

Understanding Cognitive Changes



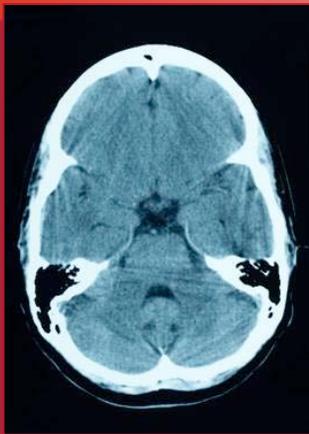
Today's Agenda



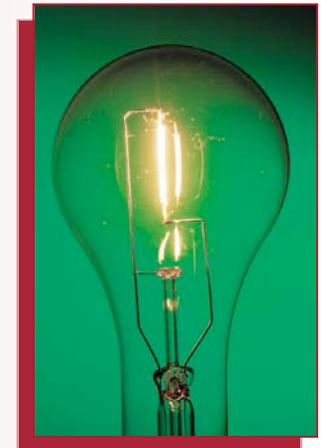
**Understanding
Cognition & MS**



**Living with Cognitive
Problems**

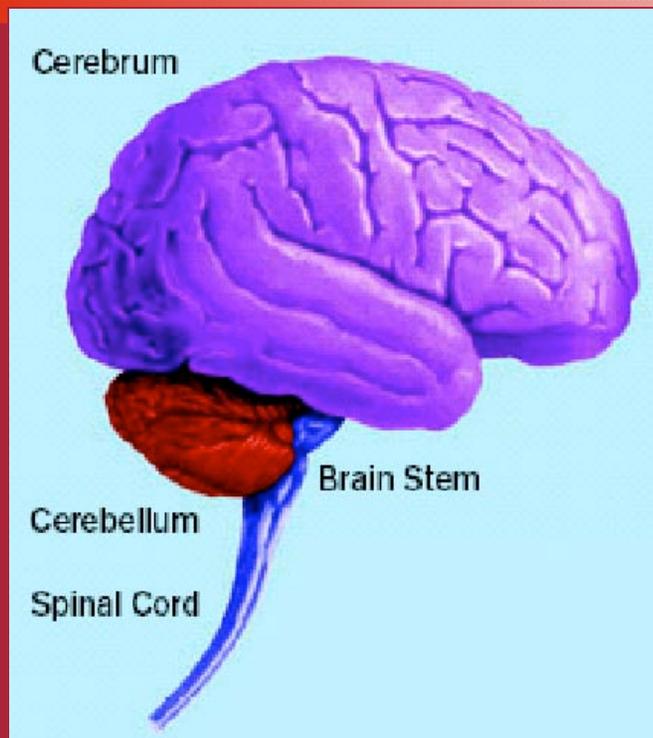


**Managing Cognitive
Problems**



What Is Cognitive Function

Cognitive functions refers to “higher” brain functions such as **memory & reasoning** that occur in the cerebrum



Demyelination in the cerebrum leads more often to **cognitive problems** than lesions in the cerebellum, brainstem or spinal cord lesions

What Cognitive Problems are Associated with MS?

- Memory
- Attention & Concentration
- Word-finding
- Speed of information processing
- Abstract reasoning & problem solving
- Visual spatial abilities
- Executive functions



Almost any cognitive function can be impaired, but generally some functions are affected while others are left intact

How Common is Cognitive Impairment?

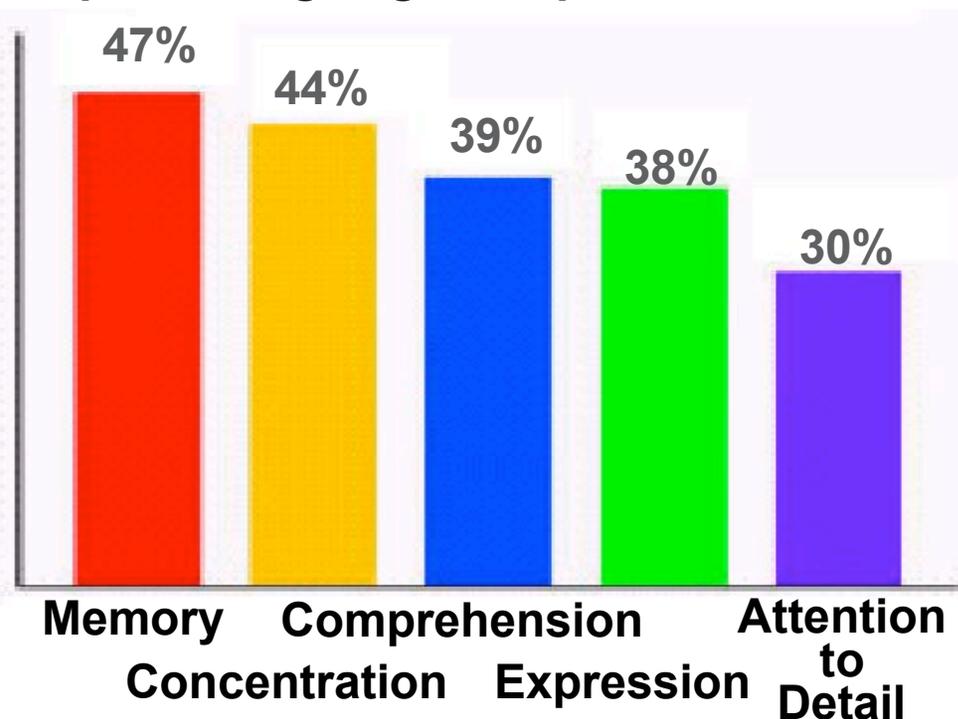


- **Severe** cognitive impairment is reported in **only 10%** of people with MS
- **Mild to moderate** impairment occurs in approximately **40-50%**

Severe cognitive decline is rare but even mild impairment may require changes in a person's routine & habits

How Common is Cognitive Impairment in MS?

Percentages of survey respondents experiencing cognitive problems



- An online **survey of 270 people with MS** confirms clinical research on incidence of cognitive symptoms
- **Memory & concentration** are the most commonly experienced cognitive symptoms

Are Cognitive Deficits Predictable?



No, it is not possible to predict whether or not a person will experience cognitive changes

- There is **little or no relationship** between duration of the disease or severity with cognitive changes
- People with a **progressive form of MS** are at a **slightly higher risk** of cognitive changes
- Cognitive problems **can worsen during an exacerbation** and lessen with remission

Is Cognitive Impairment Progressive?



Not much is known about the progression of cognitive impairment

- Cognitive change is **difficult to assess**
 - Cognitive performance **can vary** during even short follow-up periods
 - A number of factors can **impair cognition temporarily**
- Recent studies have shown that worsening is possible, although the rate of **progression is usually slow**

Can Cognitive Impairment be Prevented?



- **Disease-modifying drugs may slow** the rate of progression of cognitive impairment
- For people with **progressive forms of MS**, there has been a suggestion of efficacy of **oral methotrexate** on cognitive function

Clearing Up Misconceptions

Misconception	Reality
When intellectual problems appear, they worsen rapidly	Although not a lot of research exists, it appears that these problems progress slowly
Intellectual problems occur only in people with progressive MS	Individuals with any kind of MS can experience cognitive problems
Intellectual function can be assessed by asking a few simple questions	Intellectual function must be assessed using a battery of standardized tests and administered and interpreted by a professional
Cognitive problems in MS are similar to Alzheimer's disease	MS bears little resemblance to Alzheimer's disease and it is almost never as severe
All people with MS should have a detailed cognitive assessment	An assessment is only necessary if problems occur and then only after an evaluation to rule out other factors

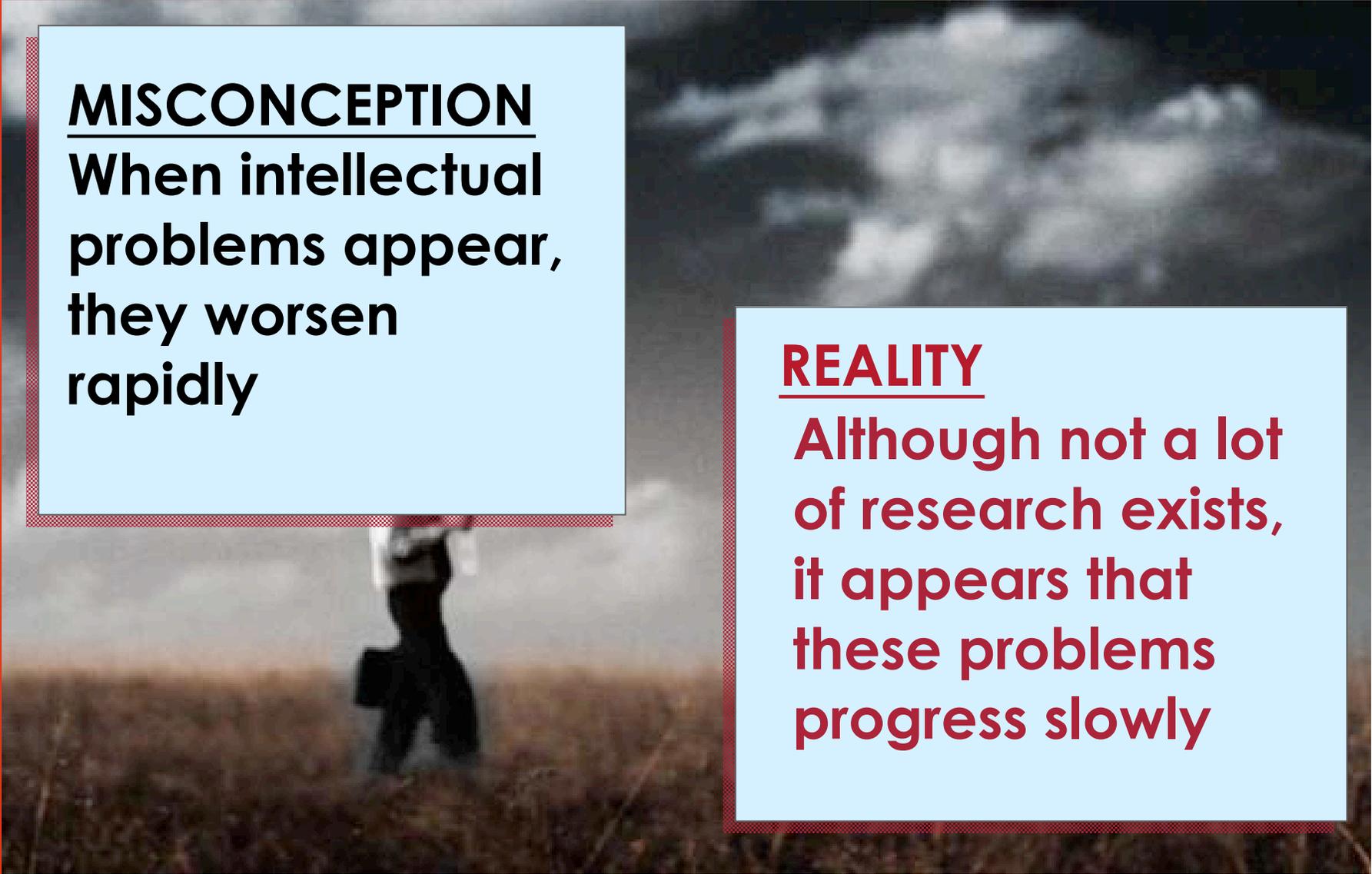
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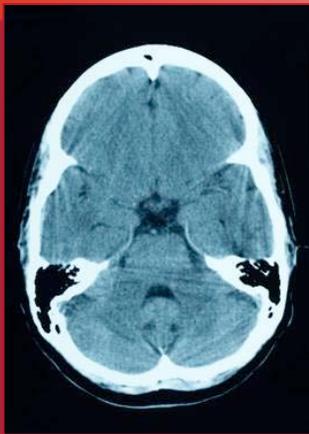
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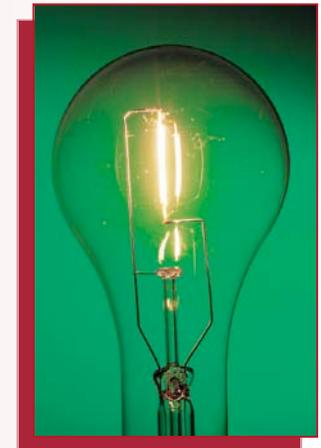
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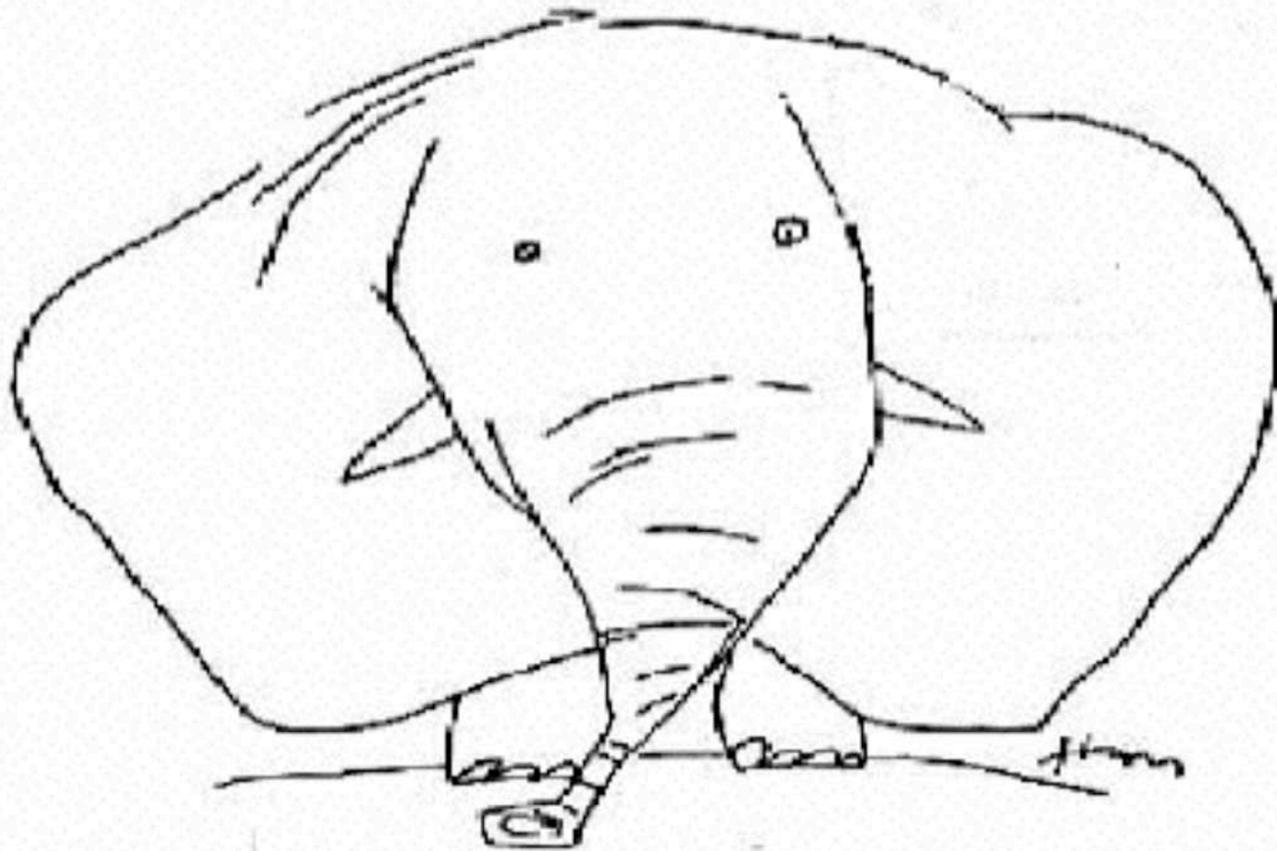
**Living with Cognitive
Problems**



**Managing Cognitive
Problems**



An elephant never takes a horse to water – no – an elephant never looks before he leaps – no, that's not it – an elephant never has his eggs all in one basket --
No! No!...



How Do I Know If I Have Cognitive Problems?

- Do you have trouble...
 - keeping track of appointments
 - remembering conversations
 - balancing a checkbook
 - staying focused on a task
 - Coming up with words
 - Organizing projects

■ **Ask your family or friends -- they may see things that you don't notice**

- If you think you may have cognitive impairments, **see a specialist** for an evaluation
- A specialist can help you identify cognitive changes and develop a **rehabilitation program**



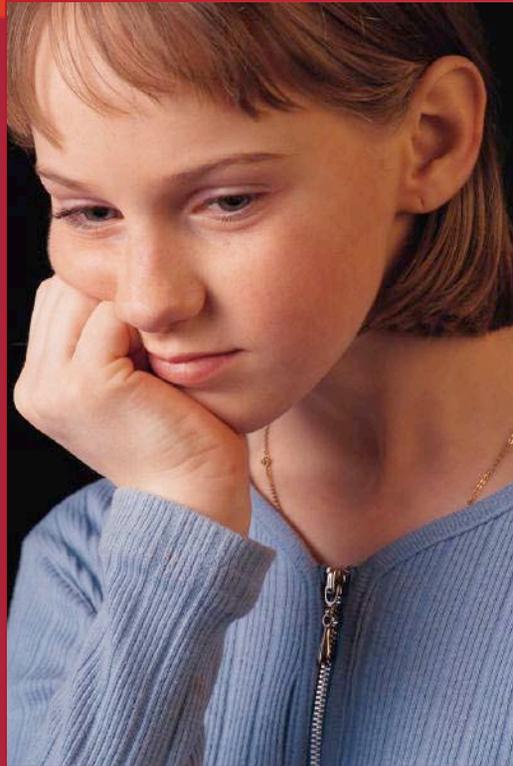
Evaluating Cognitive Problems

- A **neuropsychological assessment** can provide you with realistic information on strengths & impairments
- Neuropsychological assessments include a battery of **tests & a detailed interview**
- **Speech/language pathologists** & occupational therapists can also help **identify cognitive impairment**



Assessments are important when evaluating ability to work, possibilities for **re-education** or **driving ability**

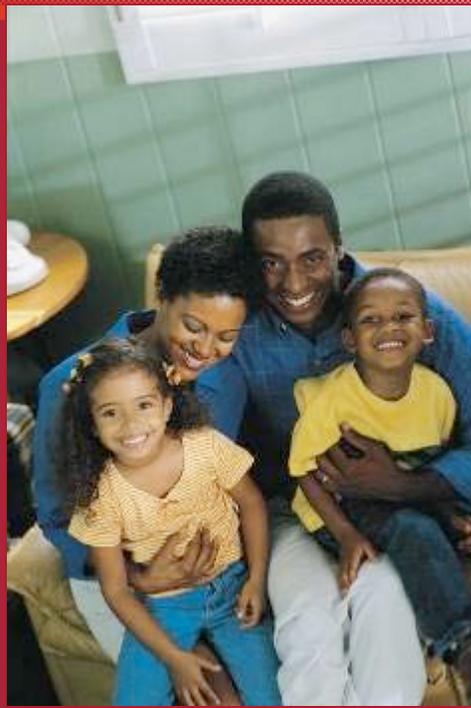
I Have Cognitive Problems--Now What Do I Do?



- **Get it out** in the open
- **Share** with others
- Make it a **family** affair
- Get **counseling** if it seems appropriate
- Explore **self-help** options

Talking to Your Family About Cognitive Changes

Psychologists, physicians & people with MS all agree that understanding & support by family members are essential



- **Family members may not realize** that cognitive changes may be part of the MS
- **Encourage your family to help** by keeping a family calendar, assigning a place for frequently used items (e.g., car keys) & returning borrowed objects to their proper spots

Can I Work With Cognitive Impairments?

Cognitive impairment may be the most significant factor in the high unemployment rate seen in MS



- See a specialist who can give you the **proper tools & strategies** to cope with cognitive challenges
- There are many interventions & strategies to help **overcome these challenges**
- Talk to the **National MS Society**--there are many resources available to you

Talking to Your Colleagues About Cognitive Changes

- **Don't wait** until there's a crisis--open the dialogue before your performance is affected
- **Get advice** on solutions and how to speak to your employer



- **Educate** your employer & co-workers about the nature of the problem
- Ask for an **accommodation**--this disability is covered by the Americans with Disabilities Act

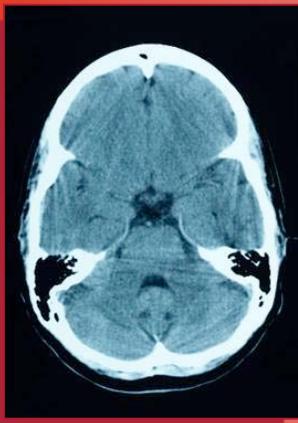
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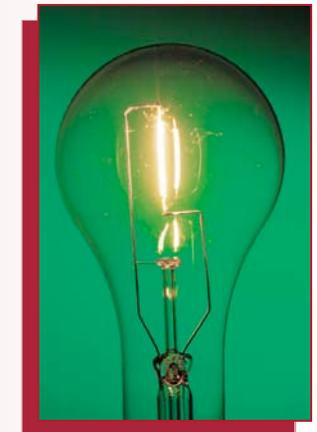
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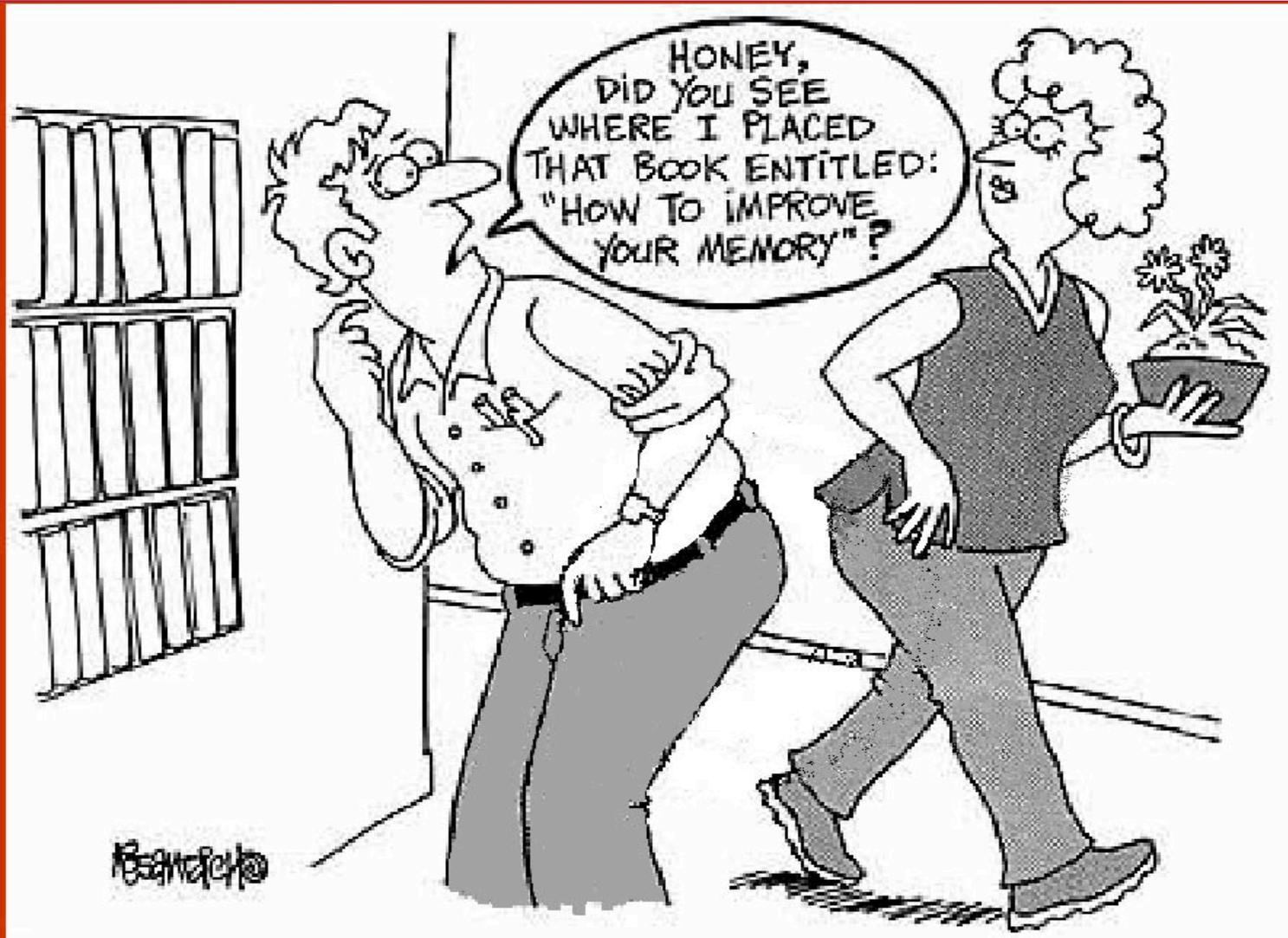


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There is Hope!

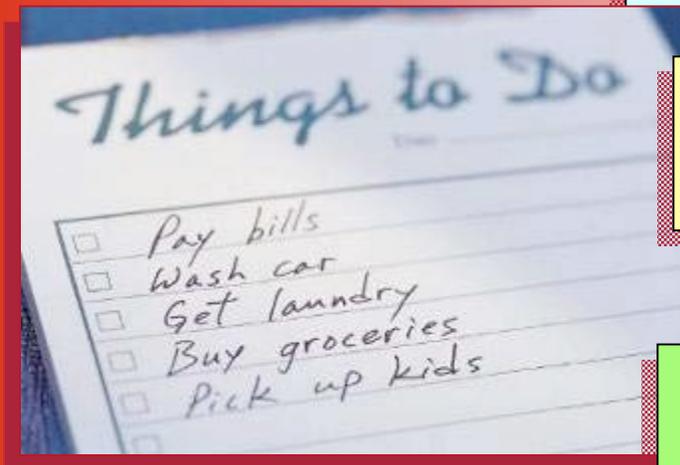


- **Cognitive rehabilitation** can help one develop coping strategies
- **Stress management, counseling or psychotherapy** may help
- Some **cognitive retraining** may be possible
- There may eventually be **medications** to help reverse cognitive damage

The Role Of Rehabilitation



- Cognitive rehabilitation focuses on developing **compensatory strategies**
- Compensatory strategies offer **alternate ways to perform a task** that has become difficult



Filing systems

Checklists

Memory aids

Reading comprehension strategies

Time management

Special-purpose diaries

Simple Ways to Compensate for Memory Problems



- Keep a diary--write everything down & refer to it often
- After each phone call, note the date, time, whom you spoke with & what it was about
- Post a large family calendar in a prominent place--tick things off as they are completed
- Use a wristwatch with an alarm to remind you of events

Simple Ways to Compensate for Memory Problems



- Personal digital organizers are effective for managing lists, agendas, phone numbers & addresses
- Place reminder notes in useful location around the house or office
- Keep things in a designated place
- Design a master shopping list and make multiple copies

Research Continues to Identify Drugs That May Help

- Donepezil hydrochloride (**Aricept**), an acetylcholinesterase inhibitor, has been shown to **improve memory in MS**
- Other acetylcholinesterase inhibitors such as rivastigmine (**Exelon**) and galantamine (**Reminyl**) may also improve memory in MS
- **Memantine**, an NMDA antagonist, which was approved in 2003 for treatment of moderate to severe Alzheimer's disease, **may improve memory in people with MS and may be neuroprotective**
- In people with Alzheimer's disease, **Memantine & donepezil** have been shown to **work together** to improve cognition when given in combination

Where Can You Go For More Information?



www.msillinois.org

**Information Resource Center
1-800-FIGHT MS**

**Look For Articles in
MS Connection & InsideMS**

