

# Creating Cultures of Cognitive Connections

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Western Oregon University



# A Holistic Approach

Besides age, what determines whether or not we have good memory abilities in older adulthood?

- Genetics (50%)
- Cognitive stimulation
- Other health conditions
- Stress
- Good sleep
- Social support and engagement
- Proper nutrition
- Adequate physical exercise

# Create a Culture

- We should be creating cultures in our communities that maximize cognitive stimulation, growth, physical exercise, and social engagement.
- Make it available to residents
- Show residents the benefits
- Seeing others being fully engaged will make them believe they can

# Did you know the prevalence of dementia is declining?

- Matthews et al. (2013) reported in the journal *Lancet* that dementia rates among people 65 and older have plummeted by 25 percent over the past two decades, to 6.2 percent from 8.3 percent, a trend that researchers say is probably occurring across most developed countries. Why?

# Prevalence of Dementia

- Possible reasons for the 25% reduction:
  - Controlling cardiovascular risk factors
    - Cholesterol
    - Blood pressure
  - Better education and possibly more cognitive stimulation
  - Greater awareness of the importance of physical exercise

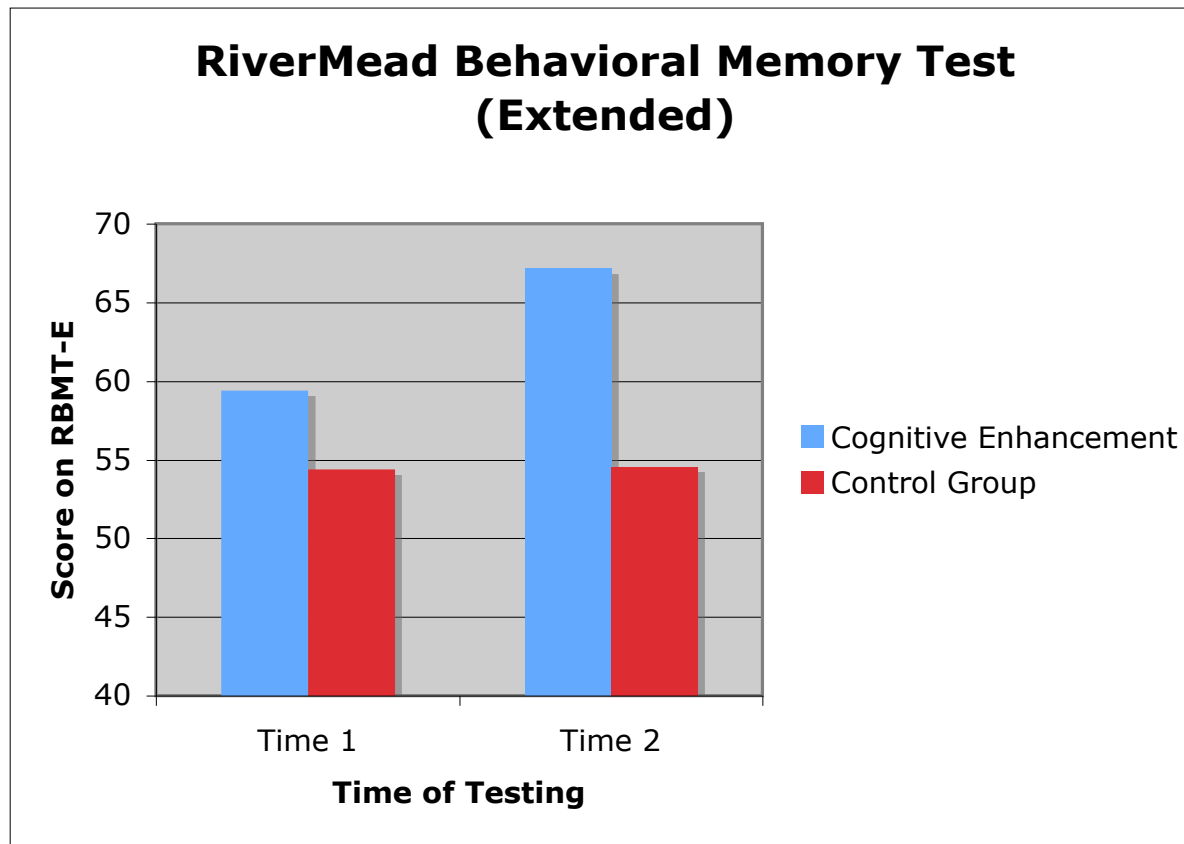
# 2013 Article in the Journal *Neurology*

- Wilson et al. found that people who participated in more mentally stimulating activities had a slower rate of decline in memory. Mental activity accounted for nearly **15 percent** of the difference in decline beyond what is explained by brain changes associated with dementia.

# More Empirical Evidence for Memory Enhancement

- Participants in 7 different communities were tested on many different memory and mental tests. Then 1/2 of the participants engaged in the cognitive enhancement program and the other 1/2 (the control group) did not. Three months later all participants were retested on the same tests. Changes over the three months were analyzed.

# Memory Ability Increased after Three Months of Cognitive Enhancement Training





# Empirical Evidence for Cognitive Stimulation

- “If older adults can maintain their cognitive ability, they will require less care and possibly delay or even eliminate the need to go to a nursing home. Cognitively stimulating activities may also postpone symptoms of dementia, which could also delay the need for more intensive care.”

*Dr. Winningham, Journal of Mental Health and Aging*

# Computer Based Cognitive Stimulation Led to Significant Improvements

- Lee et al., (2013) published a paper in PLOS ONE describing the results of an 8 week (24 session) computer training intervention group relative to a waitlist control group. Significant improvements observed in:
  - Immediate memory
  - Attention
  - Visual spatial memory

2		5			7			6
4			9	6	5		2	
				8			4	5
9	8		5	7	4			
5	7		8	1	2		6	9
			6	3	9		5	7
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	6			5	1			2
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	1	2	
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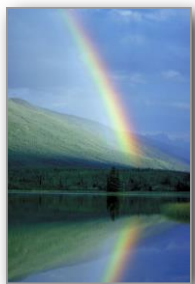
# Great Resources

- [www.robwinningham.com](http://www.robwinningham.com)

Click on “Crossword Puzzles Are Not As Good as Sudoku Puzzles...” to download mini-sudokus and get access to hundreds of 9 X 9 puzzles.

# Spring'to'Life

Use the clues to find words that are hidden in the puzzle.  
Search horizontally, vertically, diagonally, forward, and backward.



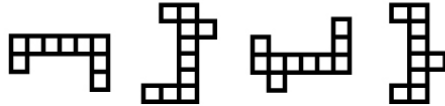
- |                            |       |                       |       |
|----------------------------|-------|-----------------------|-------|
| 1. Month of showers        | _____ | 7. Bird's home        | _____ |
| 2. Vivid yellow flower     | _____ | 8. Pools of rainwater | _____ |
| 3. Rubber overshoes        | _____ | 9. Colorful arc       | _____ |
| 4. Popular wedding month   | _____ | 10. Plant shoot       | _____ |
| 5. St. Patrick's Day month | _____ | 11. Defrost           | _____ |
| 6. Kentucky Derby month    | _____ | 12. Parasol           | _____ |

# Mental Rotation Exercise

Dr. Rob Winningham

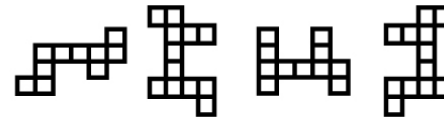
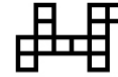
Which of the shapes below the line is a **rotated** image of the shape above the line? Mirrored or similar images do not count. **Tip:** Try to use the process of elimination to narrow down your options.

1.



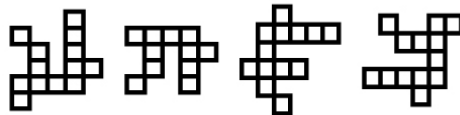
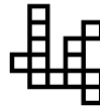
A B C D

2.



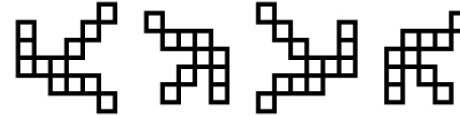
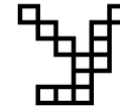
A B C D

3.



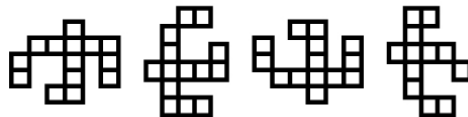
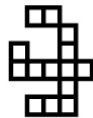
A B C D

4.



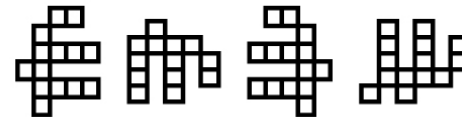
A B C D

5.



A B C D

6.



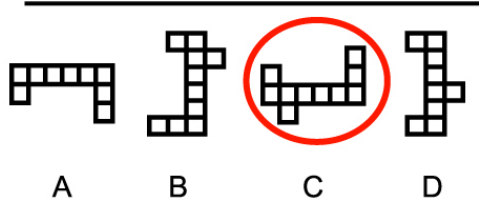
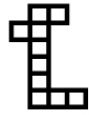
A B C D



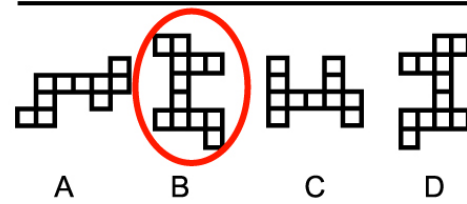
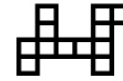
# Mental Rotation Exercise

(solutions)

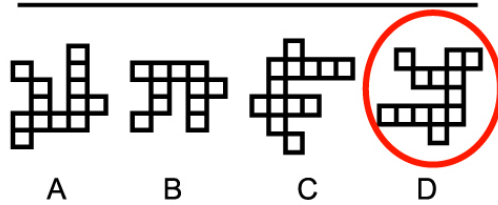
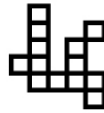
1.



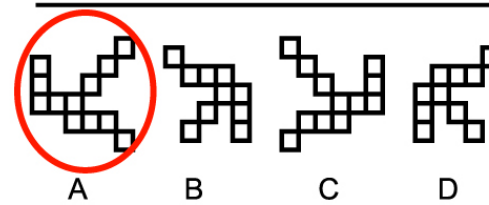
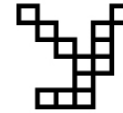
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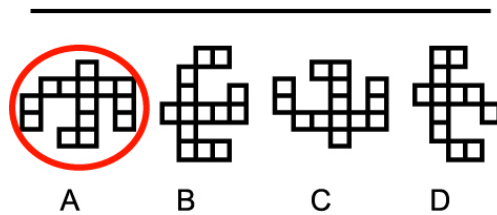
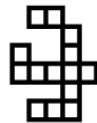
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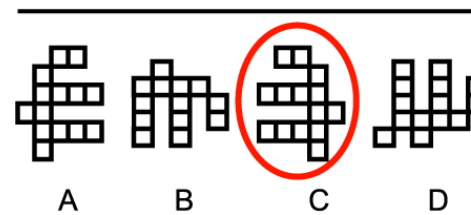
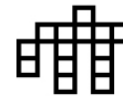
4.



5.



6.



# Proper Nouns A to Z

Dr. Rob Winningham

Fill in each blank with a man's first name that begins with that letter of the alphabet. (Clue: Do you know anyone named Xavier or Yancy?)

A \_\_\_\_\_

Q \_\_\_\_\_

B \_\_\_\_\_

R \_\_\_\_\_

C \_\_\_\_\_

S \_\_\_\_\_

D \_\_\_\_\_

T \_\_\_\_\_

E \_\_\_\_\_

U \_\_\_\_\_

F \_\_\_\_\_

V \_\_\_\_\_

G \_\_\_\_\_

W \_\_\_\_\_

H \_\_\_\_\_

X \_\_\_\_\_

I \_\_\_\_\_

Y \_\_\_\_\_

J \_\_\_\_\_

Z \_\_\_\_\_

K \_\_\_\_\_

L \_\_\_\_\_

M \_\_\_\_\_

N \_\_\_\_\_

O \_\_\_\_\_



























P \_\_\_\_\_



# Letter Symbols

Use the key to decode the Eleanor Roosevelt quote, substituting letters for the symbols.

## KEY

A	B	C	D	E	F	G	H	I	J
									
K	L	M	N	O	P	Q	R	S	T
									
U	V	W	X	Y	Z				
									



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# Cognitive Stimulation

- iPads – Many high quality cognitive stimulation apps.



# Recommended Apps for Cognitive Stimulation

- Fit Brains
- Lumosity
- Tetris
- Sudoku2
- Memory Block
- Stroop Effect
- Visual Attention
- Brain Lab

# Recommended Apps for Cognitive Stimulation

- Word Search+
- Word Jigsaw
- Brain Challenge
- Words Chain Challenge
- Chain of Thought
- This is to That
- Watch That!

# Apps for Cognitive Stimulation

## Do you have other app ideas?

- Please post them on the website [www.robwinningham.com](http://www.robwinningham.com)
- Under the post titled “*Apps for Cognitive Stimulation*”
- You can also find much more information about our experience using iPads and even download a powerpoint file

# Social Support and Mood Matters

- Depression is less likely among people who have strong social networks.
- Depression is also associated with cognitive impairment.
- Berkman et al. (2008) reported that people in their 50' s and 60' s who socialized a lot had the slowest rate of memory loss. People with the least education benefited the most.

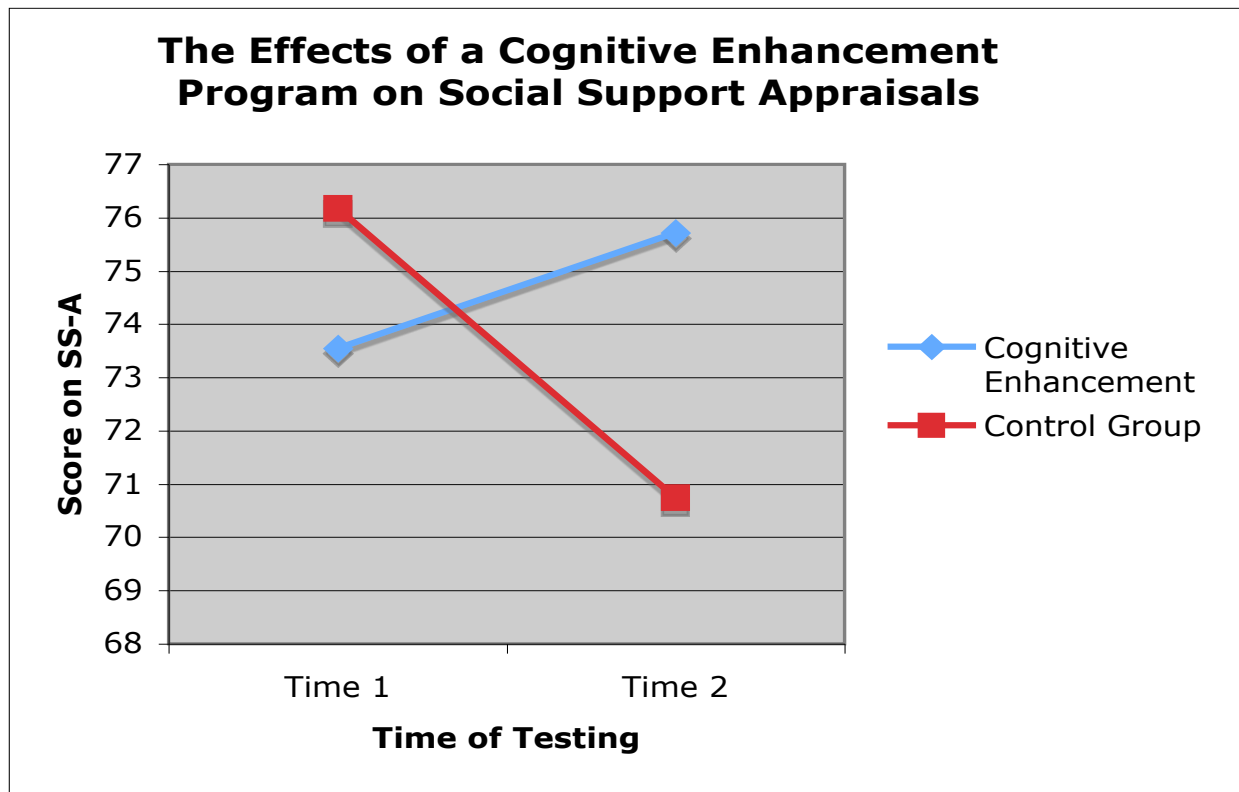


# Social Engagement is Stimulating

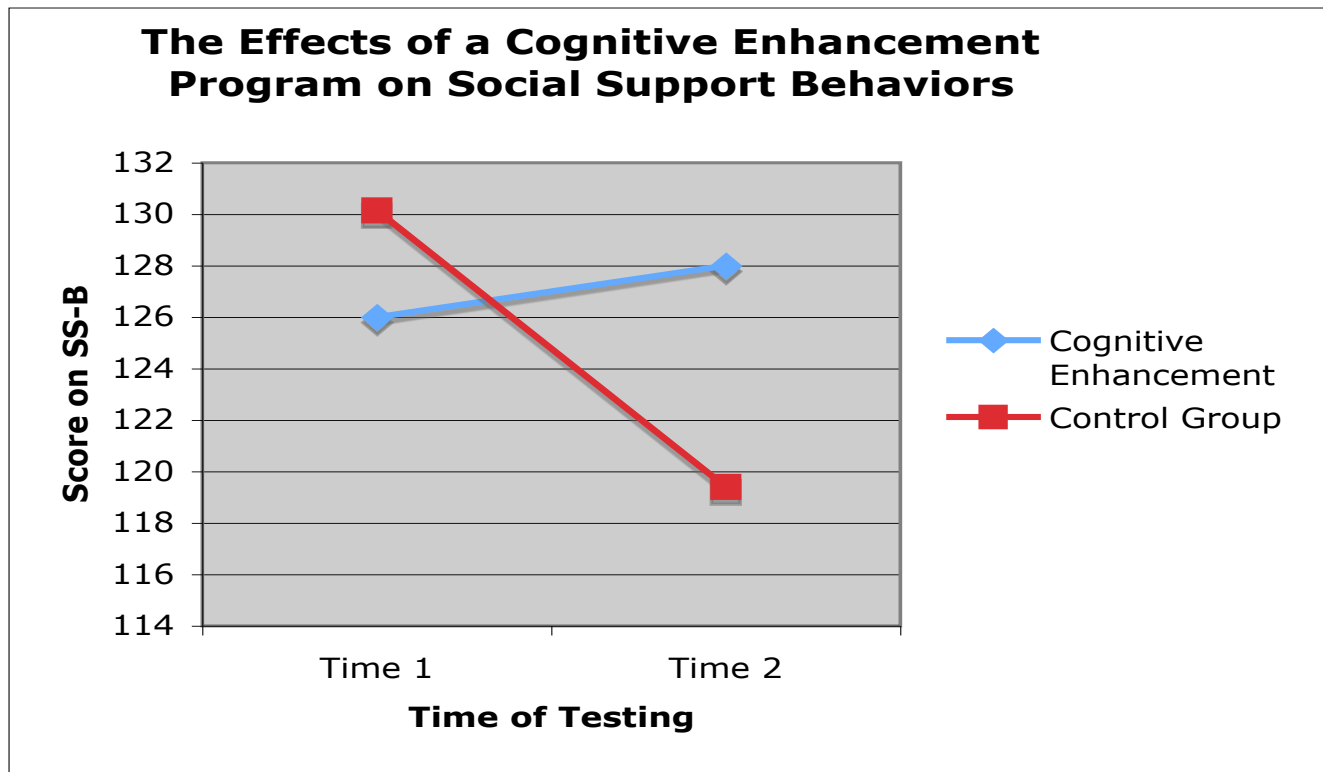
“The working hypothesis is that social engagement is what makes you mentally engaged,” said Lisa F. Berkman, the study’s senior author and director of the Harvard Center for Population and Development Studies. “You can’t sit and withdraw if you’re constantly talking and working on things and figuring out problems in your daily life. It’s not just completing a crossword puzzle, it’s living your life.”

From: <http://well.blogs.nytimes.com/2008/06/04/socializing-appears-to-delay-memory-problems/>

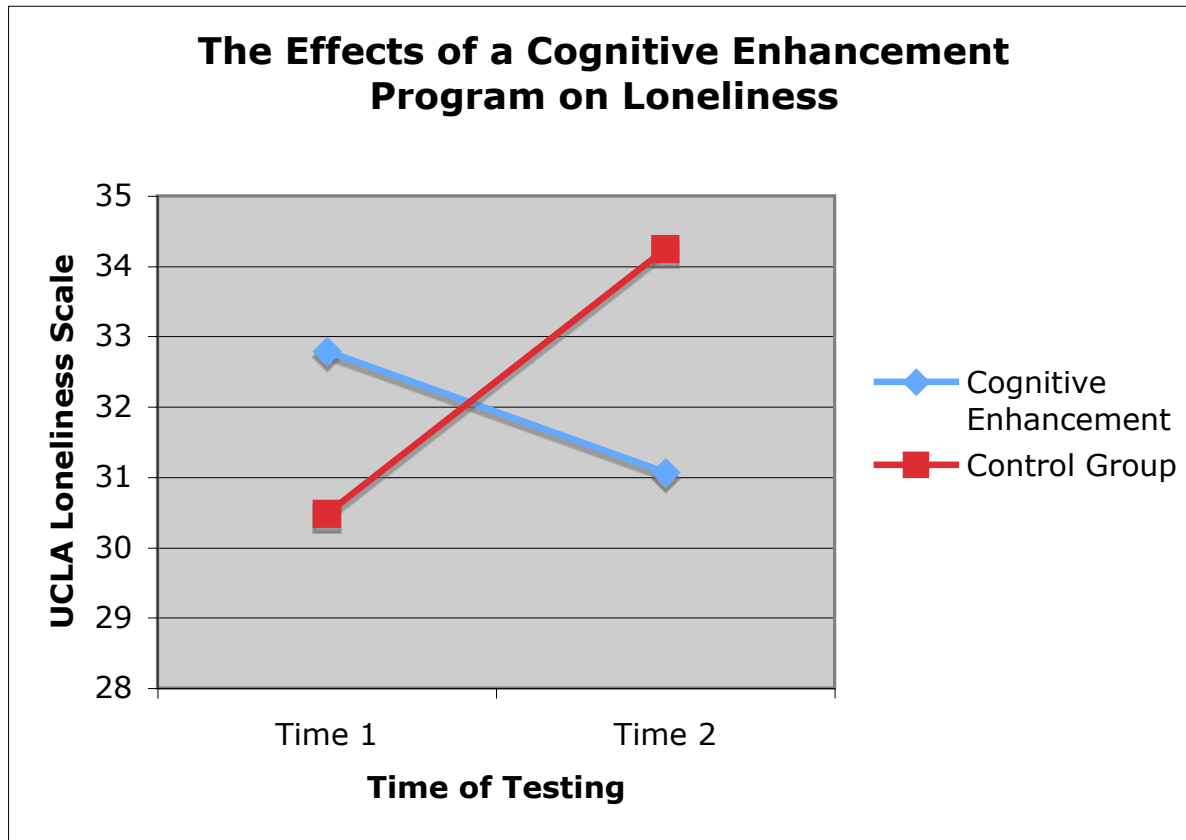
# Cognitive Enhancement Training Led to Increased Social Support



# Cognitive Enhancement Training Led to Increased Social Support



# Cognitive Enhancement Training Led to Decreased Loneliness



# Exercise and Cognition

- The ability to pay attention to relevant stimuli is correlated with cognitive ability in older adults. It appears that exercise affects this ability.



# Exercise and Cognition

- Scarmeas et al., (2009) found that older adults (mean age 77 years) who were in the top third in terms of getting physical exercise were 61% less likely to get dementia



# What type of exercise is best?

- A mixture of aerobic and strength (or resistance) training is best.



# What type of exercise is best?

- Liu-Ambrose et al. (2010) reported that either once-a-week or twice-a-week resistance training sessions for 12 months led to improvements in older adults' cognition and attention.
  - 11% improvement for once-a-week
  - 13% improvement for twice-a-week



# What type of exercise is best?

- Nagamatsu et al. (2012) found that twice a week resistance training in 70 to 80 year old women, with Mild Cognitive Impairment, led to significant improvement in attention and memory ability.

# Benefits of High Quality Life Engagement Programs

- The benefits to residents are obvious, primary, and maximize quality of life.
- But these programs require an investment on the part of the communities, however there is the potential for a significant return on investment (ROI).

# Benefits for Communities

- An active community attracts active members
  - Family members visit and see a place where they would want loved ones to live
  - Attract residents who are **NOT** yet high need
    - What has happened since the great recession?
  - Success begets success as active residents lead to more active residents wanting to move in

# Benefits for Communities

- Reduce turnover caused when residents move, in order to receive more intensive care
  - Keep residents at their current level of care longer
  - Vacancies cost communities money
  - Commission to marketing and sales or to resident finding services can be costly
  - When communities do a great job, they will often have a waiting list and can redirect resources to improve the community – *success begets success!*

# Benefits for Communities

- Continuing Care Retirement Communities (CCRCs)
  - CCRC Model
  - Their model works best with healthy *residents* and not skilled nursing *patients*
  - Live Long, Die Short works really well in CCRC (and who wouldn't want to live long and die short)



# LIVE LONG, DIE SHORT



A Guide *to* Authentic Health  
*and* Successful Aging



ROGER LANDRY, MD, MPH

# Live Long, Die Short



# Benefits for Communities

- Skilled Nursing and Rehab Hospitals
  - Re-hospitalization fines can be reduced with better non-medical services
  - Cognitive and physical exercise programs can dramatically reduce re-hospitalizations
  - And, it maximizes quality of life!



# Summary

- Participation in cognitively stimulating activities is associated with decreased likelihood of developing dementia.
- A culture of cognitive, physical, and social engagement can maximize engagement and quality of life (not to mention the benefits to the community).
- You have a ton of resources with Masterpiece and Dr. Rob's Cognitive Connection, let's maximize our residents' engagement and give them opportunities to continue grow and learn.



- *Cognitive Connection* website
- ML Clients will get hundreds of ready-to-print cognitive stimulation tools for ***FREE!***
- ML Clients will get access to the Certified Cognitive Stimulation Instructor Program for 50% off normal cost

# The Partnership

- Certified Cognitive Stimulation Instructor Program
  - More information at ***[www.robwinningham.com](http://www.robwinningham.com)***
  - Training is appropriate for just about every staff member



# COGNITIVE STIMULATION

A VIDEO COURSE SERIES



Most people claim it is the most valuable training they have ever experienced.



## Vol. 1: Use It or Lose It: Evidence and Ideas for Cognitive Stimulation Programs

In this presentation, you will learn about the latest research on the use it or lose it theory and why cognitive stimulation is associated with improved mental

functioning and a decreased chance of developing dementia. In addition, a holistic approach to brain health is introduced. Many practical suggestions for cognitively stimulating activities are presented.



## Vol. 2: Memory: Why Do We Forget, How Does Memory Change as We Age?

In this presentation, you will learn how we make new memories, why we forget, and how memory changes as

we age. There is good news, in that some cognitive abilities remain relatively intact and we'll discuss how to take advantage of those in older adults with memory impairment.

# COGNITIVE STIMULATION

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### **Vol. 3: How the Brain Makes Memories, Controls Behavior, and is Related to Many Common Problem Behaviors**

In this presentation, you will learn how the various lobes of the brain help control mental processes. In particular the role of attention and concentration (i.e., executive functioning) in the lives of aging adults will be discussed. Also, valuable information about enhancing executive functioning in order to maximize quality of life, in people who already have memory impairment, will be discussed.



### **Vol. 4: Distinguishing Dementia and Delirium**

In this presentation, you will learn about the most common types of dementia and how they differ from delirium. Differences in different types of dementia will be discussed as that knowledge can be used to better help people with dementia. You will also learn basic information about commonly prescribed memory drugs.



### **Vol. 5: Developing Your Own Cognitive Stimulation Program: The Activities**

In this presentation, you will learn how to use many different types of targeted cognitive stimulation activities. You will learn how to exercise executive functioning, word fluency, spatial memory, and other cognitive abilities. This video lecture will better prepare you how to offer a high quality cognitive stimulation program that can be varied to fit a wide range of cognitive abilities.

# COGNITIVE STIMULATION

## A VIDEO COURSE SERIES



**Most people claim it is the most valuable training they have ever experienced.**



### **Vol. 6: Developing Your Own Cognitive Stimulation Program: Best Practices and Motivating People**

In this presentation, you will learn important principles to maximize the efficacy of cognitive stimulation and other activity programs. Essential topics such as screening potential participants, challenging more capable participants, size of classes, and frequency of classes will be discussed. You will also learn how to motivate participants to engage in cognitive stimulation programs and other activities. range of cognitive abilities.



### **Vol. 7: Maximizing Quality of Life: Physical Exercise, Nutrition and Sleep Affect Memory Ability Matter**

In this presentation, you will learn how physical exercise, nutrition, and better sleep can maximize cognitive ability and quality of life. You will also learn strategies to motivate people to engage in these positive lifestyle behaviors. Older adults will benefit from your knowledge of these important factors.



### **Vol. 8: Maximizing Social Support and Social Engagement**

In this presentation, you will learn how social support and loneliness are related to mental and physical health outcomes. You will learn many invaluable strategies to maximize social support and engagement among older adults in a variety of environments. These strategies can dramatically improve quality of life for many older adults.




# **COGNITIVE STIMULATION COURSE CERTIFICATE of COMPLETION**

Certified Consultants, LLC (a partnership between Activity Connection.com and Dr. Robert G. Winningham, Professor of Psychology and Gerontology) confirms that:

**Shelley Evans**

has completed a comprehensive series of eight courses and requisite testing and has earned the designation of **CERTIFIED COGNITIVE STIMULATION INSTRUCTOR (CCSI).**

This designation denotes a commitment to professional development and quality service to the senior community.

  
*Signature of Dr. Robert G. Winningham*  
*Course Instructor*

20th day of March, 2013

*Date*

# The Partnership

- Certified Cognitive Stimulation Instructor Program
  - ML Clients will have access to these resources and opportunities for 50% of retail prices
  - Available on ML Website





# Email Offers – rob.winningham@gmail.com

- Social Support Article and Chapter
- Best Practices for Cognitive Stimulation Article published in Senior Housing and Care Journal
- Selected cognitive stimulation activities

# Contact Information

Email: [rob.winningham@gmail.com](mailto:rob.winningham@gmail.com)

Website: [www.robwinningham.com](http://www.robwinningham.com)

## Additional resources available at:

- *www.activityconnection.com*
- Username: augur
- Password: actcon987
- 30 day trial password

