

**Alzheimer's Disease**

*And other really bad brain problems*

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**A Disease**

**Organization**

**Phenomenology**

**Epidemiology**

**Pathology**

**Etiology**

**Diagnosis**

**Differential**

**Comorbid Disorders**

**Course**

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**Phenomenology**

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***Phenomenology***

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*Dementia*

- ***Disorder of Cognitive Function***

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***Dementia***

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*Other aspects of The MSE*

- ***General Presentation***
  - *varied with level*
  - *care taking*

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***Dementia***

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*Other aspects of The MSE*

- ***Emotions***
  - ***Mood***
    - *Generally euthymic*
    - *dysphoria, frustration early on*
    - *May become "agitated" or "irritable"*
  - ***Affect***
    - *May be appropriate*
    - *Blunted*
    - *Inappropriate*

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***Dementia***

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***Other aspects of The MSE***

- ***Thought***
  - ***Process***
    - *impoverished*
  - ***Content***
    - *hallucinations rare*
    - *> w/ Sensory impairment*
    - *delusions*
    - *poorly formed*

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***Cognition***

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***The Cognitive Functions***

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- ***Attention and Concentration***
- ***Language function***
- ***Memory***
- ***Visuospatial Ability***
- ***Perceptual Capacity***
- ***Conceptualization and Abstract Reasoning***
- ***General Intelligence***

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***Judgment and Insight***

- Insight
  - Understand situation
- Judgment
  - Make decision using that info

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**Judgment and Insight**

- Competency
- Ability to
  - Understand nature of decisions to be made
  - Risks and benefits
  - Logical Process
  - Consistent

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**Epidemiology**

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**Epidemiology**

*Dementia*

- 2 - 4 million Americans
- 5-7% of these over 65
- 20% of those over 80
- ½ of all nursing home beds
- \$12,000,000,000

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**Pathology**

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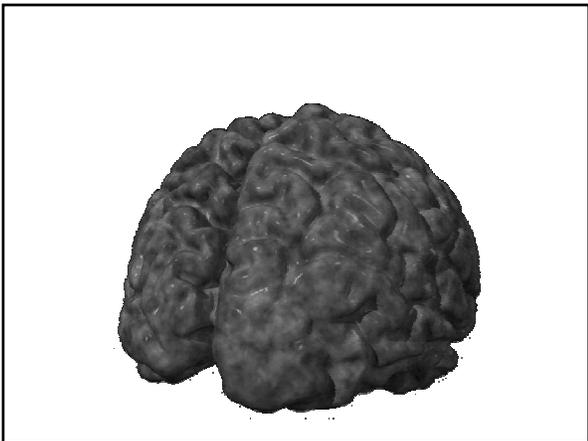
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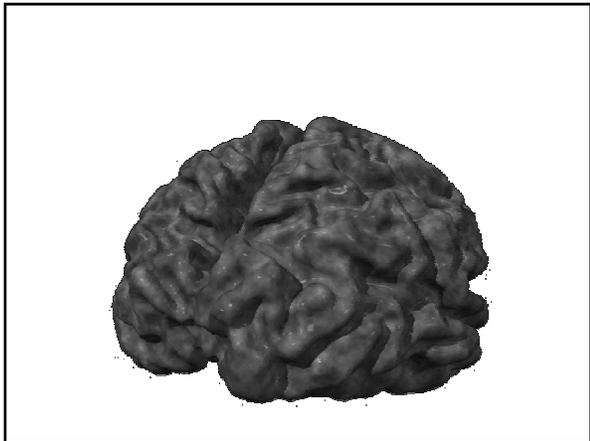
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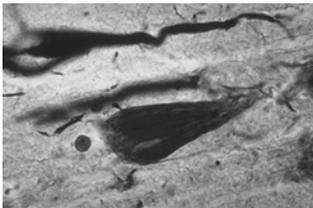
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*Tangles and Degeneration*



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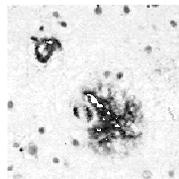
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*Neuritic Plaques*

- *Amyloid accumulation*



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## Alzheimer's

### *Etiology*

- ▶ *Unknown*
- ▶ *Acetylcholine*
- ▶ *Genetics*
- ▶ *Microtubules*
- ▶ *Aluminum*
- ▶ *Blood-Flow Hypothesis*
- ▶ *Glutamate*
- ▶ *Philothermal*
- ▶ *Autoimmune*
- ▶ *Infectious*
- ▶ *Head-Injury*
- ▶ *Other*

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## Diagnosis

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## Alzheimer's

### *Diagnosis*

- ▶ *Pathological*
- ▶ *Clinical assessments*
- course
- 80-90% with standardized criteria



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## ***Dementia of the Alzheimer's Type***

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*DSM-IV Diagnostic Criteria*

- **Memory Impairment, and**
- **one (or more):**
  - *aphasia*
  - *apraxia*
  - *agnosia*
  - *executive functioning impairment*
  - *The Global Criteria*

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## ***Alzheimer's***

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*Diagnostic Work up*

- ▶ *Screening tests (Mini-Mental State Exam)*
- ▶ *Neuropsychological Assessment*
- ▶ *Rule out tests*

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## ***Differential***

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## ***Delirium***

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### *Phenomenology*

***Organic brain syndrome, characterized by***

- ▶ ***Acute onset***
- ▶ ***Global impairment***
- ▶ ***Metabolic derangement***

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## ***Delirium vs. Dementia***

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### *Things in Common*

- ***Cognitive Deficits***
- ***Present with***
  - ▶ ***Confusion***
  - ▶ ***Memory problems***

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## ***Delirium vs. Dementia***

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### *Things Different*

- ***Delirium—usually reversible***
  - ▶ ***Dementia rarely so***
- ***Pathology***
  - ▶ ***Dementia:***
    - ***Usually identifiable pathological findings***
    - ***at least on autopsy***
  - ▶ ***Delirium***
    - ***more often physiological***

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**Dementia**

*Other Differentials*

- *Benign Senescent Forgetfulness*
- *Depression*
- *Pseudodementia???*
- *Amnesia*
- *Malingering*

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**Comorbidity**

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**Dementia**

*Comorbid Disorders*

- *Delirium*
- *Depression*
- *Anxiety*
- *Psychosis*

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**Course**

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**Alzheimer's**

*Course*

- *No Cognitive Disorder*
- *Very Mild Cognitive Disorder*
- *Mild*
- *Moderate*
- *Moderately Severe*
- *Severe*
- *Very Severe*

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**Other Dementias**

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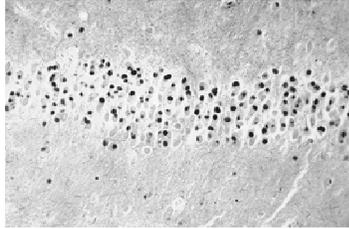
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### ***Specific Pathologies: Degenerative***

*Pick's Disease*

- **Frontal atrophy**
  - *Hypoperfusion*
  - *"Frontal symptoms"*



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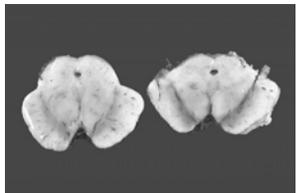
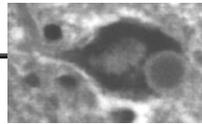
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### ***Parkinson's Disease***

- **Subcortical**



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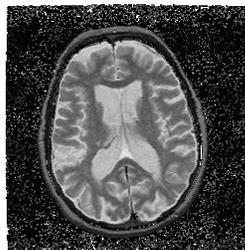
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### ***Huntington's***

- **Caudate nucleus**
  - *Hypometabolism*
  - *Degeneration*
  - *Aut Dom.*
  - *Symptoms*



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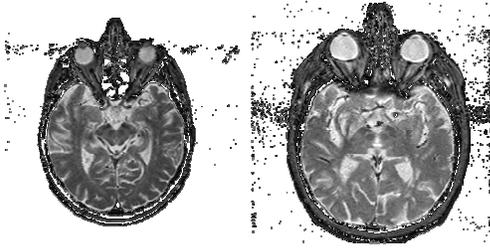
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*Vascular Dementia*



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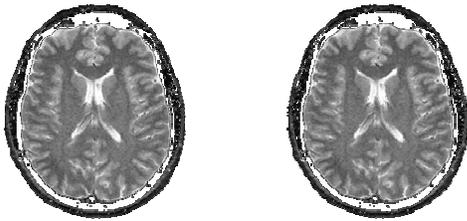
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*Infectious Causes*



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*The "Reversible" Dementias*

- *Depression*
- *Hypothyroidism*
- *Substance induced*
- *Normal Pressure Hydrocephalus*
- *Nutritional deficiencies*

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