

# ALZHEIMER'S DISEASE

Natural ways to treat and prevent Alzheimer's Disease, while promoting optimal brain function.

## WHAT IS ALZHEIMER'S DISEASE (AD)?

### Alzheimer's Disease:

- The most common of a large group of disorders known as "dementias".
- Characterized by a progressive, irreversible, degeneration of brain cells causing thinking ability and memory to deteriorate.
- Affects behaviour, mood, emotions and the ability to perform daily living activities.

### There are two forms of Alzheimer's Disease:

1. Familial Alzheimer's Disease (FAD)
2. Sporadic Alzheimer's Disease

### FAD: "Early Onset Alzheimer's Disease":

A small percentage of people with AD have FAD (<5%). Alice, the main character in the acclaimed book and movie "Still Alice", had FAD. These inherited genes have a powerful influence. For example, if one parent has FAD, each child has a 50% chance of inheriting the disease in early adulthood. Alice, in the movie, encouraged her children to get genetic testing because of such a high probability.

### Sporadic Alzheimer's Disease: "Late Onset Alzheimer's Disease":

Has less genetic influence than FAD. People can develop Sporadic AD without an inherited predisposition. Lifestyle factors and underlying health conditions exert a powerful influence on the disease process.

However, research shows some genetic influence in Sporadic Alzheimer's Disease. A person with a direct relative (parent or sibling) with AD has a three times greater chance of developing the disease than someone who does not.

## WHAT CAUSES ALZHEIMER'S DISEASE?

The disease, first identified by Dr. Alois Alzheimer in 1906, has two hallmark identifications:

**PLAQUES:** microscopic dense protein deposits called beta amyloid or A-beta, which accumulate, stick



together and become toxic to precious brain tissue, which then die.

**TANGLES:** fibrous clumps that form inside nerve cells, which interfere with normal brain processing and cause brain cells to degenerate and die, leading to markedly reduced brain tissue - i.e. the brain shrinks.

Research has not yet elucidated significant evidence to explain why some people get AD and others do not, aside from genetic influence.

However, a large body of scientific study points to the cause(s) of AD as a probable combination of poor lifestyle behaviour and under treated pre-disposing health conditions, which increase the risk for AD development in all people.

## **THIS IS OUR CURRENT UNDERSTANDING OF RISK FACTORS FOR DEVELOPING ALZHEIMER'S DISEASE.**

AD appears to develop when the combined effects of various risk factors overwhelm the brain's natural self-repair mechanism, resulting in damage to healthy nerve cells.

Advancing age is the most significant risk factor for developing AD. Other factors include: genetics, diabetes, Down syndrome, head injury, menopause in women, clinical depression, chronic anemia (iron and B12 deficiency), stroke, heart disease, high blood pressure, stress, alcohol abuse, drug interactions, inadequate nutrition (nutrient deficiency) and lack of exercise in both the brain and body.

## **THE TOP 10 WARNING SIGNS OF AD:**

### **MEMORY LOSS THAT AFFECTS DAY-TO-DAY ABILITIES**

It's normal to occasionally forget appointments, or a friend's phone number and remember them later. A person with AD, will forget things more often and have difficulty recalling recently learned information.

### **DIFFICULTY PERFORMING FAMILIAR TASKS**

A person with AD will have trouble completing tasks that have been familiar to them all their lives, such as preparing a meal, bathing, doing laundry, or playing a sport.

### **PROBLEMS WITH LANGUAGE**

Everyone has trouble finding the right word sometimes, but a person with AD may forget simple words or substitute words, making sentences difficult to understand.

### **DISORIENTATION IN TIME AND SPACE**

It's normal to forget the day of the week - for a moment. But people with AD can become lost on their own street, not knowing how they got there or how to get home. A good example of this is seen in the movie/book "Still Alice" when Alice gets lost on her daily run through Harvard Square where she teaches and frequents daily.

### **IMPAIRED JUDGEMENT & DECISION MAKING**

A person with Alzheimer's disease may not recognize a medical problem that needs attention or lack awareness about their personal hygiene - such as when they need to shower or bathe, or they might decide to wear heavy clothing on a hot day.

### **PROBLEMS WITH ABSTRACT THINKING**

Someone with AD may have significant difficulty with numbers, for example, balancing a chequebook or their bank account.

### **MISPLACING THINGS**

Anyone can temporarily misplace a wallet or keys. A person with AD may put things in inappropriate places: a wristwatch in the fruit basket or the car keys in the fridge as shown in the movie/book "Still Alice".

### **CHANGES IN MOOD & BEHAVIOUR**

Everyone becomes sad or moody from time to time. Someone with AD can exhibit varied mood swings - from calm to tears to anger - for no apparent reason.

### **CHANGES IN PERSONALITY**

A person with AD may experience striking personality changes and become confused, suspicious, or withdrawn. They might display marked apathy, fearfulness, and acting out of character.

## LOSS OF INITIATIVE

A person with AD may become passive and apathetic about personal hygiene, housework, business and social activities.

## HOW IS ALZHEIMER'S DISEASE DIAGNOSED?

No single test can tell if a person has AD. The diagnosis is made through a systematic assessment that eliminates other possible causes.

This is because dementia symptoms also occur in other illnesses such as: depression, diabetes, anemia, thyroid problems, heart disease, infections, drug interactions and alcohol abuse.

The diagnosis will take time and can be made by a MD or a specialist, who might also refer to a psychologist, psychiatrist, neurologist, social worker or occupational therapist.

A psychiatric evaluation may be helpful in ruling out other illnesses such as depression or a drug reaction, which cause symptoms similar to AD.

The Process of Diagnosis involves:  
A Medical History, Physical Exam, Laboratory Tests, X-Rays, EEGs, and occasionally scans like: CT, MRI, SPECT, PET.

**A Mental Status Exam is a KEY part of the process.**

This is used to assess a person's sense of time and place, ability to do simple calculations, recall words and objects, draw, spell and answer questions such as "what year is it?". In the book/movie "Still Alice", there is a scene where Alice is undergoing a Mental Status Exam with her specialist.

## THERE ARE FOUR STAGES IN THE PROGRESSION OF AD:

Alzheimer's Disease typically follows certain stages, which are commonly described as "early", "middle", "late" and "end of life". In most cases AD progresses

slowly over a course of seven to ten years but may be much longer.

Stages are useful in helping us understand the symptoms of AD. However, AD affects each person differently. At each stage, the duration varies from person to person and the symptoms may overlap.

### EARLY STAGE:

Memory loss becomes noticeable to the person with the disease and those around them.

Tasks such as balancing a bank account and social aspects such as following a conversation may become challenging. Most patients in this stage retain many of their abilities and require very little assistance.

### MIDDLE STAGE:

A person's ability to perform daily living activities declines substantially during this stage. As the disease progresses and affects different areas of the brain, various abilities are lost. Thinking and memory problems increase and a person will require help with daily activities. Restlessness, sleep pattern changes and hallucinations may also occur.

Family and caregiver involvement increase dramatically and home help or moving to a care facility may be needed.

### LATE STAGE:

The focus of care at this stage is to ensure the highest quality of life possible, both physically and emotionally. A person with late stage Alzheimer's disease will eventually become unable to communicate verbally, walk independently, or sit without support.

Care is required 24 hours a day. In many cases, the person will need to live in a care facility. If the person remains at home, added support will be needed.

### END OF LIFE:

At the end of their lives, most people with AD are being cared for in a facility. The person can still experience emotions even though they are unable to express them.

# WHAT ARE THE TREATMENTS FOR ALZHEIMER'S DISEASE?

## CONVENTIONAL VS. NATURAL APPROACHES

There is currently no cure for AD. However, an individualized treatment plan which combines both natural and conventional approaches can significantly improve symptoms, while preserving memory, language, thinking abilities, and motor skills. The goal of the treatment plan should be to greatly enhance the quality of life for the patient for many years.

### Conventional Treatment:

MD's may prescribe medications such as:

**Cholinesterase Inhibitors:** A class of drugs that aim to preserve the ability of damaged nerve endings to transmit messages from one nerve cell to another. Examples Include: Aricept (donepezil), Rivastigmine (Exelon), Reminyl ER (extended release glantamine hydrobromide).

Most often used in early and middle stage AD.

**Memantine Hydrochloride:** Blocks the re-uptake of glutamate from the space (synapse) between nerve cells, preventing toxic levels of glutamate from re-entering the nerve cell.

Most often used in late stage AD.

### Natural Treatment:

The Alzheimer's Society of Canada promotes complementary and alternative health care for Alzheimer's patients and for those people who might be at risk of developing the disease.

The following can be used in conjunction with, or as an alternative to, conventionally prescribed medications for Alzheimer's disease and dementia.

**Naturopathic Medicine** employed by a registered doctor of naturopathic medicine is a safe and proven form of health care, which helps prevent AD and reduces symptoms, while preventing degeneration of brain tissue in people suffering from AD.

**Naturopathic Doctors** can make a probable diagnosis of AD, while ruling out other causes because they are trained similarly to MD's. An ND

will take a thorough health history and perform a physical exam as well as lab tests.

**Natural Treatment** approaches greatly benefit people who are at risk of developing AD or those who are currently suffering from it.

The naturopathic approach can be used safely and effectively as an alternative to, or in combination with, conventionally prescribed medications to treat conditions that increase risk of AD. It can also improve AD symptoms, slow the disease progression, and significantly enhance a person's quality of life.

In addition, the naturopathic approach will improve a person's entire health as a "healthy side effect" of the broad-spectrum treatment approach. This results in better brain function, and prevention of conditions that promote AD, while also halting the development of contributing medical problems.

Naturopathic doctors help people safely and effectively treat conditions which are high risk factors for AD by:

- promoting healthy aging in body and mind.
- balancing hormones in men and women.
- treatment and correction of thyroid disease, anemia and other nutrient deficiencies.
- treatment and holistic management of heart disease, diabetes, stress and alcohol abuse.
- reducing medication dependence for those who take multiple medications.

Naturopathic Doctors employ a person-centred approach to the treatment and prevention of AD using Nutrition and Lifestyle Counselling, Traditional Chinese Medicine & Acupuncture, Herbal remedies, and Homeopathic Medicine.

### Behavioural Treatment:

Specialized centers offer Cognitive Behavioural Therapy and Cognitive Rehabilitation, which are proven to be a safe, highly effective form of non-pharmaceutical treatment in Alzheimer's patients who are in the early and middle stage of disease. An example of a specialized center in our area is St. Joseph's Hospital in Guelph Ontario (Community

Outreach Services - Alzheimer Program).

[www.healthline.ca](http://www.healthline.ca)

## **FOLLOW THESE NATURAL GUIDELINES FOR BETTER BRAIN FUNCTION, DISEASE AND DEMENTIA PREVENTION, AND OVER ALL BODY HEALTH!**

### **A Review of what we currently understand:**

- Cognitive capacity declines naturally as we age.
- Aging is the most significant risk factor for Alzheimer's disease.
- As time progresses our brains can experience: loss of nerve cell integrity, brain tissue thinning, impaired neurotransmitter (serotonin, acetylcholine, and dopamine) signaling and accumulation of neurofibrillary tangles.
- The result is less brain efficiency as we age and predisposition to mild cognitive impairment (MCI), a known predisposing factor for Alzheimer's disease.

However, many of these factors are modifiable to a significant degree and proactive lifestyle changes and nutritional interventions have been shown to decrease the rate of intellectual decay and to reverse age-related cognitive decline.

**Growing evidence supports the following nutritional interventions as having beneficial effects on brain function.**

### **OMEGA THREE FISH OILS:**

These fatty acids are incorporated into nerve cells in the brain. EPA & DHA, the types of omega 3 fats found in fish oil, make up 40% or more of neuronal membranes.

- These healthy fats play a central role in providing the brain with enough neurotransmitters and help them signal nerve cells more efficiently, which modulate numerous aspects of cognition and behaviour.

The typical Western diet is severely **deficient** in beneficial omega-3's and supplies omega-6 in **excess**,

which promotes inflammation in the brain and contributes to several age-related degenerative diseases.

**Numerous scientific studies have associated increased dietary omega 3 intake with better cognitive performance.**

A **good quality** fish oil supplement supplying 1400mg EPA and 1000mg DHA per day, will do the brain and body good, by preventing cognitive decline and promoting optimal brain function.

**BLUEBERRIES! YUMMY & GOOD FOR YOUR BODY & BRAIN!**

*The brain health benefits of blueberry constituents are well documented.*

**Blueberries contain the following amazing benefits:**

- High anti-oxidant effects, protecting precious brain cells from damage and death.
- Enzyme inhibitors that break down acetylcholine, one of the brain's most precious neurotransmitters needed for memory and learning.
- Aid in making new brain cells and enhance "neuronal plasticity" in the region of the brain most affected by Alzheimer's disease (the region of the hippocampus).

**The biochemical actions of dietary fortification with blueberries translate into observable improvements in learning, memory, and cognitive performance in both animal and human studies.**

- Consume 1 to 3 cups of fresh blueberries every day for brain and body health.

### **GREEN TEA:**

The interest in studying green tea components as brain healthy originally started with epidemiological evidence that linked green tea consumption with superior cognitive function in aged populations.

- Powerful green tea constituents such as epigallocatechin-3-gallate (EGCG) and phenolic anti-oxidants, provide tremendous

disease-modifying potential in Alzheimer's disease and the ability to preserve cognition during aging.

- In a double-blind, placebo controlled trial, green tea improved memory and attention in subjects with mild cognitive impairment.

**Green tea polyphenols and L-theanine (an amino acid found in green tea) halt the damaging effects of amyloid-beta proteins, the hallmark disease process in Alzheimer's disease, where they cause severe stress and neuron death.**

Several animal studies have found EGCG and related substances found in green tea, suppress amyloid beta induced cognitive dysfunction and neurotoxicity.

**Over all, consuming green tea as part of your regular beverage consumption per day will have neuro-protective benefits and help you prevent and treat Alzheimer's disease.**

#### **B-VITAMINS:**

The brain produces more energy per volume than any other organ in the body and is the first organ to be affected by insufficient intake of B-vitamins.

- Multiple human studies have associated low blood levels of B-vitamins with cognitive decline and dementia. That is because the brain is very dependent on a high supply of B-vitamins for a vast array of neurochemical processes, especially B6, B12, and Folic Acid.
- Taking 50 to 100mg of a daily B-complex supplement will support brain energy and functioning, while preventing dementia.
- Brown Rice is an excellent source of B-vitamins.

**A day in the life of a healthy brain and body would include: blueberries, green tea, fish and brown rice!**

Add in a variety of fresh vegetables, healthy proteins and fats from: beans, lentils, nuts, seeds, and lean animal products such as poultry, beef, pork, wild game, dairy and eggs and your body and brain will thank you!

**Your local naturopathic doctor may also prescribe other nutritional supplements known to prevent and treat Alzheimer's disease such as:**

#### **COEnzymeQ10:**

- A nutrient needed to make energy in the brain.
- Supplementation with COEnzymeQ10 is especially important for those people taking cholesterol lowering medications (e.g. Lipitor, Crestor) which suppress the body's ability to make sufficient COEnzymeQ10.

#### **Acetyl L-Carnitine:**

There is impressive efficacy of acetyl-L-Carnitine in supporting brain health and cognition during normal age-related cognitive decline and Alzheimer's disease.

- A meta-analysis of randomized, controlled human clinical trials, involving data from 21 studies and over 1200 subjects with MCI and mild to moderate AD, provides unequivocal evidence that supplementation with acetyl-L-Carnitine halts cognitive deficits observed during aging and during the brain deterioration process in Alzheimer's disease.

#### **ASHWAGANDHA:**

Ashwagandha is an ancient herb that has been used for its potent, restorative benefits. Recent research shows that Ashwagandha has remarkable neuro-generative effects, including:

- Halting and repairing damage to brain cells.
- Providing more acetylcholine (brain signaling neurotransmitter) which is similar to the current Alzheimer's prescription drug, donepezil.

#### **PHYSICAL ACTIVITY IS KEY FOR BRAIN HEALTH!**

Your local ND will also recommend adequate, enjoyable daily physical exercise. If your body is not fit, your brain will be unfit too!

- Daily physical movement promotes adequate muscle mass, regulates blood sugar, reduces stress and improves oxygen and blood flow to the brain. All of these factors prevent brain deterioration and promote optimal learning, memory, and cognition function.
- Aerobic exercise is key! Walk 30 minutes or more each day for body and brain health!

**TALK TO YOUR LOCAL NATUROPATHIC DOCTOR ABOUT NUTRITIONAL INTERVENTIONS AND MODIFIED LIFESTYLE BEHAVIOURS THAT ARE RIGHT FOR YOUR BODY AND BRAIN, so that you can live with more easy, joy and vitality, while preventing dementia and disease.**

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Heidi McGill is a registered doctor of naturopathic medicine. She has owned and operated Healing Foundations since November 2006. She has helped dozens of families discover their best balance for overall wellness in body and mind, using the principles and practices of

naturopathic medicine. Dr. Heidi regularly appears as “Guelph’s Naturopathic Expert” on Inside Guelph, a local Roger’s T.V. program. She also writes articles on topics that matter to you. Dr. Heidi is focused on educating you about how your body functions in combination with the natural and cultural environment. She is genuinely passionate about guiding you towards optimal health, vitality and more joy in your life.

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### **Healing Foundations Naturopathic Clinic**

Phone: 519-821-1999

Email: [clinic@healingfoundations.ca](mailto:clinic@healingfoundations.ca)

Website: [www.healingfoundations.ca](http://www.healingfoundations.ca)

