy aims to slow disease progression and treat symptoms associated with the disease. Clinical studies indicate that these drugs generally have only modest benefit.

Patients and their families need to discuss with their doctors whether drug therapy can help improve behavior or functional abilities. They also need to discuss whether or not drugs should be prescribed early in the course of the disease or delayed.

The following drugs, cholinesterase inhibitors, are commonly prescribed for treatment of Alzheimers disease:

- Donepezil (Aricept)
- Rivastigmine (Exelon)
- Galantamine (Reminyl)
- Memantine (Ebixa)

All of the drugs currently approved for treatment of Alzheimer's disease are expensive. While there are generally no serious risks associated with these medications, these drugs can have a number of bothersome side effects, including indigestion, nausea, vomiting, diarrhea, loss of appetite, muscle cramps, and fatigue.

In any case, the benefits of these drugs are far from dramatic and may often not be noticeable in everyday life. In fact, many doctors have reservations about developing any additional drugs that affect the cholinergic system since, at best, they only slow progression and do not appear to affect the basic destructive disease process. When patients go off the drugs, the deterioration continues

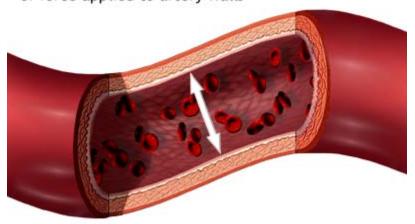
Comparative studies have reported little differences in effectiveness among these drugs. All drugs have gastrointestinal side effects, including nausea. Of note, some of the drugs often used in elderly Alzheimer's disease patients are known as anticholinergics and may offset the effects of the Alzheimer's disease *pro*-cholinergic drugs. Such drugs include antihistamines, antipsychotic drugs, and some anti-incontinence drugs.

#### **Heart and Vascular Diseases**

Many people with mild cognitive impairment have vascular risk factors. In some cases, imaging reveals silent cerebral infarcts that amplify the effects of any degenerative brain disease. In others, the patient may have had a series of silent or clinical strokes that have a cumulative effect on their cognition, and the brain shows none of the changes indicative of Alzheimer disease

Researchers are investigating whether diseases that affect the heart and vascular (blood vessel) system may increase the risk of Alzheimers disease. These conditions include high blood pressure, prior strokes, unhealthy cholesterol levels, and diabetes. There is some evidence that controlling these conditions may help prevent Alzheimers disease.

## Blood pressure is the measurement of force applied to artery walls





Blood pressure is the force applied against the walls of the arteries as the heart pumps blood through the body. The pressure is determined by the force and amount of blood pumped and the size and flexibility of the arteries.

### **Yoga Therapy View**

#### **Lifestyle Factors**

Clinical trials have evaluated numerous substances for preventing Alzheimers disease but have not found them to be helpful. They included nonsteroidal anti-inflammatory drugs (NSAIDs), statin drugs, estrogen replacement therapy, and herbal remedies such as ginkgo biloba.

However, certain lifestyle changes may help in Alzheimers disease prevention:

- Stay mentally active. Participating in intellectually engaging activity (such as
  doing crossword puzzles or learning a new language) may help reduce the risk of
  Alzheimer's disease.
- **Stay physically active.** Exercise and regular physical activity of at least moderate intensity may help preserve cognitive function.
- Stay socially active. Personal relations and connections may help protect against Alzheimers disease.
- have been found to prevent Alzheimers disease, a low-fat, low-cholesterol diet is healthy for the heart and the brain. Replace saturated fats and trans-fatty acids with unsaturated fats from plant and fish oils. Fish oils omega-3 fatty acids, which contain docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) are an excellent source of unsaturated fat. Eat lots of darkly colored fruits and vegetables, which are the best source for antioxidant vitamins and other nutrients. (Although there has been much research on B vitamins and vitamin E, there is no evidence that vitamin supplements are protective.) The Mediterranean Diet is an example of an eating plan that includes many of these recommendations.

#### Care for the Caregiver

About 80% of patients with Alzheimer's disease are cared for by family members, who often lack adequate support, finances, or training for this difficult job. Few diseases disrupt patients and their families so completely or for so long a period of time as Alzheimer's. The patient's family endures two separate losses and grieves twice:

 First, they must grieve for the ongoing disappearance of the personality they recognize. • Finally, the caregiver must grieve the actual death of the person.

Often, caregivers themselves begin to show signs of psychological stress or ill health. Depression, empathy, exhaustion, guilt, and anger can play havoc with even a healthy individual faced with the care of a loved one suffering from Alzheimer's.

Support services can greatly improve caretakers quality of life and make it easier for them to continue caring for patients in their homes. Such support includes individual and family counseling, telephone counseling, support groups, and stress management and problem-solving techniques. Such help may reduce the rates of depression and improve self-confidence in caregivers, and possibly enable the patient to remain in the home.

#### **Twelve Steps for Caregivers**

- 1. Although I cannot control the disease process, I need to remember I can control many aspects of how it affects my relative.
- 2. I need to take care of myself so that I can continue doing the things that are most important.
- 3. I need to simplify my lifestyle so that my time and energy are available for things that are really important at this time.
- 4. I need to cultivate the gift of allowing others to help me, because caring for my relative is too big a job to be done by one person.
- 5. I need to take one day at a time rather than worry about what may or may not happen in the future.
- 6. I need to structure my day because a consistent schedule makes life easier for me and my relative.
- 7. I need to have a sense of humor because laughter helps to put things in a more positive perspective.
- 8. I need to remember that my relative is not being difficult on purpose; rather their behavior and emotions are distorted by the illness.
- 9. I need to focus on and enjoy what my relative can still do rather than constantly lament over what is gone.
- 10. I need to increasingly depend upon other relationships for love and support.
- 11. I need to frequently remind myself that I am doing the best that I can at this very moment.

12. I need to draw upon the Higher Power, which I believe is available to me..

#### Strengthen your Brain with Healthy Diets

Heading a healthy diet can majorly work in reducing the risks of getting triggered by Alzheimer's.

Human brain is the center point that controls each and every function of the body. It is the most important part to keep the human body function properly. The top section of the body needs to be taken care of; a healthy lifestyle can be the best way to maintain complete wellness. There are numerous syndromes that can badly affect the health of human brain; in many cases the brain disorders are highly fatal. One of the most dreaded brain disorders is Alzheimer's disease.

It is a disease that catches hold of the most important organ, our brain. It is a disease that destroys brain cells leading to loss of memory. It further creates problem with thinking and behavioural patterns. Alzheimer's disease highly affects work, lifelong hobbies and habits. Over of period of time this disease can worsen and may also be termed as fatal. Doctors opined that it is highly associated as the form of dementia. It refers to the loss of intellectual abilities.

It is true, that diseases are not invited, and they just come and mess up the routine. Only taking precautionary measures is in our hand, rest all depends on destiny. Research has revealed that heading a healthy diet can enormously work in reducing the risks of getting triggered by Alzheimer's disease.

Heading for foods or diet that is rich in vegetables, fish, nuts, fruits, poultry, butter and low red meat can work best in strengthening the human brain. Dietary factors play a major role in overall boosting the health of the human brain. Diets including salad dressings, tomatoes, fish, poultry, nuts, vegetables like cauliflower and broccoli, green leafy vegetables, organ meat, high fat dairy etc can be considered as the rich sources of vitamins and minerals that work in enhancing the resistance power of brain. Following these diet patterns can be a great attempt in protecting the organ from Alzheimer's disease.

Also it has been observed that Mediterranean diets are the rich sources of natural elements that are great in boosting overall health of the body including brain. It is very essential that a body should posses the combination of nutrients including saturated and monounsaturated fatty acids, omega-3 and omega-6 fatty acids, folate and Vitamin E and B12. These are most essential nutrients that should be present in adequate quantities to attain a healthy well being.

Following a healthy diet refers to involving this nutritious stuff in your diet regularly. This will keep your body updated with the essential nutrients that work in overall energizing your body. To resist any syndrome it is very essential for our body to be loaded with all the essential nutrients that maintain the energy, stamina and metabolism levels. To attain complete well being it is very important to focus on the basic ingredients of diet. There are several other factors apart from diet that can trigger Alzheimer's disease. Certain physical problems like high cholesterol levels, high blood pressure, obesity and uncontrolled diabetes can also majorly work in affecting the brain condition.

## Drinking and Smoking Lead to Mild Cognitive Impairment and Alzheimer's Disease

A combination of studies have shown that heavy drinking, smoking, and high cholestrerol in middle age all contribute to earlier onset Alzheimer's disease.

We knew our lifestyles would catch up with us sooner or later.

It's sooner, if people don't amend their ways and make healthier choices earlier in life.

Baby boomers who are living it up now by drinking heavily, smoking, and eating a fatty diet may live to regret their lifestyle choices later...though they won't remember it.

Two studies released at the American Academy of Neurology's 60th Anniversary Annual Meeting in Chicago showed that people who drink heavily (more than two drinks per day), smoke (a half-pack or more per day), or who have high cholesterol (from 249-500) in their forties will be likely to develop Alzheimer's disease years earlier than their healthier counterparts.

The first study's lead author was researcher Ranjan Duara, MD, from the Wien Center for Alzheimer's Disease at Mount Sinai Medical Center in Florida. Duara's study looked at the drinking and smoking habits of over 900 subjects with preliminary diagnoses of pre-Alzheimers, who were all 60 years or older.

The results revealed that those who drank heavily developed Alzheimer's disease almost five years earlier than moderate drinkers.

Those who smoked the equivalent of a half-pack of cigarettes per day or more developed the disease about 2.3 years before those who smoked less or not at all.

"The current thinking is that the pathology of Alzheimer's disease builds up over many years before clinical symptoms are manifest," said Duara to reporters. "People who start with a good cognitive reserve, who remain active mentally, are able to compensate for the pathology of the brain for a much longer period of time."

The study also looked at participants who carried a mutated form of a gene – called ApoE-4 – and revealed that those who had the gene developed Alzheimer's about three years sooner than those without the gene mutation.

Those will all three risk factors – heavy drinking, smoking, and the altered gene – developed Alzheimer's about 8.5 years earlier than those without any of the risk factors.

A second study followed 9,700 people and showed that those who had high cholesterol in their forties were one and a half times more likely to receive a later diagnosis of Alzheimer's.

Those with cholesterol numbers of 249-500mg were one and a half times more likely to be later diagnosed with Alzheimer's than those with normal or low levels. Those who had cholesterol levels from 221-249mg were one and a quarter times more likely to develop the disease.

"High mid-life cholesterol increased the risk of Alzheimer's disease regardless of diabetes, high blood pressure, obesity, smoking and late-life stroke," said that study's lead author Alina Solomon.

Dr. Duara said that if people at risk reduced their unhealthy behaviors, with the resulting delayed onset there would be a 50% reduction in the number of cases of Alzheimer's at any given time.

Said Duara to reporters, "These results are significant because it's possible that if we can reduce or eliminate heavy smoking and drinking, we could substantially delay the onset of Alzheimer's disease for people and reduce the number of people who have Alzheimer's at any point in time."

## **Yogic Remedies for MCI and Early AD**

Presently there is a heavy focus on medication in the treatment of Alzheimer's disease. However it is interesting to look at the chakra focus for Mild Cognitive Impairment and Early Alzheimer's disease. The seventh chakra or the crown chakra is associated with a psychological imbalance relating to memory disorders; which is the first symptom of Alzheimer's Disease. As a yoga therapist it would be beneficial to focus on the asana, pranayama associated with the seventh chakra.

The Sanskrit name for the 7th chakra is "Sahasrara", meaning "thousandfold." The 7th chakra is represented by a 1000-petaled lotus, which symbolizes the infinite nature of this chakra, connecting us with the Divine.

If this crown chakra is blocked we are at a loss regarding what we are supposed to be doing. We are out of touch with our own spirit; our own intention here on earth.

Asanas:

Matsyasana (= Fish) The back is fully stretched (the dorsal especially). The chest is expanded like a rooster. The neck and throat are stretched. This opens up the entire region of the heart. It is included for the 4th through 7th Chakras..

Sarvangasana (=Shoulder stand) or **Double leg** raise if you experience back problems. In double leg raise ensure that the full length of your back is resting on the floor with the spine held firmly in a neutral position, and your shoulders and neck are relaxed. Press your hands on the floor to assist with lifting the legs and to help maintain correct posture. If you feel strain at any time bend the knees to make it easier, or modifiy by doing one leg at a time; alternating leg.

Relaxation pose: Savasana, Corpse pose

#### Meditation:

Meditation is a gradual process. Start with 3 minutes, twice a day and work towards a longer period. Some of the benefits are:

- Mental clarity and brain function improves
- Body and nervous system will benefit from total relaxation
- Concentration, focus and memory willpower increases

#### Chanting:

Chanting is a powerful way of releasing and opening.

"...And we ourselves shall be loved for a while and forgotten. But the love will have been enough; all those impulses of love return to the love that made them. Even memory is not necessary for love. There is a land of the living and a land of the dead, and the bridge is love, the only survival, the only meaning."

--- Thornton Wilder