

## Alzheimer's Disease

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### **Alzheimer's disease: improvement of visual memory and visuoconstructive performance by treatment with picotesla range magnetic fields.**

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Impairments in visual memory and visuoconstructive functions commonly occur in patients with Alzheimer's disease (AD). Recently, I reported that external application of electromagnetic fields (EMF) of extremely low intensity (in the picotesla range) and of low frequency (in the range of 5Hz-8Hz) improved visual memory and visuoconstructive functions in patients with Parkinson's disease. Since a subgroup of Parkinsonian patients, specifically those with dementia, have coexisting pathological and clinical features of AD, I investigated in two AD patients the effects of these extremely weak EMF on visual memory and visuoconstructive performance. The Rey-Osterrieth Complex Figure Test as well as sequential drawings from memory of a house, a bicycle, and a man were employed to evaluate the effects of EMF on visual memory and visuoconstructive functions, respectively. In both patients treatment with EMF resulted in a dramatic improvement in visual memory and enhancement of visuoconstructive performance which was associated clinically with improvement in other cognitive functions such as short term memory, calculations, spatial orientation, judgement and reasoning as well as level of energy, social interactions, and mood. The report demonstrates, for the first time, that specific cognitive symptoms of AD are improved by treatment with EMF of a specific intensity and frequency. The rapid improvement in cognitive functions in response to EMF suggests that some of the mental deficits of AD are reversible being caused by a functional (i.e., synaptic transmission) rather than a structural (i.e., neuritic plaques) disruption of neuronal communication in the central nervous system.

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### **Age-related disruption of circadian rhythms: possible relationship to memory impairment and implications for therapy with magnetic fields.**

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Disorganization of circadian rhythms, a hallmark of aging, may be related causally to the progressive deterioration of memory functions in senescence and possibly Alzheimer's disease (AD). In experimental animals, disruption of circadian rhythms produces retrograde amnesia by interfering with the circadian organization of memory processes. The circadian system is known to be synchronized to external 24 h periodicities of ambient light by a neural pathway extending from the retina to the suprachiasmatic nucleus (SCN) of the anterior hypothalamus. There is also evidence that the earth's magnetic field is a time cue ("Zeitgeber") of circadian organization and that shielding of the ambient magnetic field leads to disorganization of the circadian rhythms in humans. Since aging is associated with a delay of the circadian rhythm phase, and since light, which phase advances circadian rhythms, mimics the effects of magnetic fields on melatonin secretion, we postulate that application of magnetic fields might improve memory functions in the elderly as a result of resynchronization of the circadian rhythms. Moreover, since the circadian rhythm organization is more severely disrupted in patients with AD, it is possible that magnetic treatment might prove useful also in improving memory functions in these patients. If successful, application of magnetic fields might open new avenues in the management of memory disturbances in the elderly and possibly in AD.

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**Common factors contributing to intractable pain and medical problems with insufficient drug uptake in areas to be treated, and their pathogenesis and treatment: Part I. Combined use of medication with acupuncture, (+) Qi gong energy-stored material, soft laser or electrical stimulation.**

[Omura Y](#), [Losco BM](#), [Omura AK](#), [Takeshige C](#), [Hisamitsu T](#), [Shimotsuura Y](#), [Yamamoto S](#), [Ishikawa H](#), [Muteki T](#), [Nakajima H](#), et al.

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Most frequently encountered causes of intractable pain and intractable medical problems, including headache, post-herpetic neuralgia, tinnitus with hearing difficulty, brachial essential hypertension, cephalic hypertension and hypotension, arrhythmia, stroke, osteoarthritis, Minamata disease, Alzheimer's disease and neuromuscular problems, such as Amyotrophic Lateral Sclerosis, and cancer are often found to be due to co-existence of 1) viral or bacterial infection, 2) localized microcirculatory disturbances, 3) localized deposits of heavy metals, such as lead or mercury, in affected areas of the body, 4) with or without additional harmful environmental electro-magnetic or electric fields from household electrical devices in close vicinity, which create microcirculatory disturbances

and reduced acetylcholine. The main reason why medications known to be effective prove ineffective with intractable medical problems, the authors found, is that even effective medications often cannot reach these affected areas in sufficient therapeutic doses, even though the medications can reach the normal parts of the body and result in side effects when doses are excessive. These conditions are often difficult to treat or may be considered incurable in both Western and Oriental medicine. As solutions to these problems, the authors found some of the following methods can improve circulation and selectively enhance drug uptake: 1) Acupuncture, 2) Low pulse repetition rate electrical stimulation (1-2 pulses/second), 3) (+) Qi Gong energy, 4) Soft lasers using Ga-As diode laser or He-Ne gas laser, 5) Certain electro-magnetic fields or rapidly changing or moving electric or magnetic fields, 6) Heat or moxibustion, 7) Individually selected Calcium Channel Blockers, 8) Individually selected Oriental herb medicines known to reduce or eliminate circulatory disturbances. Each method has advantages and limitations and therefore the individually optimal method has to be selected. Applications of (+) Qi Gong energy stored paper or cloth every 4 hours, along with effective medications, were often found to be effective, as Qigongnized materials can often be used repeatedly, as long as they are not exposed to rapidly changing electric, magnetic or electro-magnetic fields. Application of (+) Qi Gong energy-stored paper or cloth, soft laser or changing electric field for 30-60 seconds on the area above the medulla oblongata, vertebral arteries or endocrine representation area at the tail of pancreas reduced or eliminated microcirculatory disturbances and enhanced drug uptake.(ABSTRACT TRUNCATED AT 400 WORDS)