

TRAIN YOUR BRAIN!

(building mental muscle)

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Reebok University Master Trainer, Golden Door Fitness Manager

I. INTRODUCTIONS

1. Nāmaste! (“*My inner peace meets, greets, and salutes your inner light*”)
2. Lawrence’s Background & Golden Door Spa
3. Our Purpose Today:
4. Learning Tools/Equipment: (small box w/7 objects...)
5. www.findlawrence.com
6. Languages

II. THEORY

1. Major Sections/Areas of the Brain

PARIETAL LOBE	
FRONTAL LOBE	
OCCIPITAL LOBE	
TEMPORAL LOBE	
CEREBELLUM	
BRAIN STEM	

	LEFT	RIGHT
CENTER	SPEECH, LANGUAGE, MATH	
	RIGHT SIDE OF BODY	LEFT SIDE OF BODY
	VISUAL DETAILS	PATTERNS OF DETAILS
	MEMORY OF NAMES	MEMORY OF IMAGES & FACES
	ACCOUNTING & ANALYTICAL	CREATIVE
FRONT	HAPPINESS	NEGATIVE EMOTIONS, WORRY
BACK	SPATIAL ZONES	SPATIAL ZONES

CENTER BRAIN
EMOTIONS
EXECUTIVE AND SOCIAL FUNCTIONS
LONG TERM AND SHORT TERM MEMORY
MEMORY OF SOUND, SIGHT, SMELL IN
SEPARATE PLACES

FRONT

“If you reach for the stars, all you get are the stars, but I’ve got a whole new spin: if you reach for the heavens, you get the stars thrown in!”



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2. Major **Functions** of the Brain
Including **MEMORY: both LONG AND SHORT TERM, plus EXECUTIVE & SOCIAL, EMOTIONAL, LANGUAGE, MATH, AND SPATIAL SKILLS**
3. Factors Affecting Function
 - **MEMORY WORKS BEST UP TO 7 ITEMS**
 - **↑CORTISOL = ↓ MEMORY (CORTISOL KILLS OFF BRAIN CELLS!)**
 - **↑ SLEEP + REST = ↑COGNITIVE PROBLEM SOLVING**
 - **↑GLUCOSE = ↑MEMORY**
 - **↑ANTIOXIDANTS + CHOLINE= ↑ MEMORY**
 - **↑BACKGROUND MUSIC + NOISE = ↓MEMORY**
 - **↑STORIES = ↑MEMORY, ↑LISTS = ↓MEMORY**
 - **↑DEPRESSION = ↓MEMORY**
 - **↑STRESS = ↓MEMORY**
4. What You **CANNOT** Change
5. What you **CAN** Change by Training

III. PRACTICAL

Class Sample Script:

This class will help train your brain like a muscle. The more you use it the more results you will get. Your brain can get stronger. Just like in the gym, you will get tired after a certain number of repetitions, so only do what's comfortable. You will find some of these exercises easy and some difficult, just like working the other muscles.

SHORT TERM MEMORY WITH NO ORAL CUES

1. **OPEN THE BOX AND TAKE OUT ITEMS 7 FOR GUESTS TO SEE.**
2. **PUT CONTENTS BACK IN THE BOX.**
3. **ASK GUESTS TO RECALL TO THEMSELVES THE ITEMS IN SILENCE ONLY**

SHORT TERM MEMORY WITH ORAL CUES

OPEN THE BOX AND TAKE OUT ITEMS FOR GUESTS TO SEE, THIS TIME ONLY SAYING OUT LOUD THE NAME OF EACH ITEM

1. **HAVE GUESTS REPEAT OUT LOUD TO THEMSELVES THE CONTENTS**
2. **PUT CONTENTS BACK IN THE BOX**
3. **HAVE GUESTS RECALL OUT LOUD TO THEMSELVES THE OBJECT NAMES**

SHORT TERM MEMORY WITH A STORY

TELL A STORY WITH OBJECTS FOR EASIER RECALL OR MAKE ANAGRAM

1. **ASK GUESTS TO RECALL WHAT IS YOUR NAME**
2. **Party Idea: My name is ____ _____. I'm coming to a party and I'm bringing (L____) and (B____). What are you bringing? You can or cannot come.**
3. **I'm going to the grocery store and getting milk. Next person repeats and adds one item. Continue until at least 7 items are chosen and repeated.**
4. **Rit'as Party Introduction: My name is Rita and I'm from Puerto Rico and I love to dance on a table. Next person**



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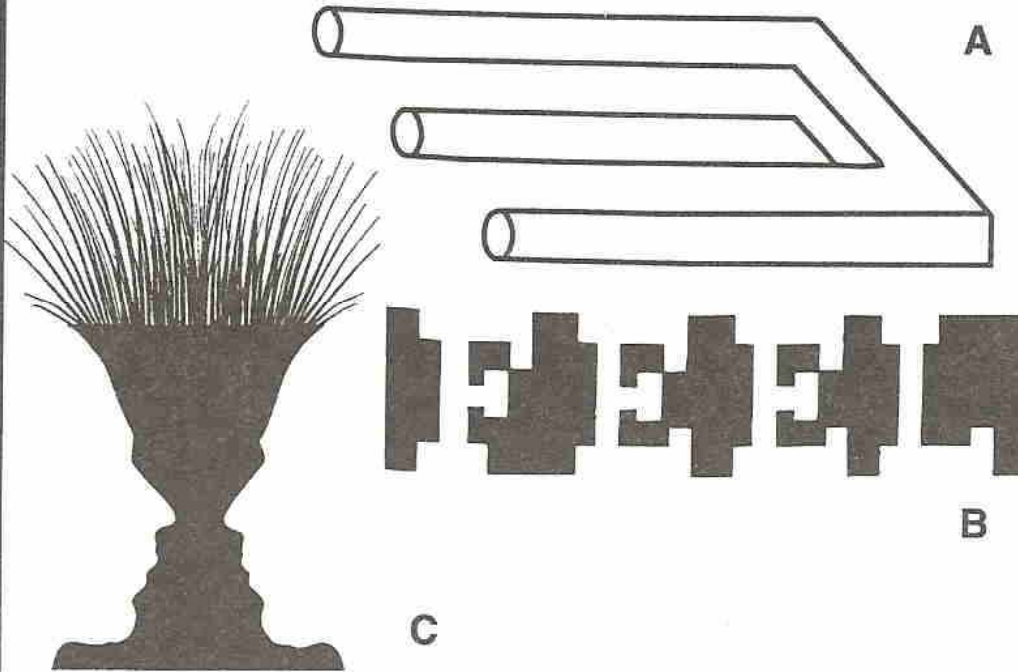
SPATIAL BRAIN EXERCISE: 5 MINUTES TOTAL



EXERCISE: Shapes in space

What we see is partly governed by what we expect to see related to past experience. Research on monkeys isolated specific areas in different parts of the brain that respond only to food (a yellow banana but not a yellow flower, for example), another area that responds to objects seen before, but not new ones (a large red balloon but not a small blue one), and a still different area that recognizes different faces.

The brain can perceive only one interpretation of a shape at one time. Our experience may lead us to expect that the "background" is less significant than what we see as a "shape" in the "foreground." We try to identify shapes with familiar objects ("If it looks a lot like a wrench, it's a wrench") and we can be wildly mistaken. The images on this page demonstrate some of those tricks of the mind.



How good are your right-brain compositional skills? Did you already identify these three familiar objects from the two sets of broken drawings on the two preceding pages?



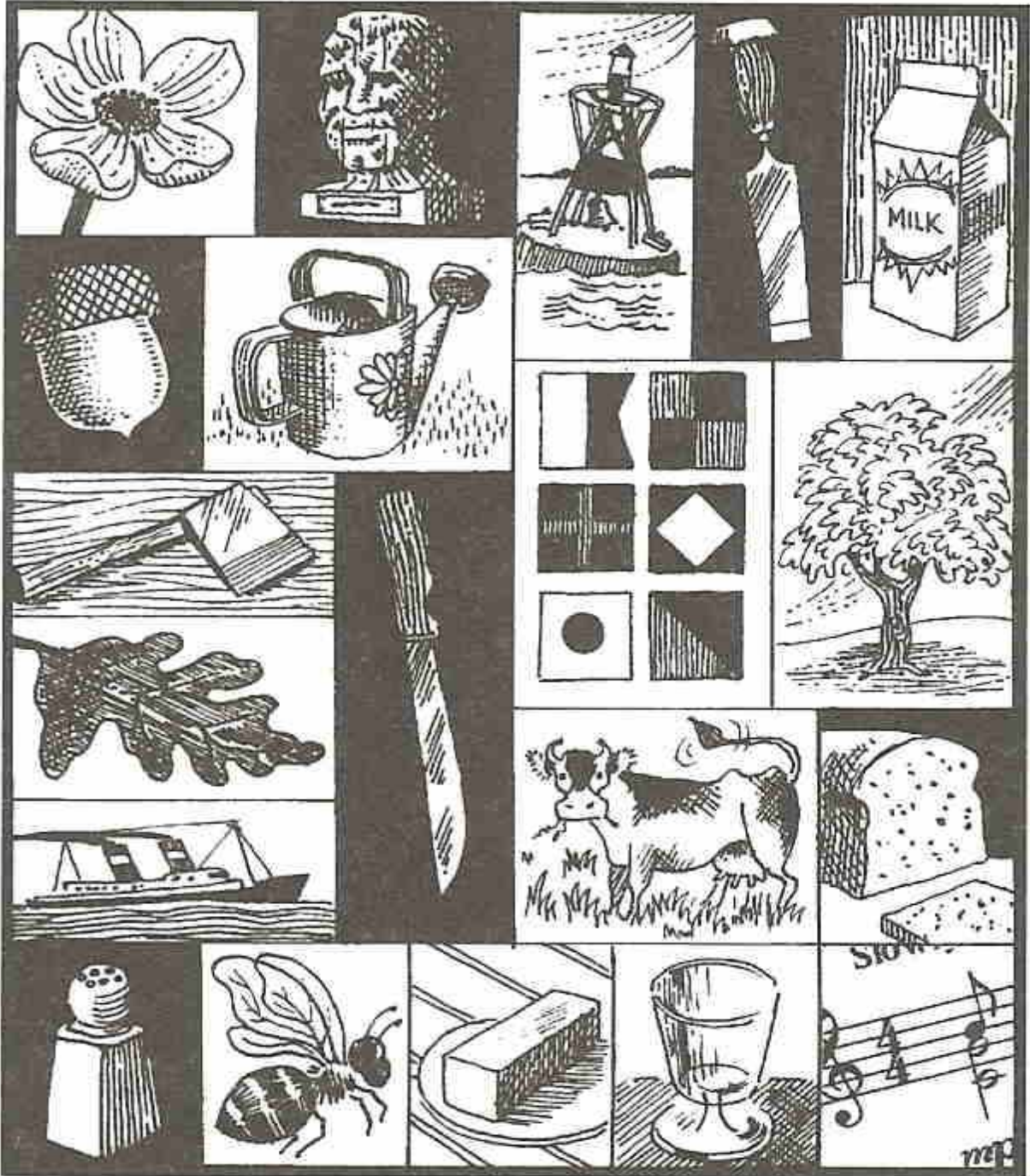
"If you reach for the stars, all you get are the stars, but I've got a whole new spin: if you reach for the heavens, you get the stars thrown in!"



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MEMORY BRAIN EXERCISE: 5 MINUTES
EXERCISE: MAKE THE 10 MOST LOGICAL PAIRINGS OF THE BELOW
ITEMS. THERE ARE NO INCORRECT ANSWERS

"If you reach for the stars, all you get are the stars, but I've got a whole new spin: if you reach for the heavens, you get the stars thrown in!"



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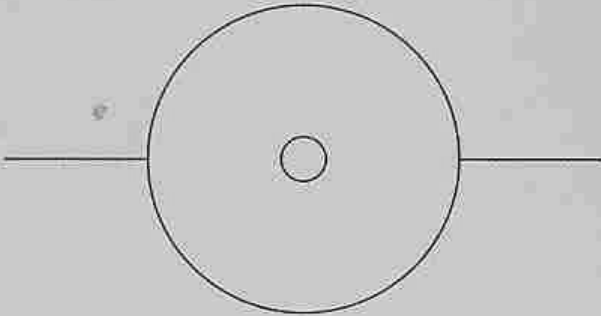
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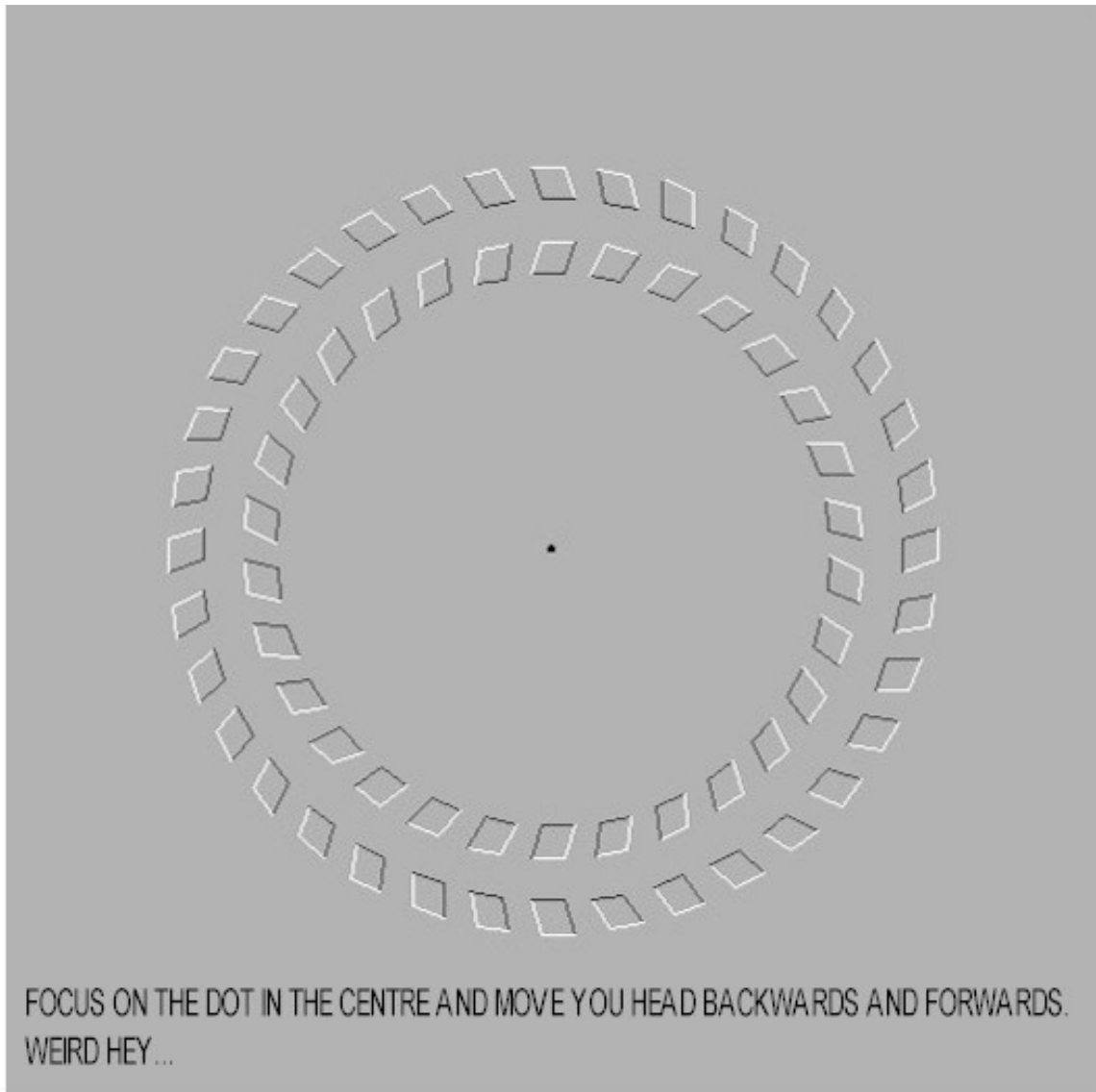
EMOTIONAL, CREATIVE, AND SPATIAL BRAIN EXERCISE: 5 MINUTES

What do you see?

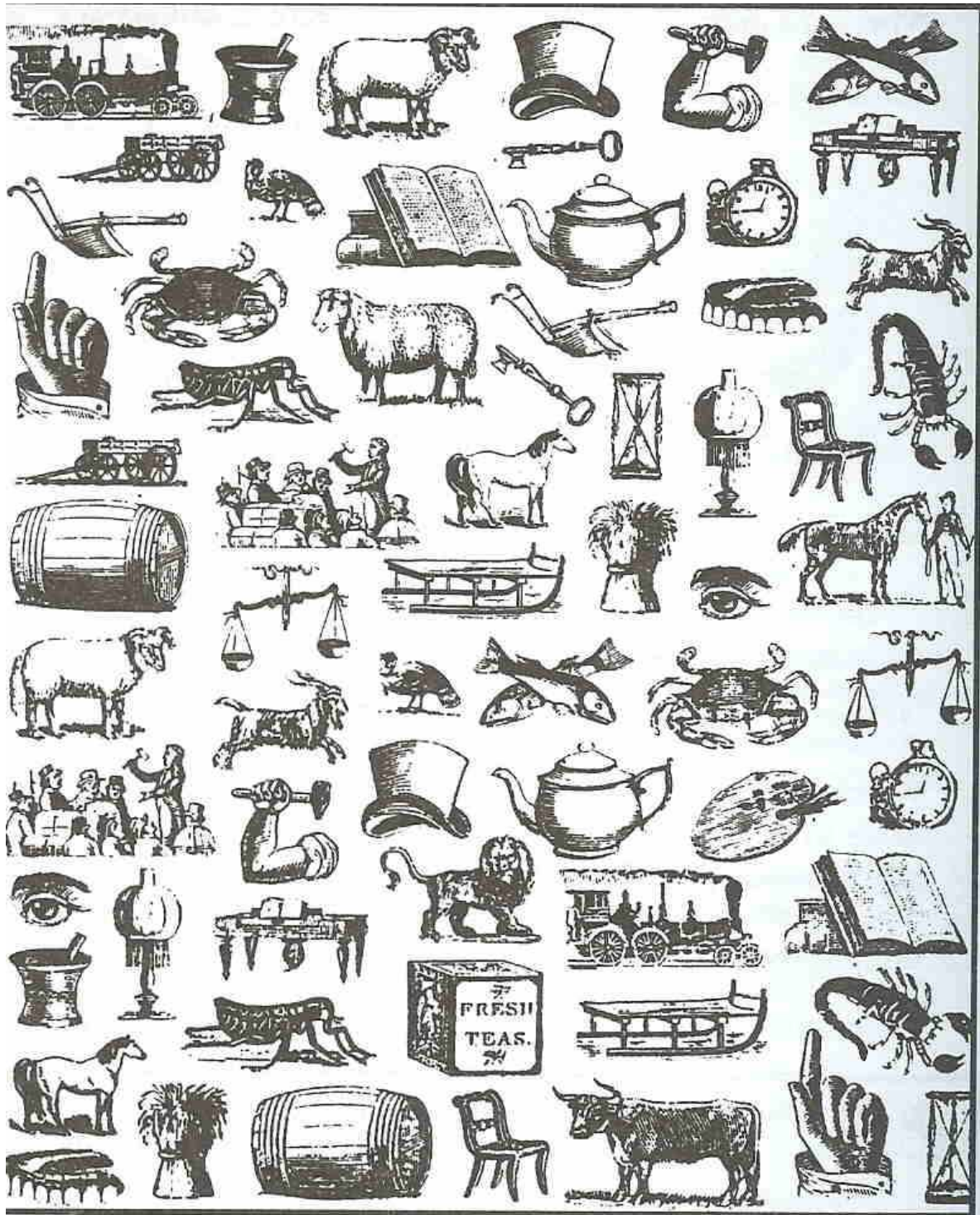


One way of answering this question might be: "Some black lines on a blue page."
Let's change the question: **What might this be?**

"If you reach for the stars, all you get are the stars, but I've got a whole new spin: the heavens. you see the stars thrown in!"



SHORT TERM MEMORY BRAIN EXERCISE: 4 MINUTES
EXERCISE: BELOW THERE ARE 2 OF ALMOST EVERYTHING. WHICH
ARE THE OBJECTS THAT APPEAR ONLY ONCE?



"If you reach for the stars, all you get are the stars, but I've got a whole new spin: if you reach for the heavens, you get the stars thrown in!"

Hint: Look for warm-blooded animals and the tea that is most pleasing to the palate.

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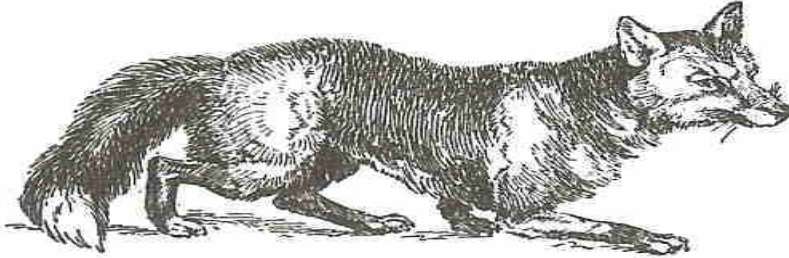


SOCIAL BRAIN EXERCISE: PROBLEM SOLVING (3 MINUTES)

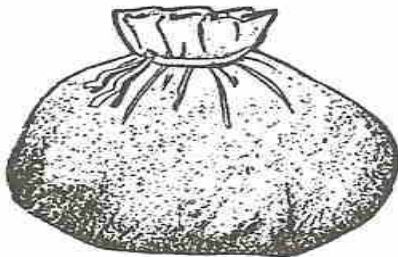
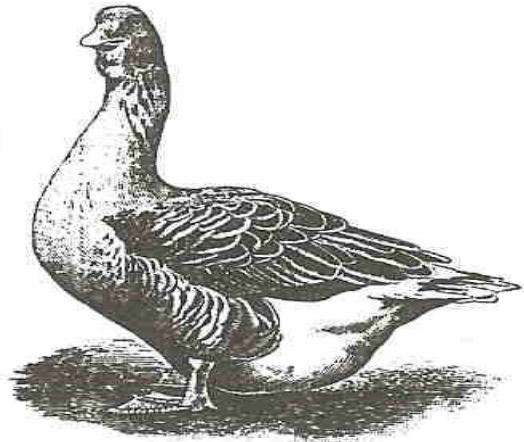


EXERCISE: Fox, goose, and grain

A "familial dilemma" is a variant of the old farmer, fox, goose, and grain riddle. It goes like this:



A farmer wants to ferry a fox, a goose, and a sack of grain across a river. However, his boat is only big enough to hold one at a time. If he leaves the fox and goose alone together on either bank, the fox will eat the goose. If he leaves the goose and the grain together, the goose will eat the grain.



How can he get all three to the other side?

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Look at the chart and say the **COLOUR** not the word

YELLOW BLUE ORANGE

BLACK RED GREEN

PURPLE YELLOW RED

ORANGE GREEN BLACK

BLUE RED PURPLE

GREEN BLUE ORANGE

Left - Right Conflict

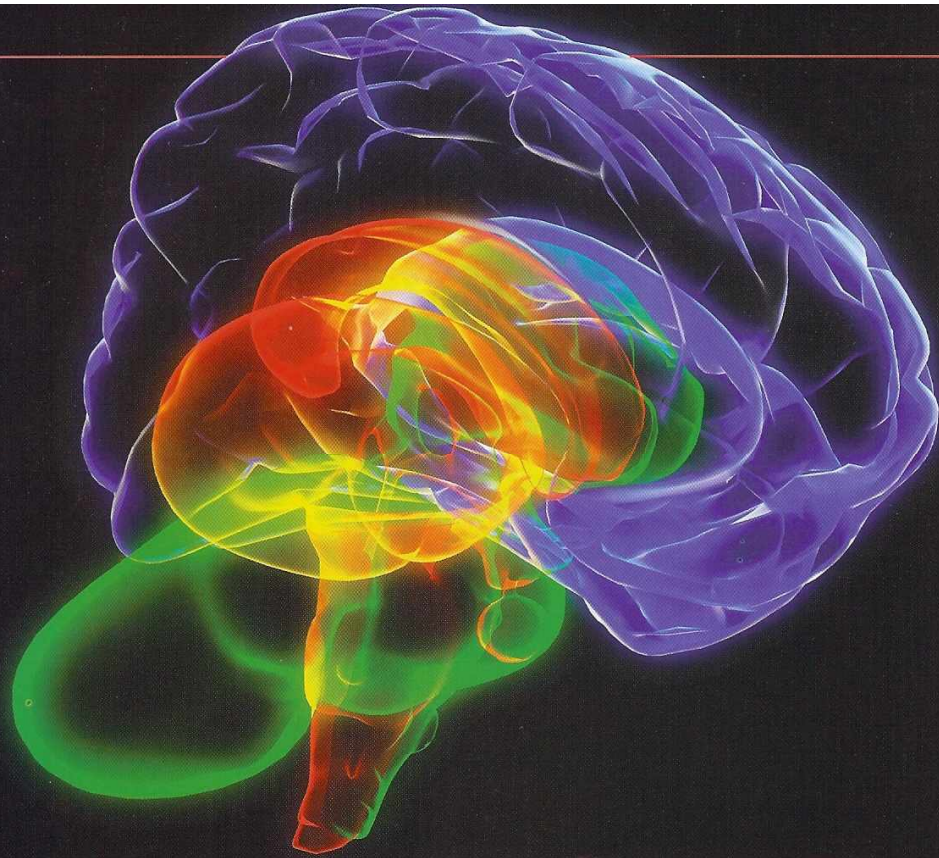
Your right brain tries to say the colour but your left brain insists on reading the word.

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Preventing Brain Drain: Nutritional Strategies for Boosting Brain Power

By Monique Ryan, M.S., R.D.

What and when you eat and drink affects your intellect, memory and thinking. Have you ever postponed eating despite feeling hungry and then felt your whole brain come alive when you finally sat down for a meal? Your headache dissipates and your concentration and focus return. Just like your heart, your brain is an organ that benefits from optimal care and premium fuel. Nutrition can also affect brain chemicals, brain cell structure and function, and the ability of the brain to transmit electrical messages. Though nutritional neuroscience is in its infancy, there are specific foods that you can incorporate into your daily meals and snacks that may prevent brain drain.

Fuel First

While all the macronutrients in our diet—carbohydrates, proteins and fats—serve important functions, our bodies continually run on some type of carbohydrate fuel whether at rest or participating in mild- or high-intensity activity. Your brain is no different. In fact, your brain and other tissue in your nervous system are very dependent upon glucose for their energy needs and, except

under conditions of starvation, it is their only major fuel. When our blood glucose levels drop below normal, we become dizzy and light-headed. Under normal conditions, your brain and nervous system require a minimum of 150 grams of glucose each day.

Practically speaking, your brain benefits when you consume your meals and snacks on time. Carbohydrate consumption boosts blood



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glucose levels, which then slowly drop off over the next two to three hours. When levels run low, your liver can pitch in and send its own carbohydrate supply into the bloodstream. One of the biggest brain-drain mistakes you can make is skipping breakfast. We awake with low liver carbohydrate stores that have been steadily depleted overnight. Breakfast not only boosts blood glucose levels, but restocks our liver fuel supply. From breakfast on, eating every three to five hours works well for many of us, but it is best to plan around your exercise and work schedule. It is also essential that you consume moderate doses of nutrient-dense carbohydrates, such as whole grains, fruits and vegetables, combined with some high-quality protein. In contrast, very large carbohydrate meals or high-fat meals can decrease alertness, as can sugar-laden foods.

Nutrient Boost

Emphasizing good food sources of specific nutrients in your diet can also give your brain a boost. Start with the mineral iron, which aids in the transport of oxygen in your red blood cells to your brain and within each brain cell. Adequate oxygen means your brain cells can metabolize fuel for energy. The level of oxygen that your brain consumes on a daily basis is significant and iron deficiency or anemia is linked to shortened attention span and mental sluggishness. Iron is also required for manufacturing brain proteins and the normal functioning of various brain chemicals. Iron-rich foods include lean red meat, pork, poultry, legumes, raisins, dried apricots and iron-fortified cereals. Men and postmenopausal women generally have lower iron requirements than menstruating women. A serum ferritin level is the most sensitive indicator of iron status.

Of all the vitamins in your diet, the B vitamins, mainly B₁₂, folic acid, B₆, thiamin and

Nutritional Strategies for Preventing Dementia

Dementia is a progressive brain disorder that affects brain processes and memory. In Alzheimer's, there is degeneration of brain cells and accumulation of protein clumps or plaques, and oxidation and inflammation may also play a role in its development, as could diet. Other forms of dementia can be caused by decreased blood flow to the brain from even minor strokes.

The good news is that the heart-healthy diet followed by many active individuals may also give your brain a good boost. Just as consuming healthy fats and limiting saturated and trans fat can keep the blood flowing in the arteries in your heart, it can keep the blood flowing in your brain. Decreased brain circulation is a potential contributor to the development of dementia. Elevated blood cholesterol levels, potentially clogging the arteries in the brain, have also been linked to Alzheimer's. Cholesterol is also involved in formation of the type of plaque found in the brain of persons with Alzheimer's. Fish oil or omega-3s may also have a role in dementia prevention. Just one fish meal per week appeared to decrease risk in two separate studies.

Uncontrolled diabetes is also strongly correlated with an increased risk of dementia, likely related to circulatory damage from high blood sugar levels and free radical damage to the brain. High blood pressure can also increase dementia risk by exacerbating cardiovascular disease.


Vitamins can also play a role in prevention. Adequate intake of B vitamins, particularly folate and B₁₂, keeps blood levels of the amino acid homocysteine down, and several studies have found that high homocysteine levels are linked to Alzheimer's. Dementia may also have a diet connection to antioxidant nutrients, but most likely through food sources rather than supplements (which some experts are concerned could actually be detrimental). A high intake of dietary vitamin E was linked to lower risk of Alzheimer's in one study and another study linked fewer cases of this disease with higher dietary intakes of both vitamins C and E. However, a more recent study in *The New England Journal of Medicine* tested the benefits of folate, B₁₂, and B₆ supplementation in healthy persons 65 and older. There was no benefit seen regarding cognitive function.

niacin, appear to be the most important for your brain health. Vitamin B₁₂ is essential for your nervous system and lack of this nutrient can result in degeneration of brain tissue, spinal cord and peripheral nerves. Good food sources of B₁₂ include animal protein foods such as milk, cheese, yogurt, beef and poultry. Vegans should ensure that they take a B₁₂ supplement, and absorption of this nutrient may be decreased in older persons. Vitamin B₆ or pyridoxine is needed for normal development and maintenance of the nervous system from conception to adulthood. Vitamin B₆ is found in wheat germ and whole grain cereals, pork, legumes, potatoes, bananas and oatmeal. Thiamin helps us extract energy from glucose and is found in breads, cereals and wheat germ. Niacin plays a role in the manufacture of many nerve chemicals. Good sources of niacin include chicken, salmon, peanut butter and wheat germ. Folic acid should also be emphasized in the diet as it helps to maintain good choline levels in the blood. Choline is involved in the formation of acetylcholine, an important neurotransmitter

that you have a very good vitamin C intake. Vitamin E can be found in liquid vegetable oils, wheat germ, avocado, almonds, peanuts and sunflower seeds.

After body fat, brain cell membranes are the next richest storage area of fat. Omega-3 fatty acids, the same healthy fat found in fish, can be found in the most metabolically active parts of your brain. While the mechanisms are not clear, Omega-3s appear to enhance brain-cell communication.

Building a Better Brain

While you can emphasize good food sources of B vitamins and iron, and add more fish to your diet, a daily multivitamin mineral supplement providing 100 percent of the daily values ensures that you meet your daily requirements of these important nutrients without the concerns of excess supplementation. 

Monique Ryan, M.S., R.D., is owner of Personal Nutrition Designs and author of *Sports Nutrition for Endurance Athletes* and *Performance Nutrition for Team Sports*.

in the brain. Good sources of folate include orange juice, kidney beans and other dried beans, and dark green leafy vegetables such as spinach, asparagus and broccoli. Food sources of choline include oatmeal, soybeans, cauliflower, cabbage, eggs and peanuts.

Our brains generate many free radicals, which are highly reactive substances that need to be kept in check. Antioxidant nutrients, such as vitamins C and E, can deactivate free radicals and are therefore important to brain health. Good sources of vitamin C include orange juice and other citrus fruits and juices, strawberries and green peppers.

Consuming six or more servings of fruits and vegetables each day ensures



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Spa at Las Casitas Village

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Home-Work:

- brainage.com (\$, need for equipment)
- science.education.nih.gov
- mensa.org
- [6 seconds.org](http://6seconds.org)
- harvardtests
- funeducation.com
- myersbriggs.org
- mentalstrength.com (\$)
- opencenter.org
- hbdi.com (\$) (Hermann brain dominance indicator)
- brainboost.com
- Brainage.com (PAID) 6seconds.org (FREE), brainmap.com (FREE), and www.implicit.harvard.edu (FREE)

Final Take-Home Messages:

This program is conceived and offered at Golden Door Spas, which all proudly feature Reebok University programming and unique fusion creations like “Yo-Chi”®



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