



# Dementia: Strategies for early detection and prevention

How you can detect and treat the early manifestations of dementia in your patients.

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The incidence of various types of dementia, including Alzheimer's disease, is steadily increasing. The prevalence rates rise with increasing age; from 2% for people in their 60's to over 32% for those in their 80's and beyond; and these figures are expected to double by the year 2020. This represents a considerable burden, not only on the patients themselves but also for their families and care-givers as well as society as a whole. Indeed, the disability weight for dementia is higher than for almost any other health condition, apart from spinal-cord injury and terminal cancer.

The true dementias include: Alzheimers disease (AD), vascular dementia (VD), dementia with Lewy Bodies and fronto-temporal dementia. The most common being Alzheimer's disease, vascular dementia and mixed (AD with VD) dementia. Patients with AD make up 50-60% all cases of clinical dementia.

### Diagnosis

Patients with dementia syndrome exhibit the following clinical features

1. Impairment of memory
2. Impairment in at least one other cognitive domain:
  - a) Aphasia,
  - b) Agnosia,
  - c) Apraxia, and
  - d) Disturbance in executive function

The above impairments cause significant interference with social, work or daily activities and represent a marked decline from previous functioning.

In general patients with AD exhibit a global decline in cognitive function, while those with VD show defects in some areas but not in others.

### Western treatments

Western pharmaceutical management of the dementias achieves only modest results, as patients tend to progressively worsen and die sooner than the rest of the population. In addition these patients place a very heavy burden on their caregivers, who in most cases are close family members.

### Mild Cognitive Impairment

The diagnosis and treatment of patients with dementia is only one part of the story. The condition that leads to dementia, referred to as 'cognitive decline' or 'mild cognitive impairment' (MCI) is much more common. Researchers have found that these early signs of dementia can be detected in individuals during their 20's and 30's, although they generally become more apparent in middle age. In middle aged and elderly patients MCI represents changes in cognition that exceed the expected age-related decline. However, within 4 years of detection around half of these patients will end up with clinical dementia (mostly AD). In contrast to the general average of 1-2% per year, these patients develop dementia at a rate of 11-14% per year. Thus, patients with MCI are a very high risk group.

There is a simple and useful screening instrument, the Folstein Mini-Mental Status Examination (MMSE), which takes about 20 minutes to administer. This can be downloaded from: [www.otnow.com/resource\\_files/mmse.doc](http://www.otnow.com/resource_files/mmse.doc)

The maximum score is 30 points; a score of less than 24 is considered abnormal. However, allowance must be made for the patient's level of education. Scores between 18 and 23 indicate MCI. Scores between 0 and 17 indicate clinical dementia and the patient should be referred for Western medical assessment. The good news is that there is a growing body of evidence that patients with MCI have a good chance of receiving significant help from TCM and thus are able to reduce their risk of developing one of the dementias.

We know that vascular dementia has a strong association with hypertension, hypercholesterolemia and diabetes (the three 'high's': blood pressure, cholesterol and blood sugar) as well as smoking. Obviously these need to be checked and corrected promptly.

The cause of Alzheimer disease is unknown. Several investigators now believe that AD is the end result of several converging risk factors, including advancing age, lipoprotein E epsilon 4 genotype, obesity, insulin resistance, dyslipidemia, hypertension, and chronic inflammation.

Oxidative damage to cerebral cells due to uncontrolled production of free radicals is an important factor in all types of dementia. This mechanism is thought to be one of the prime causes of the increased cellular death as well as dysfunction seen in these patients. Indeed several clinical trials and animal studies have shown that significant improvements in cognitive function result from the ingestion of various anti-oxidant herbs and/or their active components, e.g. ginkgo biloba leaf extract (flavoglycosides), ginseng root (ginsenosides Rb1 and Rg3, ginseng saponins), Huperzine A, salvia root (tanshinone, salvanolic acid), pueraria root and leaves (puerarin), rhodiola herb (rhodosin), green tea (polyphenols).



# Dementia: Strategies for early detection and prevention *continued*

## TCM APPROACHES

According to TCM, the health of the brain is related to the Kidney Essence and the Blood; while cognitive functions are controlled by the Heart. Furthermore, the clear Yang Qi of the mind and senses (poetically referred to as the 'orifices' of the Heart) may become obstructed by Phlegm. Thus with increasing age, the progressive decline of the Kidney Essence as well as the tendency to Blood stasis manifest in cognitive decline or impairment, along with various other age-related health issues. This may be worsened by concurrent Qi deficiency, Blood deficiency or retention of Phlegm. Thus the key pathodynamic factors involved in dementia are:

- Blood stasis
- Kidney Essence deficiency (generally manifesting as Kidney Yin deficiency or Kidney Yang deficiency)
- Heart Qi-Blood dual deficiency
- Blood deficiency
- Phlegm obstruction of the mind and senses

Much of the current research in China involves the use of complex formulations that address all of the above pathodynamic factors. Although many such studies have methodological flaws (e.g. small numbers of participants, lack of blinding, not randomized), the evidence points to a better safety profile than orthodox Western pharmacotherapy and comparable or better efficacy.

### Treatment using Prepared Chinese herbal Medicines

While the following protocols are also suitable for patients with dementia, better results will be obtained if treatment is begun early, when the patient is manifesting the early signs of cognitive decline. A foundation treatment protocol for patients identified with MCI is as follows:

#### Memor-aid Formula

Plus

#### Bu Yang Huan Wu Wan (Astragalus & Lumbricus Formula)

Begin with medium to high dosage and then continue long term at the label dosage, once improvement has been established (i.e. after 3-6 months).

Depending on the individual presentation, various formulas

may be used in combination for a shorter period (e.g. to resolve Phlegm, clear deficiency Heat, balance Kidney Yin and Yang, tonify the Qi, nourish the Blood)

- **Wen Dan Tang (Bamboo & Hoelen)** – Phlegm retention
- **Stress Relief 1 (or Jia Wei Xiao Yao San)** – Liver Qi constraint
- **Empty Heat Formula (or Zhi Bai Di Huang Wan)** – Kidney Yin deficiency with deficiency Heat
- **Restore the Spleen (or Gui Pi Wan)** – Qi-Blood dual deficiency
- **Rehmannia Eight Vitality Formula (or Fu Gui Ba Wei Di Huang Wan)** – Kidney Yang deficiency with internal Cold

## MEMORAID FORMULA

This formula contains herbs that tonify the Kidney Essence as well as the Heart Blood, to nourish and promote brain functions. In addition, it contains the triple herb formula, Sheng Mai San ('Formula to Restore the Pulse Beat' a.k.a. Ginseng & Ophiopogon Formula), which has been shown to regulate cardiac function, and promote coronary as well as cerebral blood flow. Together with the herbs Salvia root and Curcuma tuber, which activate the Blood and dispel stasis, this formula promotes cardiac as well as cerebral blood circulation. Modern research has shown that the herbs Ginkgo leaf, Curcuma tuber, Schizandra fruit, Ginseng root and Salvia root contain a variety of potent antioxidants, which are able to prevent free radical damage to the highly metabolically active cells of the cerebral cortex. In addition there is some evidence that the herbs Cuscuta seed, Atractylodes rhizome and Polygonatum rhizome may help to slow or prevent some of the degenerative processes in AD.

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