Alzheimer's disease is not a memory disorder; more accurately, it is a degeneration of neural and supporting tissue in the brain. It is characterized by the presence of fiber tangles within nerve cells, plaques or clusters of degenerating nerve endings, accumulation of beta-amyloid (a beta) proteins, as well as decreases in important neurotransmitters—especially acetylcholine.

Failure of memory functions is just one effect of the process. Other cognitive and brain functions gradually deteriorate.

EMF has been studied in relationship to Alzheimer's Disease (AD) because of higher incidence of this disease in EMF-exposed workers. Several possible different, or perhaps combined mechanisms, have been proposed to explain this incidence: melatonin effects, calcium efflux and neurotransmitter alterations, brefec of the blood-brain barrier, aggravation of toxic insults.

This map provides links to overviews on the topic as well as studies on various factors associated with EMF and its impact on this specific pathology.

**Beta-amyloid plaque develops**

**Shrinkage of brain tissues**

**Tangles and clumps in nerves, disintegration**

**Six Studies: EMF and Alzheimer's Disease**

**Compilations of abstracts on EMF and AD**

**Six Studies: EMF and Alzheimer's Disease**

**Melanin in humans and EMF studies**

**Bior initiation Reports 2012**

**Compilation of abstracts on EMF and AD**

**Occupational exposures and AD: a meta-analysis**

**Occupational exposures and AD: a collection of abstracts**

**Melatonin in humans and EMF studies**

**Biornigious Report 2012**

**AD and EMF studies**

**Increased Alzheimer's disease**

**AD and EMF studies**

**Blood flow, barrier and EMF studies**

**Melatonin in humans and EMF studies**

**Light, ELF, circadian rhythm**

**Video display units, melatonin**

**Day exposure, night melatonin**

**Cellphone use, ELF, melatonin**

**Night exposure, night melatonin**

**Railway workers, ELF, melatonin**

**High power lines, female melatonin**

**Melatonin may protect against Alzheimer's disease**

**Alzheimer's mouse study response**

**Living near power lines, more AD risk**

**Power-Line EMFs, New Focus on AD**

**Living near power lines, more AD risk, study**

**Presentation on EMF and EHS**

**Interview on EMF, EHS and Alzheimer's**

**Biornigious Report 2012: Alzheimer's**

**AD fact sheet**

**Blood-brain barrier and AD**

**Important factors in AD**

**Disrupted circadian clock, AD**

**AD, EMF, Mechanisms and Prevention**

**OCCUPATIONS WITH EMF RISK**

**Electric utility workers**

**Railway workers**

**Telephone workers**

**Machinists**

**Welders**

**Carpenters**

**Seamstresses**

**Dressmakers**

**Tailors**

**ALZHEIMER’S DISEASE AND EMF**

**Neurodegeneration and occupational risks**

**Alzheimer's disease**

**Increased dementia**

**3 studies of worker risk**

**Occupational exposures**

**Environmental risk factors**

**Occupational MF exposures**

**MF exposures, electrical workers**

**Occupational histories, HMO patients**

**ELF-EMF, AD and neurodegenerative disease**

**Swedish twins, work exposures, dementia, ELF**

**IS EHS A PRE-AD STATE?**

**Home: Oscillatiorium**

**Newest version this map Date of this update: 04-08-16**

**“Several mechanisms have been proposed and studied in order to explain ELF-EMF potential actions on biological systems, involving melatonin and biosynthetic enzymes in the pineal gland (melatonin hypothesis), oxidative stress, or Ca2+ efflux (release of calcium ions from a sample into a surrounding solution) in immune system cells and neurons. Other potential pathways, which may be involved in the relationship between ELF-EMF and AD include apoptosis and necrosis in brain cells, effects on biomagnetic particles reported in the human brain or differential levels of electrosensibility among the general population, but their potential nexus with AD remain unknown.” Ana Garcia, et al**