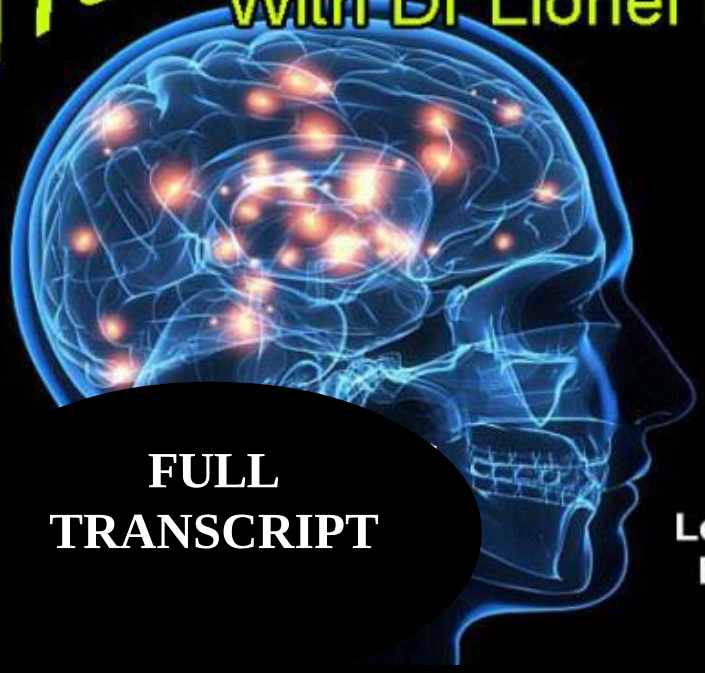
Free Seminar & Workshop

Training Your Brain

With Dr Lionel Hartley



FULL TRANSCRIPT

BENEFITS

Quicker Reactions
Sharper Listening
Faster Thinking
Sharper Vision
Better Moods
Drive Safer
Better Memory
Delay Dementia
Succeed Quicker
Lengthen Your Lifespan
Extend Comfort Zones
More Self-Confidence

Transcript
PowerPoint
& Handout booklet

Transcript: Training Your Brain

SLIDE 1 – Title Slide

SLIDE 2 – Who is your author

Introduction (10 Minutes)

Your brain has a natural ability to remodel itself throughout life. It is called *"Neuroplasticity"*. The brain is always changing, sometimes for the better, and sometimes for the worse.

This seminar and workshop will equip you with tools, resources and mental exercises to harness that change and direct it in ways that will effectively enhance your overall performance and improve the quality of your life, perhaps even longevity.

Legend has it that a certain college philosophy professor asked one question on his final exam. He picked up a chair, put it on his desk, and wrote on the board, "Using everything we have learned this semester, prove that this chair does not exist."

The students dug deep and wrote like crazy for a whole hour, some of them churning out 30 pages of heady philosophical debate and

logic.

But one student turned in his paper after less than a minute. Turned out he was the only one to get an “A.”

What did he write so quickly that turned out to be just the right answer? “What chair?”

It doesn’t matter how brainy we are or how much education we’ve had – we can still improve and expand our mind. Boosting our mental faculties doesn’t have to mean studying hard or becoming a reclusive bookworm. There are lots of tricks, techniques and habits, as well as changes to our lifestyle, diet and behaviour that can help us flex our grey matter and get the best out of our brain cells.

SLIDE 3

Unit 1 Training Your Brain Part 1 (20 Minutes)

OVERLAY x 2

A. Boosting Working Memory

Until recently, a person’s IQ – a measure of all kinds of mental problem-solving abilities, including spatial skills, memory and verbal reasoning, etc. – was thought to be a fixed

commodity largely determined by genetics. But recent studies suggest that a very basic brain function called *working memory* might underlie our general intelligence, opening up the intriguing possibility that if you improve your working memory, you could boost your IQ too.

Working memory is the brain's short-term information storage system. It's a workbench for solving mental problems. For example if you calculate 73 – 6 + 7, your working memory will store the intermediate steps necessary to work out the answer. And the amount of information that the working memory can hold is strongly related to general intelligence.

A team led by Torkel Klingberg at the Karolinska Institute in Stockholm, Sweden, has found signs that the neural systems that underlie working memory may grow in response to training.

According to the journal *Nature Neuroscience*, vol 7, p 75, using functional magnetic resonance imaging (fMRI) brain scans, they measured the brain activity of adults before and after a working-memory training programme, which involved tasks such as memorising the positions of a series of dots on a grid.

After five weeks of training, their brain activity had increased in the regions associated with this type of memory.

Perhaps more significantly, when the group studied children who had completed these types of mental workouts, they saw improvement in a range of cognitive abilities not related to the training, and, according to the Journal of the American Academy of Child and Adolescent Psychiatry, vol 44, p177, there was a leap in IQ test scores of 8 per cent.

Klingberg claims working-memory training could be a key to unlocking brainpower. He says, “Genetics determines a lot and so does the early gestation period. On top of that, there is [a certain percentage] that can be improved by training.”

OVERLAY x 2

B. Your Recollection Kit

Mind like a sieve? Don’t worry. The difference between mere mortals and memory champions is more method than mental capacity.

An auditorium is filled with 600 people. As they file out, they each tell you their name. An hour later, you are asked to recall them all.

Can you do it? Most of us would balk at the idea. But in truth we're probably all up to the task. It just needs a little technique (something your presenter has) and dedication (something your presenter lacks in this regard).

First, learn a trick from the "mnemonists" who routinely memorise strings of thousands of digits, entire epic poems, or hundreds of unrelated words.

When Eleanor Maguire from University College London and her colleagues studied eight front-runners in the annual World Memory Championships they did not find any evidence that these people have particularly high IQs or differently configured brains.

But, while memorising, these people did show activity in three brain regions that become active during movements and navigation tasks but are not normally active during simple memory tests.

According to the Journal of *Nature Neuroscience*, vol 6, p 90, this may be connected to the fact that seven of them used a strategy in which they place items to be remembered along a visualised route.

To remember the sequence of an entire pack of randomly shuffled playing cards for example, the champions assign each card an

identity, perhaps an object or person, and as they flick through the cards they can make up a story based on a sequence of interactions between these characters and objects at sites along a well-trodden route.

Actors use a related technique: they attach emotional meaning to what they say. We always remember highly emotional moments better than less emotionally-loaded ones.

Professional actors also seem to link words with movement, remembering action-accompanied lines significantly better than those delivered while static, even months after a show has closed. Opera singers do the same, linking the lyrics to the musical score.

Helga Noice, a psychologist from Elmhurst College in Illinois, and Tony Noice, an actor, who together discovered this effect, found that non-actors can benefit by adopting a similar technique.

Students who paired their words with previously learned actions could reproduce 38 per cent of them after just 5 minutes, whereas rote learners only managed 14 per cent.

Helga and Tony Noice believe that having two mental representations gives you a better shot at remembering what you are supposed to say.

Training [7] Your Brain

Strategy is important in everyday life too, says Professor Barry Gordon from Johns Hopkins University in Baltimore, Maryland. Simple things like always putting your car keys in the same place, writing things down to get them off your mind, or just deciding to pay attention, can make a big difference to how much information you retain.

And if names are your downfall, try making some mental associations. Just remember to keep the derogatory ones to yourself.

SLIDE 4 Ways To Help Remember Names

Overlay

Ask him or her for his or her name. Rather than blurting out, “What’s your name?”, I may simply say, “I don’t believe that I have the pleasure of your name.”

If it’s a telephone conversation, and the person has not identified themselves, I ask, “To whom am I speaking?” or, to use the vernacular and if you’re comfortable ending a sentence with a preposition, ask, “Who am I speaking to?”

The manager of a large office noticed their

new man one day and told him to come into his office.

“What’s your name?” was the first thing the manager asked the new guy.

“John,” the new fellow replied.

The manager scowled. “Look ... I don’t know what kind of a mamby-pamby place you worked at before, but I don’t call anyone by their first name. It breeds familiarity, and that leads to a breakdown in authority. I refer to my employees by their last name only ... Smith, Jones, Baker - whatever ... and that’s all. And I am to be referred to only as Mr. Robertson. Now that we’ve got that straight, what’s your last name?”

The new chap sighed, “Darling. My name is John Darling.”

“Okay John. Now, what I really called you in here to tell you about is ...”)

Overlay

Say the name out loud, and often: Names exist to be said out loud. By actively using a person’s name you are not only practicing it, you are also getting your mind used to the idea that you are socially interested in the person - and that will boost your memory for them yet

further.

In conjunction with writing down the details, I used this technique during the time of my studies at the Avondale seminary where I worked part-time for a year at a college and factory security gate checking vehicles in and out during the hours of darkness.

Over the course of the year I was able to memorise the details of 2,900 different vehicles – primarily the rego number but also the colour, the type of vehicle and the name of the driver.

Overlay

Spell it out: It's easy to mishear a name, and many names are similar, such as Katie, Katherine, Kate, Cat, Caitlin, Kathy, Karen. Ask a person how their name is spelt. This gives you time to think about the name, and helps to remember it.

If a name is unfamiliar, ask what it means: Names from parts of the world with which you're not familiar can be confusing. It can really help to add some more colour to the sound, by asking what it means.

A Chinese bun-maker in Tianjin City near Beijing has changed his company's name from *Goubuli* which means 'a dog would ignore it'

to the English expression, ‘Go believe’.

Overlay

Pay attention to the face: The first and primary reason we ever forget anything is that we fail to pay attention.

The trick here is to encourage your eyes to do a Z-shaped movement across a person’s face, encompassing both eyes, their nose and the two corners of their mouth.

Look for a distinctive feature, and pay attention to that- it will be a landmark by which you’ll come to recognise the person the next time round.

Stick to looking at the face as your memory jogger.

I recall over-hearing a conversation between two ladies who met immediately in front of where I was sitting in an airport transit lounge.

One said to the other, “Why, if it isn’t Maggie Browning. I haven’t seen you for … well, it has been years and years. I never would have recognised you if it wasn’t for that old dress you’re still wearing.”

Overlay

Use visual associations: Recognising someone's name or face is most of the job of remembering who they are, but of course you have to link the two in your mind. If Egbert has an amusing nose, say to yourself 'Egbert, the guy with the amusing nose'. Just don't say it out loud.

Overlay

Link the person to a celebrity with the same name: Try associating people who have such names to the celebrities who share them. Linking a person called Charlie with Charlie Chaplin will automatically make their name more distinctive and memorable.

Overlay

Learn more about the person: When you first meet a person, you know nothing about them, so it can be difficult to find enough ideas to connect with their name and face to make those associations stick. So learn more about the person.

By learning these extra details, the person will begin to occupy more space in your mind.

Overlay

Link the name to an amusing image: Another powerful method for linking names to people is to treat them as little sentences.

If someone is called Terrence Mackie, maybe imagine him eating a Big Mac while walking a Terrier. If someone is called Ted Hood, imagine him wearing a hood with a teddy-bear on it.

Overlay

Test yourself: Once you have learned a name, the best way to strengthen that memory is to make sure you actively recall it by reviewing and remembering it.

So think back to the person you were introduced to ten minutes ago, and actively recall their name.

Overlay

Write it down as soon as appropriate. Whenever I learn the names of people in our street I add the details to a text file on my ’phone labelled ‘neighbours’ so I can refer back later if, or more likely when, I forget.

If it’s good enough for the likes of Einstein,

Isaac Newton, and Thomas Jefferson, keeping a diary might be a good idea for all of us. Getting into the habit of constantly taking notes or writing down things or ideas effectively create an extension to your mind.

Overlay

Don’t be afraid of getting a name wrong: It doesn’t matter if you get a name wrong, people are flattered that you take an interest, so take risks, practice actively recalling.

More than once, rather than asking directly, I have resorted to simply stating the dilemma by saying, “I seem to have forgotten your name.”

Slide 5

C. Focused Attention

You can be smart, well-read, creative and knowledgeable, but none of it is any use if your mind isn’t on the job.

Paying attention is a complex mental process, shifting between zooming in on detail and stepping back to survey the big picture.

So unfortunately there is no single remedy to enhance your concentration. But there are a

few ways to improve it.

Overlay

The first is to raise your arousal levels.

The brain's alertness and attention state is controlled by the neurotransmitters dopamine and noradrenalin.

Dopamine encourages a persistent, goal-centred state of mind whereas noradrenalin produces an outward-looking, vigilant state.

So not surprisingly, anything that raises dopamine levels can boost your powers of concentration.

Unfortunately many will do this is with drugs such as caffeine or amphetamines and the ADHD drug methylphenidate, better known as Ritalin.

But if you prefer the drug-free approach, the best strategy is to sleep well, eat foods packed with slow-release sugars, and take lots of exercise.

It also helps if you are trying to focus on something that you find interesting.

Overlay

The second step is to cut down on distractions. Workplace studies have found that it takes up to 15 minutes to regain a deep state of concentration after a distraction such as a phone call. Just a few such interruptions and half the day is wasted.

Music can help as long as you listen to something familiar and soothing that serves primarily to drown out background noise. Psychologists also recommend that you avoid working near potential diversions, such as the fridge.

Overlay

Feedback Question: Why do you think working near the fridge might be a distraction? (Food, noise, other users, etc.)

There are mental drills to deal with distractions. College counsellors routinely teach students to recognise when their thoughts are wandering, and catch themselves by saying “Stop! Be here now!”

It sounds corny but it can develop into a valuable habit. As any Eastern Meditator will tell you, concentration is as much a skill to be lovingly cultivated as it is a physio-chemical state of the brain.

Slide 6

D. Brain Exercises

On top of a healthy diet and regular exercise, there are ways to give your brain its own workout routine.

Experts recommend sticking to brain training that involves real-world activities.

Exercises to strengthen brain function should offer novelty and challenge.

Giving your brain new experiences that combine physical senses: vision, smell, touch, taste, and hearing – with emotional “sense”, stimulates more connections between different brain areas, causes nerve cells to produce natural brain nutrients that dramatically help memory and makes surrounding cells stronger and more resistant to the effects of aging.

Overlay

a. Test your recall.

Make a list — of grocery items, things to do, or anything else that comes to mind — and memorize it. An hour or so later, see how many items you can recall.

For the greatest mental stimulation, make items on the list as challenging as possible.

Overlay

b. Do math in your head.

Figure out problems without the aid of pencil, paper, or computer; you can make this more difficult and also athletic by going for a walk at the same time.

Overlay

c. Learn a foreign language.

The listening and hearing involved stimulates the brain. What's more, a rich vocabulary has been linked to a reduced risk for cognitive decline.

Overlay

d. Create word pictures.

Visualize the spelling of a word in your head, then try and think of any other words that begin (or end) with the same two letters.

Overlay

e. Refine your hand-eye abilities.

Take up a new hobby that involves fine-motor skills, such as knitting, drawing, painting, assembling a puzzle, etc.

SLIDE 7 (Uses overlays for each point)

f. Refine your handedness.

i. Brush teeth with your non-dominant hand.

Open the tube and apply toothpaste with your non-dominant hand, then brush with that hand also.

ii. Shower with your eyes closed.

Try using just your tactile senses (although, use common sense to avoid burn or injury). Locate the water taps solely by feel, and adjust the temperature. Then wash, shave, and so on with your eyes shut.

iii. Switch around your morning activities.

Get dressed after breakfast, walk the dog on a new route, or change your TV or news station. Even watching a kids' program like

Sesame Street, for example, may arouse the brain to notice how much of what we take for granted is explored in-depth by children.

iv. Turn familiar objects upside down, literally.

Turn your desk clock, or an illustrated calendar or pictures of your family, upside down.

v. Switch seats at the table.

Around the family table, switch seats to change whose position you occupy, who you relate to, your view of the room, and even how you reach for the tomato sauce or salt and pepper.

vii. Make a game of it.

Dr John E. Morley, director of St. Louis University's Division of Geriatric Medicine and author of the book, *'The Science of Staying Young'* says, "Simple games like Sudoku and word games are good, as well as comic strips where you find things that are different from one picture to the next".

Try chess, scrabble, checkers or solitaire.

viii. Draw a map from memory.

After returning home from visiting a new place, try to draw a map of the area; repeat this exercise each time you visit a new location.

ix. Challenge your taste buds.

When eating, try to identify individual ingredients in your meal, including subtle herbs and spices.

Or take a cooking class and learn a new way to cook. Cooking uses a number of senses: smell, touch, sight, and taste, which all use different parts of the brain.

x. Engage your senses.

Try activities that involve as many of your senses as possible, such as gardening or an athletic exercise that utilizes the mind and body, like golf or a team ball sport.

Slide 8

Unit 2 Activity 1 - Workshop (20 Minutes)

Refer to the activities in the workbook.

Slide 9

Unit 3 Training Your Brain Part 2 (15

Minutes)

Overlay x 2 (Controlling thinking is easier than you think)

A. Positive Thought Control

There is a simple method of thought control you can learn that seems to boost brain power called ‘bio-neurofeedback’ that is gaining scientific credibility.

Bio-neurofeedback grew out of the now questionable biofeedback therapy, popular in the 1960s.

It works by showing people a real-time measure of some seemingly uncontrollable aspect of their physiology – heart rate, say – and encouraging them to try and change it.

A couple of years ago I had some chemically-induced heart-stress tests done at the Gold Coast University Hospital in a room filled to capacity with medical students.

I was discussing with the professor the benefits of bio-neurofeedback and suggested that one could easily elevate or lower blood pressure at will simply by using a mental technique.

In front of these students he scoffed at the

idea and challenged me to a demonstration.

As I was already coupled to extensive cardiac monitoring equipment this was an easy task, so I asked if he would like it lowered or elevated first. He suggested lowering it, as that would be the most difficult.

My blood pressure at this time was already quite low but by mental relaxation I was able to lower it even further until I could feel that I was getting a little dizzy.

As he stared in unbelief at the monitors and the students suppressed their sniggering, I suggested he then watch carefully as I thought sufficient stressful thoughts to elevate my blood pressure significantly.

This I did to his astonishment, and as I relaxed my mind and the blood pressure returned to normal, this professor of cardiology admitted to all present that this ‘bio-neurofeedback’ certainly needs more investigation.

Recently, this technique has been applied to the brain – specifically to brain wave activity measured by an electroencephalogram, or EEG.

The first attempts were aimed at boosting the size of the alpha wave, which crescendos when we are calm and focused. In one

experiment, researchers linked the speed of a car in a computer game to the size of the alpha wave. They then asked subjects to make the car go faster using only their minds. Many managed to do so, and seemed to become more alert and focused as a result.

This early success encouraged others, and forms of neurofeedback have become a popular alternative therapy for ADHD. There is now good scientific evidence that it works, as well as some success in treating epilepsy, depression, tinnitus, anxiety, stroke and brain injuries.

For over a decade now, some experimenters have used brain scanners in place of EEGs. Scanners can allow people to see and control activity of specific parts of the brain.

According to the ‘New Scientist’ magazine of 1st. May 2004, p9, a team at Stanford University in California showed that people could learn to control pain by watching the activity of their pain centres.

But what about outside the clinic? Will bio-neurofeedback ever allow ordinary people to boost their brain function?

John Gruzelier of the Imperial College of London has shown that it can improve medical

students' memory and make them feel calmer before exams. He has also shown that it can improve musicians' and dancers' technique, and is testing it out on opera singers and surgeons.

Neils Birbaumer from the University of Tübingen in Germany wants to see whether neurofeedback can help psychopathic criminals control their impulsiveness.

And there are hints that the method could boost creativity, enhance orgasms, give shy people more confidence, lift low moods, alter the balance between left and right brain activity, and alter personality traits. All this by the power of thought.

Overlay x 2 (To teach is to learn twice – Joseph Joubert)

B. Talking Like a Teacher

You can utilise the skills you already have more effectively by acting like you're teaching. Rather than just recalling the steps needing to complete the task at hand, act as though you are teaching yourself or someone else how to do it. This will help you recall the necessary information better and avoid making stupid mistakes.

Overlay

C. Storytelling

Storytelling can be a good way to exercise your brain. First of all, it makes things easier to remember because it puts what you want to remember in a more compelling framework.

It gives you a chance to focus on important details and associate emotion with what you're trying to remember.

Even if you're not telling yourself a story to help retain the information, you'll still improve your memory just by telling stories in general.

Storytelling and repetitive story-listening has been used as a treatment for slowing the progression of Alzheimer's disease.

If storytelling can help an Alzheimer's patient improve his or her memory, chances are it can help you and I too.

Overlay x 2 (Use music to tune up your thinking)

D. The Sonata Effect

Music may tune up your thinking, but you

can’t just crank up the volume and expect to become a genius.

A decade ago Frances Rauscher, a psychologist now at the University of Wisconsin at Oshkosh, and her colleagues made waves with the discovery that listening to Mozart improved people’s mathematical and spatial reasoning.

Even rats ran mazes faster and more accurately after hearing Mozart than after hearing white noise or music by the minimalist composer Philip Glass.

Last year, Rauscher reported that, for rats at least, a Mozart piano sonata seems to stimulate activity in three genes involved in nerve-cell signalling in the brain.

This sounds like the most harmonious way to tune up your mental faculties.

But before you grab the CDs, hear this note of caution. Not everyone who has looked for the Sonata Effect has found it that way.

What’s more, even its proponents tend to think that music boosts brain power simply because it makes listeners feel better – relaxed and stimulated at the same time – and that a comparable stimulus might do just as well. In fact, one study found that listening to a story gave a similar performance boost.

There is, however, one way in which music really does make you smarter, though unfortunately it requires a bit more effort than just selecting something mellow on your portable device.

Music lessons are the key. Six-year-old children who were given music lessons, as opposed to drama lessons or no extra instruction, got a 2 to 3-point boost in IQ scores compared with the others.

Similarly, Rauscher found that after two years of music lessons, pre-school children scored better on spatial reasoning tests than those who took computer lessons.

Maybe music lessons exercise a range of mental skills, with their requirement for delicate and precise finger movements, and listening for pitch and rhythm, all combined with an emotional dimension.

Nobody knows for sure. Neither do they know whether adults can get the same mental boost as young children. But, surely, it can't hurt to try.

Slide 10

Unit 4 Activity 2 Active Listening (10 Minutes)

Play 60 seconds of Pachebel's Canon (String Quartet or similar)

• What did you hear? What instruments in particular produced the sound you heard? Did any of the instruments stand out to you?

• How did the music make you feel? Why?

• Does this music remind you of anything in your life?

• What did you think about as you listened to this music?

• What word best describes this music? Why did you choose that word?

• What can you say about the repetition in the music?

• Do any stories come to mind from your listening? Who would like to share their story?

Slide 11

Unit 5 Maintaining Your Brain Part 1 (15 Minutes)

Overlay

A. Don't Bounce Your Brain

Make “Safety First” a Priority. Brain trauma is a silent epidemic. The major causes of adult head trauma are motor vehicle accidents, on-the-job accidents, falls, assaults and sports injuries.

Taking common-sense safety precautions including wearing seatbelts and sports safety helmets as appropriate will minimise your risk. Remember that if you have an existing brain injury you are much more susceptible to acquiring another one.

Overlay

B. Food for Thought (Refer to handout)

You are what you eat, and that includes your brain. So what is the ultimate mastermind diet?

Your brain is the greediest organ in your body, with some quite specific dietary requirements. So it is hardly surprising that what you eat can affect how you think.

If you believe the dietary supplement industry, you could become the next Einstein just by popping the right combination of pills. Look closer, however, and it isn’t that simple.

The savvy consumer should take talk of

brain-boosting diets and supplements with a pinch of salt-free low-sodium salt. But if it is possible to eat your way to genius, it must surely be worth a try.

First, go to the top of the class by eating breakfast. The brain is best fuelled by a steady supply of glucose, and many studies have shown that skipping breakfast reduces people's performance at school and at work.

But it isn't simply a matter of getting some calories down. According to published research, kids breakfasting on fizzy drinks and sugary snacks performed at the level of an average 70-year-old in tests of memory and attention.

Beans on toast is a far better combination, as Barbara Stewart from the University of Ulster, UK, discovered.

Toast alone boosted children's scores on a variety of cognitive tests, but when the tests got tougher, the breakfast with the high-protein beans worked best. Beans are also a good source of fibre, and other research has shown a link between a high-fibre diet and improved cognition.

If you can't stomach beans before midday, wholemeal cereal or toast with Marmite makes a great alternative. The yeast extract is packed

with B vitamins, whose brain-boosting powers have been demonstrated in many studies.

If you eat eggs as part of your diet, then a smart choice for lunch is omelette and salad. Eggs are rich in choline, which your body uses to produce the neurotransmitter acetylcholine.

Researchers at Boston University found that when healthy young adults were given the drug scopolamine, which blocks acetylcholine receptors in the brain, it significantly reduced their ability to remember word pairs. Low levels of acetylcholine are also associated with Alzheimer's disease, and some studies suggest that boosting dietary intake of choline may slow age-related memory loss.

Other sources of choline are salmon, chickpeas, split peas, navy beans, pasta, rice, spinach, beets, wheat products and peanuts.

A salad packed full of antioxidants, including beta-carotene and vitamins C and E, should also help keep an ageing brain in tip-top condition by helping to mop up damaging free radicals.

Dwight Tapp and colleagues from the University of California at Irvine found that a diet high in antioxidants improved the cognitive skills of 39 ageing beagle dogs – proving that you can teach an old dog new

tricks.

Round off lunch with a yogurt dessert, and you should be alert and ready to face the stresses of the afternoon. That's because yogurt contains the amino acid *tyrosine*, needed for the production of the neurotransmitters dopamine and noradrenalin, among others.

Studies by the US military indicate that tyrosine becomes depleted when we are under stress and that supplementing your intake can improve alertness and memory.

Other tyrosine-containing foods are peanuts, almonds, avocados, bananas, lima beans, pumpkin seeds and sesame seeds.

Don't forget to include a snack mid-afternoon, to maintain your glucose levels. Just make sure you avoid junk food, and especially highly processed goodies such as cakes, pastries and biscuits, which contain trans-fatty acids.

These not only pile on the kilos, but they are implicated in a host of serious mental disorders, from dyslexia and ADHD (attention deficit hyperactivity disorder) to autism.

Hard evidence for this is still thin on the ground, but researchers at the annual Society for Neuroscience meeting in San Diego,

California, reported that rats and mice raised on the rodent equivalent of junk food struggled to find their way around a maze, and took longer to remember solutions to problems they had already solved.

It seems that some of the damage may be mediated through triglyceride, a cholesterol-like substance found at high levels in rodents fed on trans-fats.

When the researchers gave these rats a drug to bring triglyceride levels down again, the animals' performance on the memory tasks improved.

Brains are around 60 per cent fat, so if trans-fats clog up the system, what should you eat to keep it well oiled? Evidence is mounting in favour of omega-3 fatty acids, in particular docosahexaenoic acid or DHA. In other words, your granny was right: fish is brain food.

Other sources of omega-3 fatty acids are nuts and seeds (such as flaxseed, chia seeds, and walnuts) and also plant oils (such as flaxseed oil, soybean oil and canola oil although canola oil and margarine containing canola oil have been linked to Macular degeneration.

Not only will omega-3 fatty acids feed and lubricate a developing brain, they also seems

to help stave off dementia. Studies published recently reveal that older mice from a strain genetically altered to develop Alzheimer's had 70 per cent less of the amyloid plaques associated with the disease when fed on a high-DHA diet.

Finally, you could do worse than finish off your evening meal with strawberries and blueberries. Rats fed on these fruits have shown improved coordination, concentration and short-term memory. And even if they don't work such wonders in people, they still taste fantastic. So what have you got to lose?

Avoid excess food. Reducing calories can help slow age-related brain changes. As a general rule, good nutrition for the body is good nutrition for the brain.

Overlay x 2 (Never underestimate the power of a good night's rest.)

C. Sleep on it

Skimping on sleep does awful things to your brain. Planning, problem-solving, learning, concentration, working memory and alertness all take a hit. IQ scores tumble. According to Sean Drummond from the University of California in San Diego, "If you have been awake for 21 hours straight, your

abilities are equivalent to someone who is legally drunk." And you don't need to stay awake all night to suffer the effects: two or three late nights and early mornings in a row have the same effect. Of course you can't replace three night's lost sleep by sleeping for three days, no matter how appealing that might be.

The good news is that the effects on the brain of sleep deprivation are reversible. If you let someone who isn't sleep-deprived have an extra hour or two of shut-eye, they perform much better than normal on tasks requiring sustained attention, such taking an exam.

And being able to concentrate harder has knock-on benefits for overall mental performance. "Attention is the base of a mental pyramid," says Drummond. "If you boost that, you can't help boosting everything above it."

These are not the only benefits of a decent night's sleep. Sleep is when your brain processes new memories, practises and hones new skills – and even solves problems. Assume you're trying to master a new skill, say, learning a foreign language.

Instead of grinding away into the small hours, you would be better off studying for a couple of hours, then going to bed.

While you are asleep your brain will reactivate the circuits it was using as you learned the skill, rehearse them, and then shunt the new memories into long-term storage. When you wake up you will be better skilled.

The same applies to other skills such as playing the piano, driving a car and, according to some researchers, memorising facts and figures.

Even taking a nap after training can help, says Carlyle Smith of Trent University in Peterborough, Ontario.

There is also some evidence that sleep can help produce moments of problem-solving insight.

The famous story about the Russian chemist Dmitri Mendeleev suddenly "getting" the periodic table in a dream after a day spent struggling with the problem, is probably true. It seems that sleep somehow allows the brain to juggle new memories to produce flashes of creative insight.

So if you want to have a eureka moment, stop racking your brains and put your head down.

If you go to *www.lrhartley.com/sleep*, there are some useful resources there to help you with sleep. For example in answer to a seminar

question, you will find this snippet: *“Magnesium deficiency can cause insomnia. Lack of potassium can lead to difficulty staying asleep throughout the night. Vitamin D deficiency has been linked to excessive daytime sleepiness”.*

Overlay

D. Brain and Brawn

Exercise daily if possible by setting exercise priorities and sticking to them. Regular exercise reduces depression and reduces cardiovascular risk factors – even a simple walk lets you think freely. Exercise in the evening after a stressful day but not immediately prior to going to bed.

Some exercise states may produce euphoria, but even 12-minute bouts of exercise (to 85% maximum heart rate) release serotonin, dopamine, and noradrenaline that can act like antidepressant medications.

A dream come true for those who dislike studying is that simply walking casually for half-an-hour three or four times a week can improve abilities such as learning, concentration and abstract reasoning by 15 per cent.

The effects are particularly noticeable in older people. Senior citizens who walk regularly perform better on memory tests than their sedentary peers. What's more, over several years their scores on a variety of cognitive tests show far less decline than those of non-walkers. Every extra kilometre a week has measurable benefits.

It's not only us oldies who benefit, however. Angela Balding from the University of Exeter in the United Kingdom has found that schoolchildren who exercise three or four times a week get higher than average exam grades at age 10 or 11.

The effect is strongest in boys, and while Balding admits that the link may not be causal, she suggests that aerobic exercise may boost mental powers by getting extra oxygen to the energy-guzzling brain.

Another reason why your brain loves physical exercise is that it promotes the growth of new brain cells. Until recently, received wisdom had it that we are born with a full complement of neurons and produce no new ones during our lifetime.

Fred Gage from the Salk Institute in La Jolla, California, busted that myth in the year 2000 when he showed that even adults can grow new brain cells. He also found that

exercise is one of the best ways to achieve this.

In mice, for example, the brain-building effects of exercise are strongest in the hippocampus, the part of the brain that is involved with learning and memory.

This also happens to be the brain region that is damaged by elevated levels of the stress hormone cortisol. So if you are feeling frazzled, do your brain a favour and go for a walk.

Even more gentle exercise can do wonders for your brain. For example, capitalise on exercise opportunities like using stairs instead of elevators.

Last year, researchers at the University of California, Los Angeles, reported results from a pilot study in which they considered the mood-altering ability of bending and stretching exercises and concluded that the best way to get a mental lift is to stretch backwards.

And the effect works both ways. Just as physical exercise can boost the brain, mental exercise can boost the body.

In 2001, researchers at the Cleveland Clinic Foundation in Ohio asked some apparently very lazy volunteers to spend just 15 minutes a day thinking about exercising their biceps.

After 12 weeks, their arms were 13 per cent stronger.

Slide 12 (advertise Aerobics classes)

Unit 6 Activity 3 - Aerobic Input (5 Minutes)

All cells in your body need oxygen, which they use to produce energy. This includes neurons or nerve cells. Despite comprising only 2 percent of the body's weight, your brain uses up more than 20 percent of your daily energy intake so it depends on oxygen, which is delivered through the blood.

Cells produce energy through a process called cellular respiration. Cells need oxygen to convert food (sugar, amino acids and fatty acids), into the brain's currency, which is Adenosine triphosphate or ATP. ATP is then used to power all the cellular mechanisms that keep the cell (and you) alive.

The best way to get oxygen into our brain is to pull down our diaphragm in order to take in a deep breath.

[Stand, demonstrate, practice a few times, and then sit down again]

Slide 13 (water)

Unit 7 Maintaining Your Brain Part 2 (15 Minutes)

A. Brain Washers

The brain is one of the most important organs in your body to keep fueled. It is approximately 85 percent water and brain function depends on having abundant access to water.

Water gives the brain the electrical energy for all brain functions, including thought and memory processes.

Drinking water helps you in a number of ways, including improving concentration and cognition, helping to balance your mood and emotions and maintaining memory function.

Dehydration affects sodium and electrolyte levels in the body that has been linked to cognitive changes.

Often the best cure for a headache may simply be a glass or two of water.

Slide 14 (no overlays)

B. Brain Busters

Manage Anxiety, Stress & Depression. Anxiety increases heart rate and blood pressure, that can lead to stroke. Acute stress such as the “flight or fight reaction” is normal and short-lived.

There is increasing evidence that prolonged stress actually damages the brain. The hormones linked to stress can actually kill nerve cells in animals and are thought to do the same in humans.

The steps you take to reduce stress are likely to preserve nerve cells and help maintain mental abilities that are crucial, especially if you have a brain injury.

One of the toughest stresses is depression. It affects memory, slows brain metabolism and can lead to some degree of brain damage.

Some strategies for coping are:

Relaxing by actively tensing then relaxing individual muscle groups. This is called Progressive Relaxation and a handout can be found at the website listed on the screen. This requires a password which is in lowercase and it is *‘relax05’*.

Re-directing internal stress into external action through exercise

Seeking support either professionally or

from friends or clergy etc.

Ensuring a balance of work and recreation

And letting go of things outside your control.

Slide 15

C. Brain Bloaters

Check Your Blood Pressure, Diabetes and Cholesterol.

If you have diabetes and high cholesterol, you have 4 times the risk of stroke. If you have diabetes you have twice the risk of stroke. Experiencing many mini-strokes can lead to dementia in later life.

Slide 16

D. Brain Cloggers

Overlay

GIGO is a computer science acronym that implies that bad input will result in bad output. The term means stands for ‘garbage in, garbage out’ and was coined by George Fuechsel, an IBM programmer and instructor.

Because computers operate using strict logic, invalid input may produce unrecognisable output, or “garbage”. GIGO is a universal computer science concept, but it also applies to what we put into our bodies and the outcomes that result from that input.

Overlay

Alcohol and other drugs affect the central nervous system and in varying degrees, impair a person’s ability to think clearly and control emotions and behaviour.

These abilities would normally only become impaired through an acquired brain injury and therefore when people use drugs and alcohol they are likely to experience serious problems with alertness, memory, problem-solving and controlling their behaviour and emotions.

By way of introducing our next brain clogger, let me share the shorter version of a verse that I heard as a child:

A pig and a drunkard were seen in a gutter
While a passerby was heard to mutter,
“You can tell a man who boozes
by the company he chooses!”
So the pig got up and quietly walked away.

Overlay

Another brain clogger is your associations. According to the business philosopher Jim Rohn, who coined the phrase, “You are the company you keep,” each and every one of us is the average of the 5 people we spend the most time with.

It is no coincidence that high achieving people tend to ‘flock together’.

Obviously, peer groups tend to have similar interests and like to discuss topics freely and without objections.

By associating yourself with intelligent people you will indirectly develop your own.

So, as cold as it might sound, you might want to think again about the friends you spend most of your time with.

Slide 17

Unit 8 Reclaiming Your Brain (15 Minutes)

If our lifestyle practices have been less that helpful to our brain it is possible for us to reclaim control of our brain and take charge of our life.

Overlay

A. Build Your Brain's Cognitive Reserve

Your brain's cognitive reserve, which diminishes through the years, is the brain's ability to withstand neurological damage due to aging and other factors without showing visible signs of slowing or memory loss.

Diminished cognitive reserve can make it more difficult to perform mental tasks. But, just as weight workouts add lean muscle to your body and help you retain more muscle and suppleness in your later years, researchers now insist that following a brain-healthy lifestyle and performing regular, targeted brain exercises can also increase your brain's cognitive reserve.

The bigger your brain's cognitive reserve, the more backup brainpower you possess. This reserve can protect your memory and perhaps even delay or prevent the visible symptoms of age-related neurological changes, including the damage caused by Alzheimer's disease.

In a six-month study, Dr Robert Bender, the medical director of the *Johnny Orr Memory Center and Healthy Aging Institute* in Des Moines, Iowa and other researchers found that Alzheimer's patients recovered a significant amount of brain activity after undergoing a

program involving drug therapy, physical exercise, low-fat diet instruction, cognitive training, socialization, and meditation.

Bender says, “We now know the brain is plastic, or resilient enough that we can actually make ourselves smarter.

Even in cases of Alzheimer’s disease, some normal brain cells remain, and research suggests they can be stimulated to create new connections.”

Overlay x 2 (Seek some sisterly guidance)

B. The “Nun Study”

If you don’t want senility to interfere with your old age, perhaps you should seek some sisterly guidance.

The convent of the School Sisters of Notre Dame on Good Counsel Hill in Mankato, Minnesota, might seem an unusual place for a pioneering brain-science experiment.

But a ongoing study of its inhabitants aged between 75 and 107 years old is revealing more about keeping the brain alive and healthy than perhaps any other to date.

The “Nun study” is a unique collaboration between 678 Catholic sisters recruited in 1991 and Alzheimer’s expert David Snowdon of the Sanders-Brown Center on Aging and the University of Kentucky in Lexington.

The sisters’ miraculous longevity – the group boasts seven centenarians and many others well on their way – is surely in no small part attributable to their impeccable lifestyle.

They do not drink or smoke, they live quietly and communally, they are spiritual and calm and they eat healthily and in moderation. Nevertheless, small differences between individual nuns could reveal the key to a healthy mind in later life.

Some of the nuns have suffered from Alzheimer’s disease, but many have avoided any kind of dementia or senility.

They include Sister Matthia, who was mentally fit and active from her birth in 1894 to the day she died peacefully in her sleep, aged 104. She was happy and productive, knitting mittens for the poor every day until the end of her life.

A post-mortem of Sister Matthia’s brain revealed no signs of excessive ageing. But in some other, remarkable cases, Snowdon has found sisters who showed no outwards signs

of senility in life, yet had brains that looked as if they were ravaged by dementia.

How did Sister Matthia and the others cheat time? Snowdon's study, which includes an annual barrage of mental agility tests and detailed medical exams, has found several common denominators.

One is the right amount of vitamin B9 (folate or folic acid). Vitamin B9 is found in dark leafy greens, asparagus, citrus fruits, beans, peas, and lentils, avocado, okra and Brussels sprouts.

Verbal ability early in life is another, as are positive emotions early in life, which were revealed by Snowdon's analysis of the personal autobiographical essays that each woman wrote in her 20s as she took her vows. Activities, crosswords, knitting and exercising also helped to prevent senility, showing that the old adage "use it or lose it" is pertinent.

And spirituality and the positive attitude that comes from it can't be overlooked. But individual differences also matter.

To avoid dementia, your general health may be vital: metabolic problems, small strokes and head injuries seem to be common triggers of Alzheimer's dementia.

Obviously, you don't have to become a nun

to stay mentally agile. We can all aspire to these kinds of improvements.

As one of the sisters said, “If you think no evil, do no evil and hear no evil, you will never write a best-selling novel.”

Overlay

C. Spirituality

Spiritual practices have been proven to have many beneficial effects as far as mental health is concerned. The exact neural basis of these effects is now coming to light as different diagnostic imaging techniques have demonstrated the neural basis and benefits of meditative and contemplative practices.

Neuro-imaging studies have shown that spiritual exercises result in an activation of several areas of the brain, primarily the prefrontal cortex. The neuro-chemical change as a result of these practices involves all the major neurotransmitter systems and these changes contribute significantly to a reduction in anxiety and depression.

Neuroscientist Dr. Andrew Newberg believes everyone can benefit from some type of meditative or contemplative practice.

He says that if your practice isn't working for you, you should try something else. As a general rule, he says, these practices lower depression, anxiety, and stress.

He adds that at Thomas Jefferson University in Philadelphia, where he is director of research at the *Myrna Brind Center of Integrative Medicine*, researchers have found that spiritual practices can improve memory and concentration.

However, Newberg tells us that in contrast, when practitioners speak in tongues or function as a medium, activity decreases in those all-important frontal lobes and increases in their thalamus, the tiny brain structure that regulates the flow of incoming sensory information to many parts of the brain.

I would suggest from his study that speaking in tongues or participating in a séance is not a legitimate spiritual practice for reclaiming our brain.

Overlay

D. Summary.

So let's summarise what we have learned today…

The brain is always changing, sometimes for the better, and sometimes for the worse. It is possible to train our brain for the better using mind stretching exercises.

It is also possible to maintain our brain in the best possible health through diet, water consumption, rest, temperance and physical and spiritual exercise.

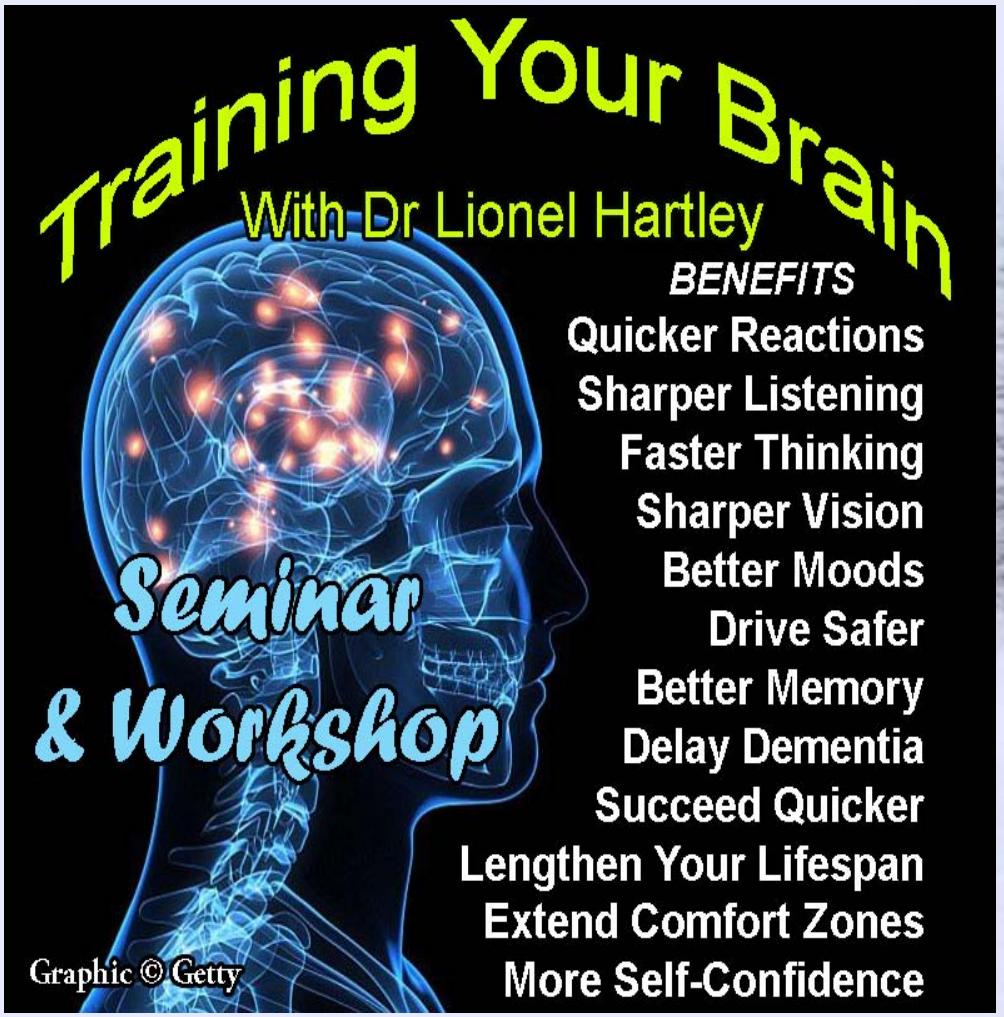
If our lifestyle practices have been less that helpful to our brain it is possible for us to reclaim control of our brain and take charge of our life.

Slide 18

Question and Answer Session

Training Your Brain

With Dr Lionel Hartley



Seminar & Workshop

BENEFITS

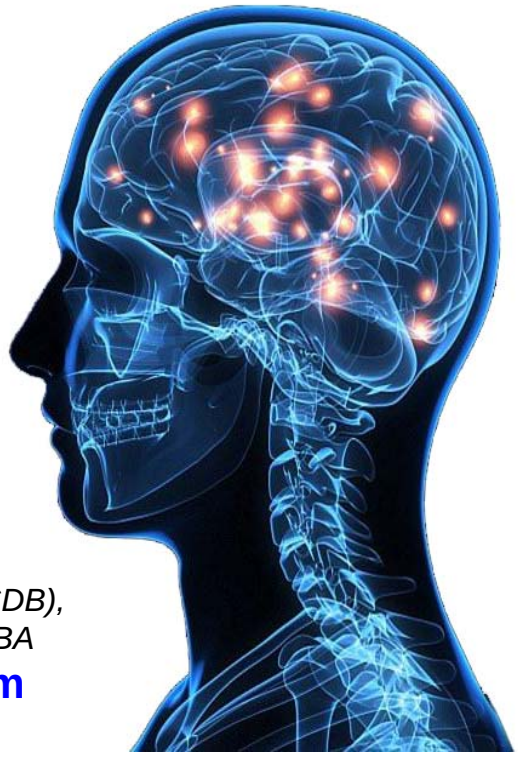
- Quicker Reactions
- Sharper Listening
- Faster Thinking
- Sharper Vision
- Better Moods
- Drive Safer
- Better Memory
- Delay Dementia
- Succeed Quicker
- Lengthen Your Lifespan
- Extend Comfort Zones
- More Self-Confidence

Welcome
Aloha mai
Huan yin
Benvenuto
Bienvenidos
Yin dee
Dobro pozhalovat'
Bem-vindo
Van harte welkom
Bienvenue
Mabuhay
Willkommen
Irashaimasu
Lasa-kusa
Selamat Datang

Who is your seminar author?

Lionel Hartley, author, radio broadcaster, public speaker and retired sociologist. He was a Lifestyle Educator and Family-life Counsellor for over three decades. He is a grandparent, married to Rosemary with three grown children.

We welcome your participation in today's seminar.



Lionel D C Hartley, DipAdmin(NZIM), HonDip (DramArt), DipTheol (SDB), RGN (Psy, PsyPaed, Admin, Nutn), DipBusLaw, DipEcon, DipAccy, BA (Lit), MA, PhD [etc.] **www.hartleyonline.blogspot.com**

Unit 1 Training Your Brain Part 1

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A. Boosting Working Memory

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Put your mind to work in the right way and it could repay you with an impressive bonus.

Unit 1 Training Your Brain Part 1

A. Boosting Working Memory

Put your mind to work in the right way and it could repay you with an impressive bonus.

B. Your Recollection Kit

Unit 1 Training Your Brain Part 1

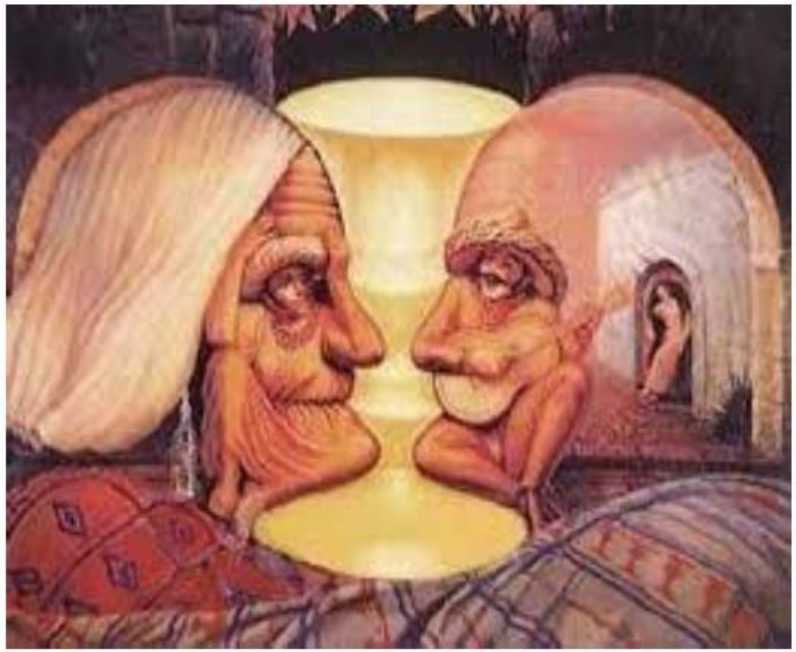
A. Boosting Working Memory

Put your mind to work in the right way and it could repay you with an impressive bonus.

B. Your Recollection Kit

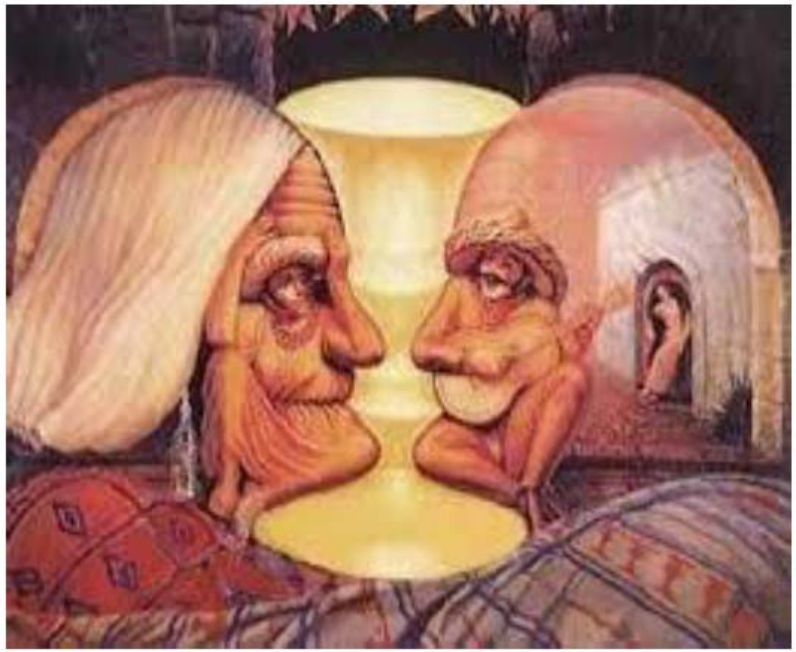
The difference between mere mortals and memory champions is more method than mental capacity.

Ways To Help Remember Names



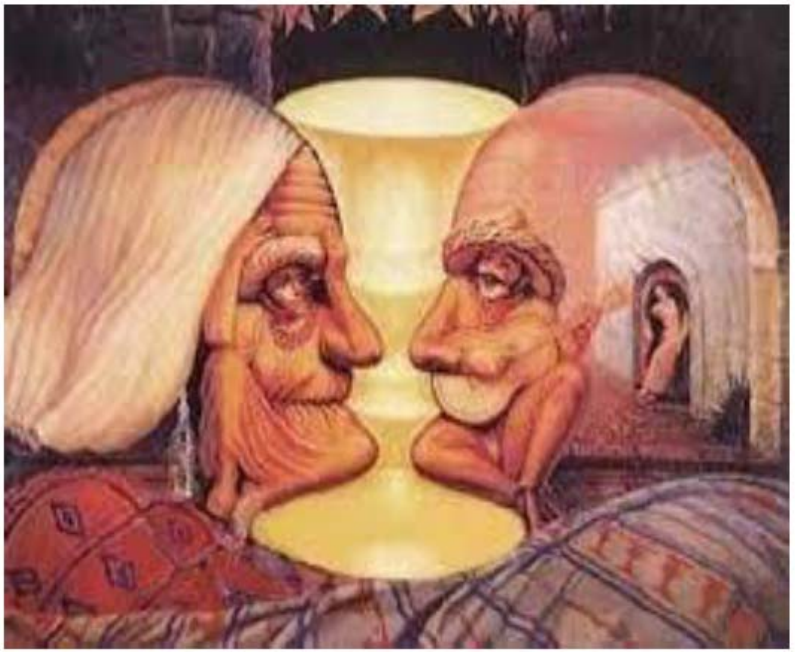
Ways To Help Remember Names

- **Ask him or her for his or her name.**



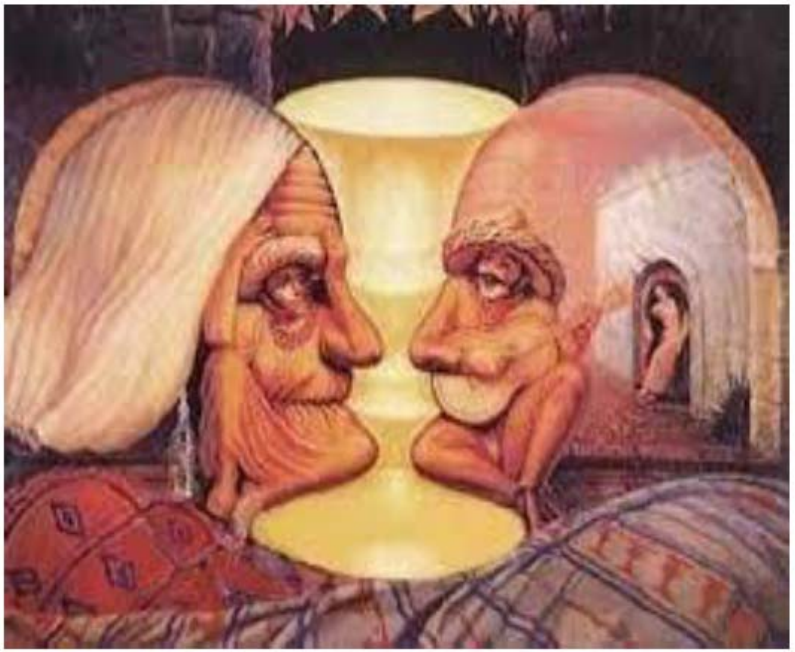
Ways To Help Remember Names

- **Ask him or her for his or her name.**
- **Say the name out loud, and often**



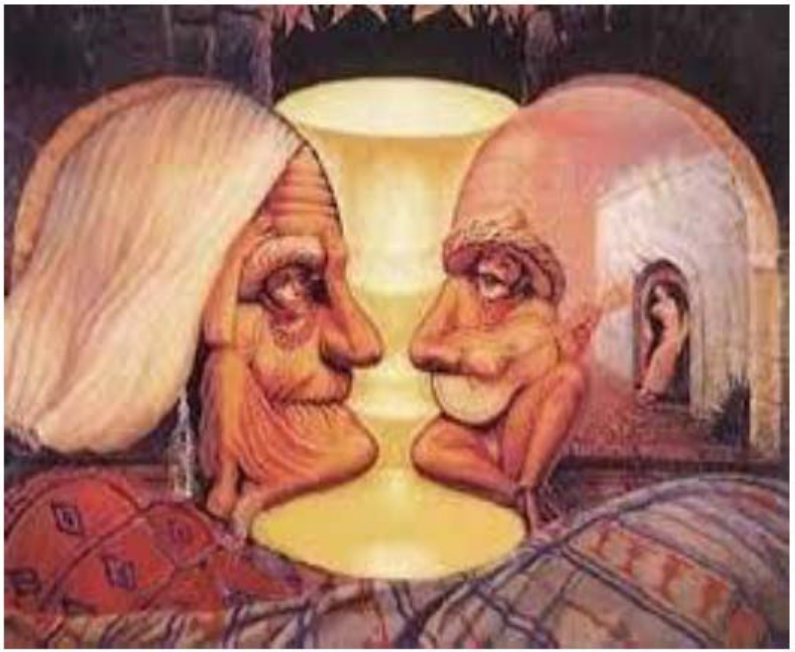
Ways To Help Remember Names

- **Ask him or her for his or her name.**
- **Say the name out loud, and often**
- **Spell it out**



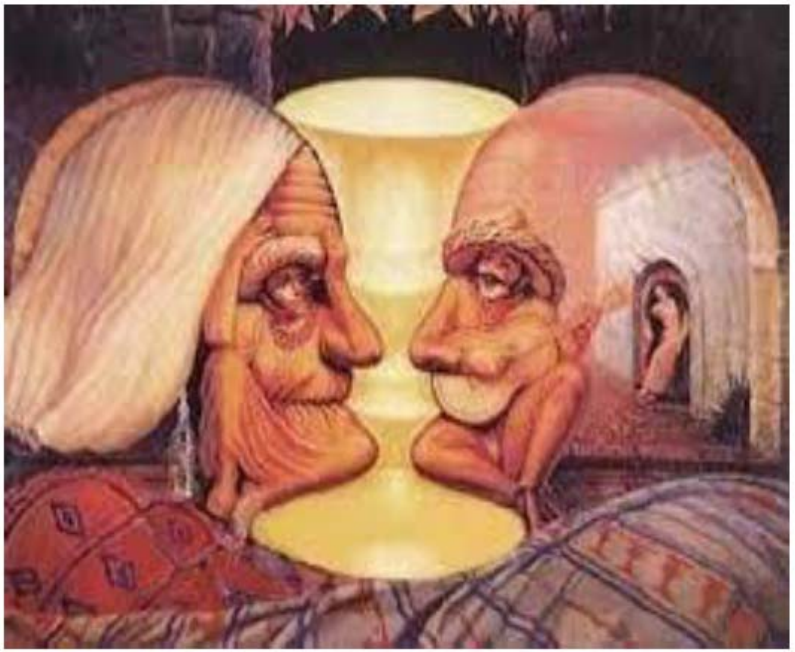
Ways To Help Remember Names

- **Ask him or her for his or her name.**
- **Say the name out loud, and often**
- **Spell it out**
- **Pay attention to the face**



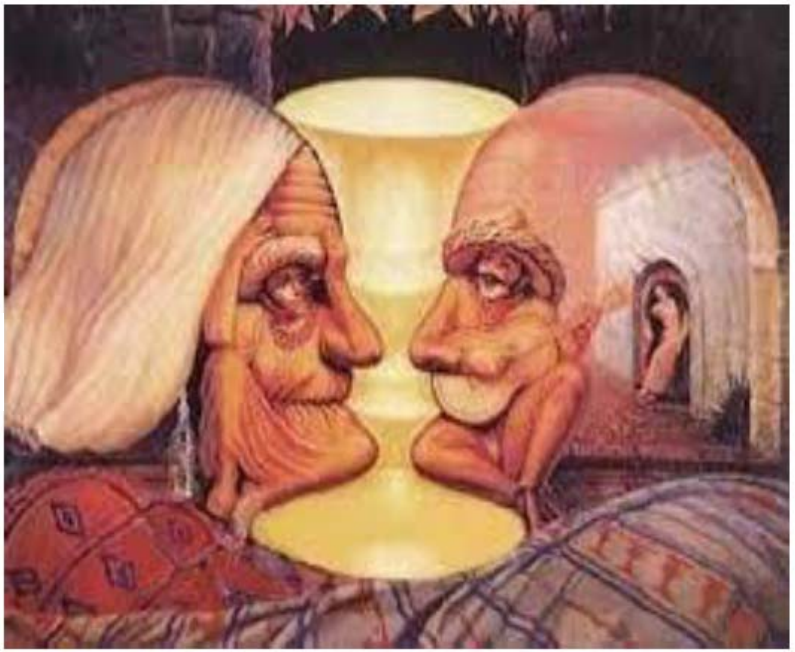
Ways To Help Remember Names

- Ask him or her for his or her name.
- Say the name out loud, and often
- Spell it out
- Pay attention to the face
- Use visual associations



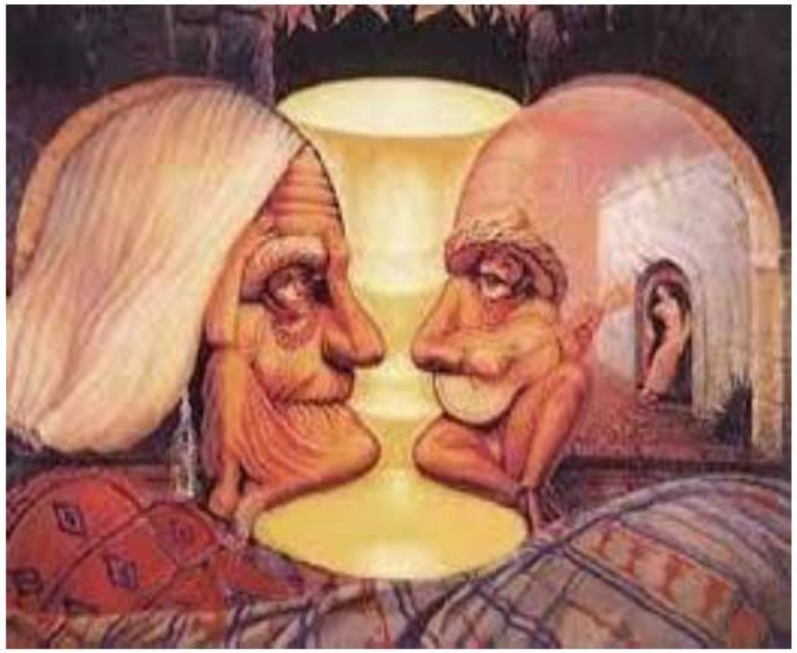
Ways To Help Remember Names

- Ask him or her for his or her name.
- Say the name out loud, and often
- Spell it out
- Pay attention to the face
- Use visual associations
- Link to a celebrity with the same name



Ways To Help Remember Names

- Ask him or her for his or her name.
- Say the name out loud, and often
- Spell it out
- Pay attention to the face
- Use visual associations
- Link to a celebrity with the same name
- Learn more about the person



Ways To Help Remember Names

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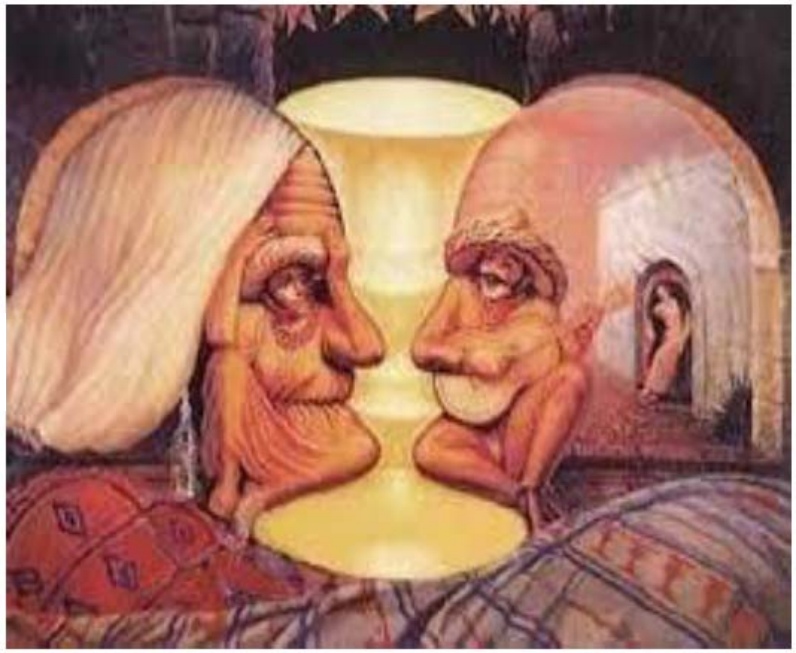
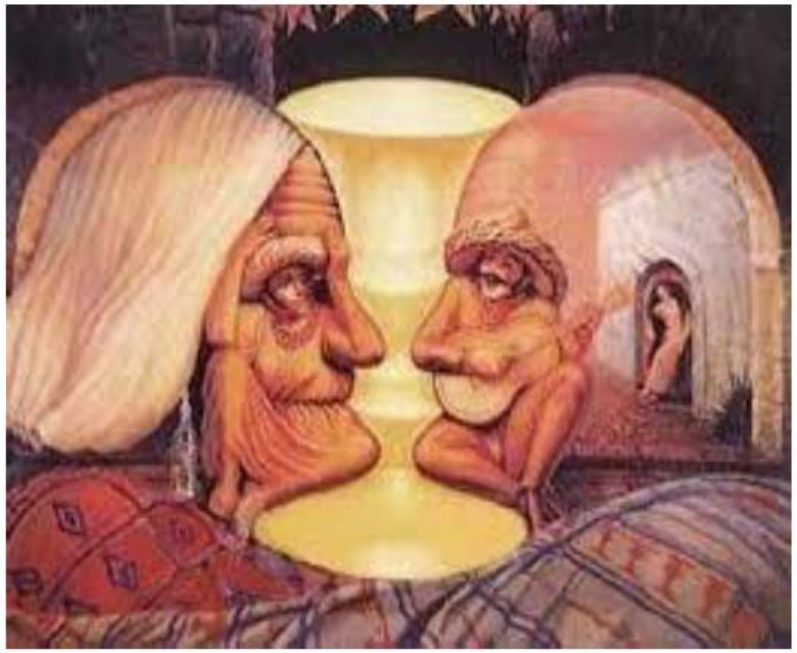
- Say the name out loud, and often
- Spell it out
- Pay attention to the face
- Use visual associations
- Link to a celebrity with the same name
- Learn more about the person
- Link the name to an amusing image



Ways To Help Remember Names

- Ask him or her for his or her name.
- Say the name out loud, and often
- Spell it out
- Pay attention to the face
- Use visual associations
- Link to a celebrity with the same name
- Learn more about the person
- Link the name to an amusing image
- Test yourself



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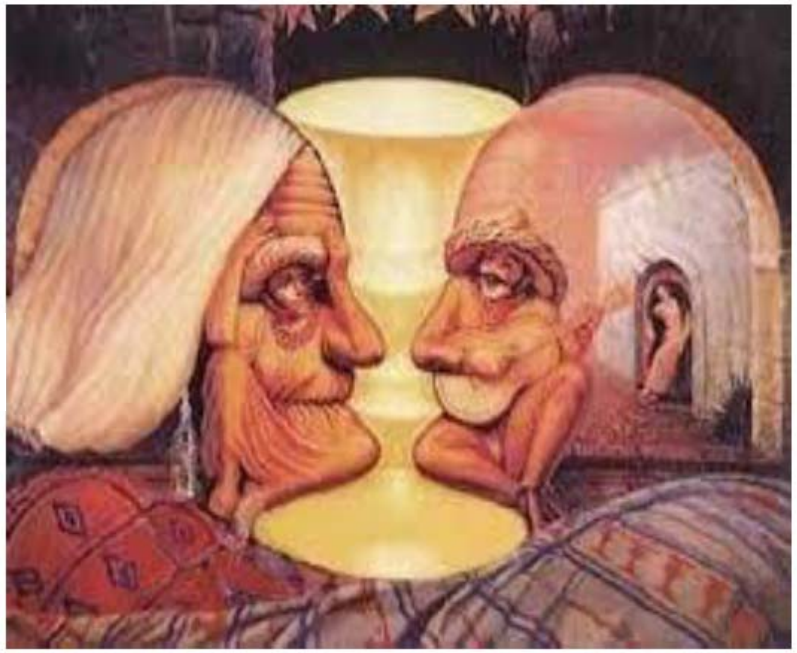
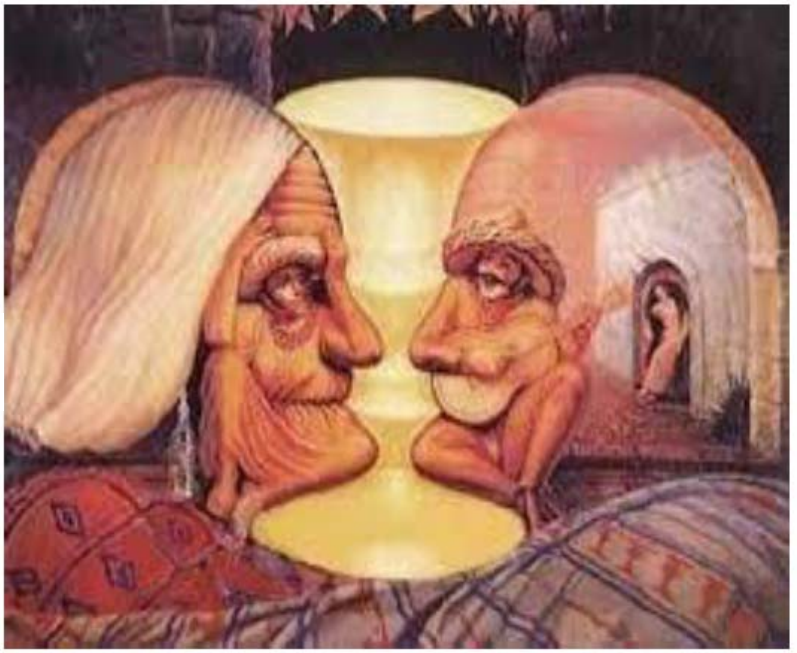
- Pay attention to the face
- Use visual associations
- Link to a celebrity with the same name
- Learn more about the person
- Link the name to an amusing image
- Test yourself
- Write it down



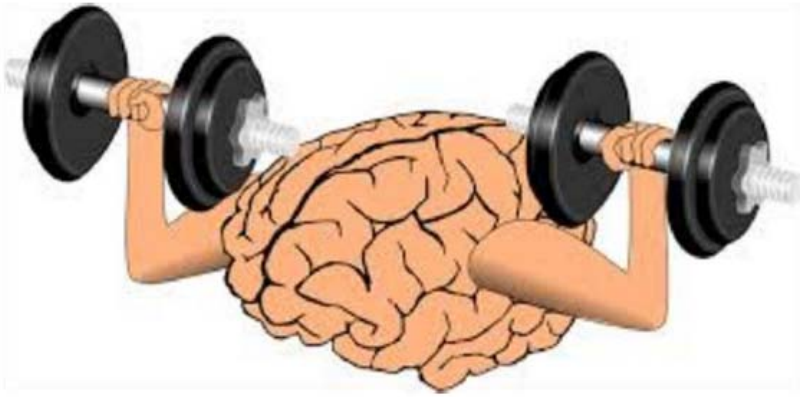
Ways To Help Remember Names

- Ask him or her for his or her name.
- Say the name out loud, and often
- Spell it out
- Pay attention to the face
- Use visual associations
- Link to a celebrity with the same name
- Learn more about the person
- Link the name to an amusing image
- Test yourself
- Write it down
- Don’t be afraid of getting a name wrong



Unit 1 Training Your Brain Part 1

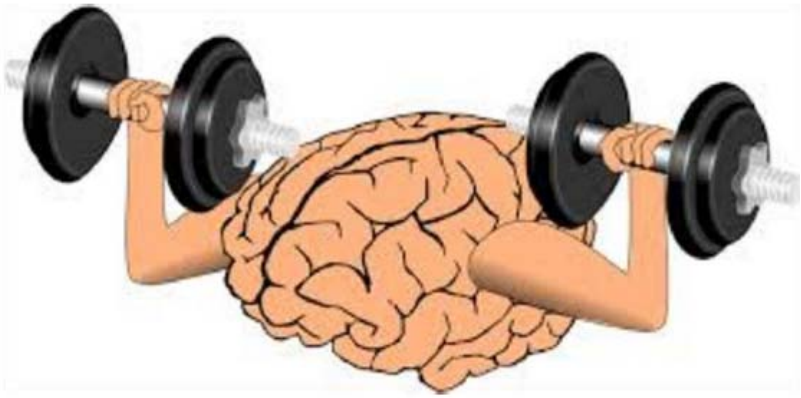
C. Focused Attention



Unit 1 Training Your Brain Part 1

C. Focused Attention

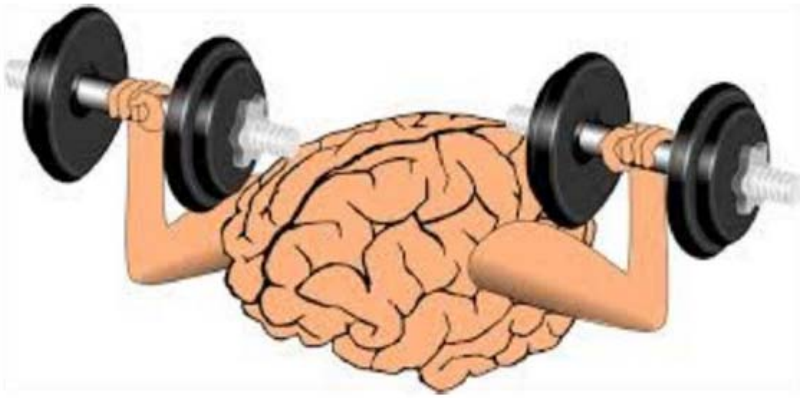
- **Raise your arousal levels**



Unit 1 Training Your Brain Part 1

C. Focused Attention

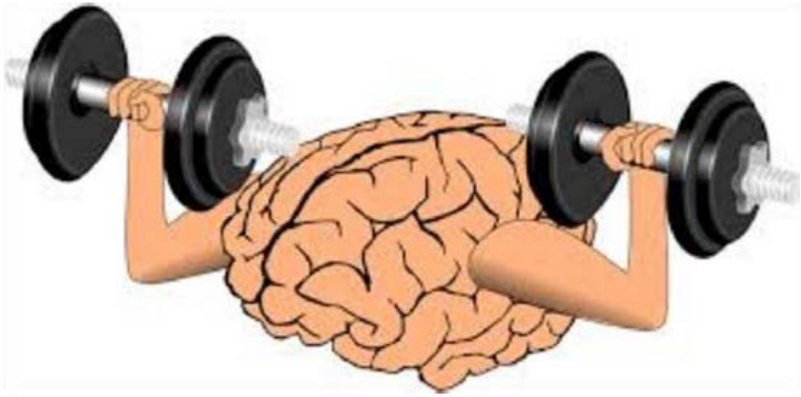
- Raise your arousal levels
- Cut down on distractions



Unit 1 Training Your Brain Part 1

C. Focused Attention

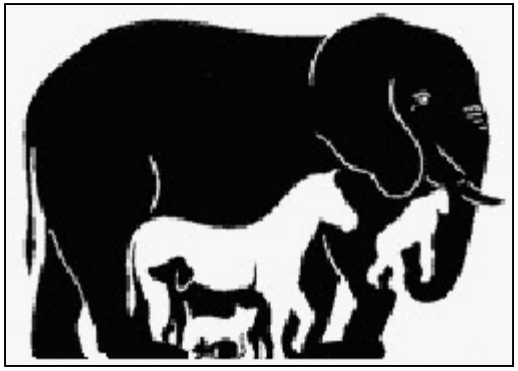
- Raise your arousal levels
- Cut down on distractions



Feedback Question: Why do you think working near the fridge might be a distraction?

Unit 1 Training Your Brain Part 1

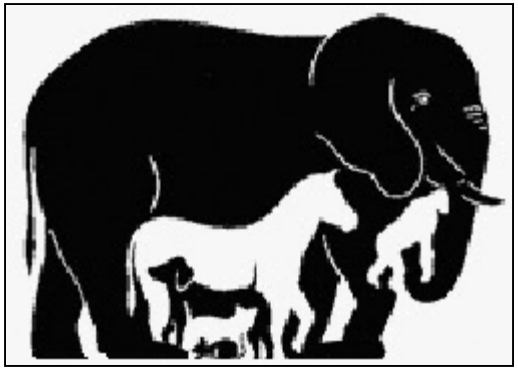
D. Brain Exercises



Unit 1 Training Your Brain Part 1

D. Brain Exercises

a. Test your recall

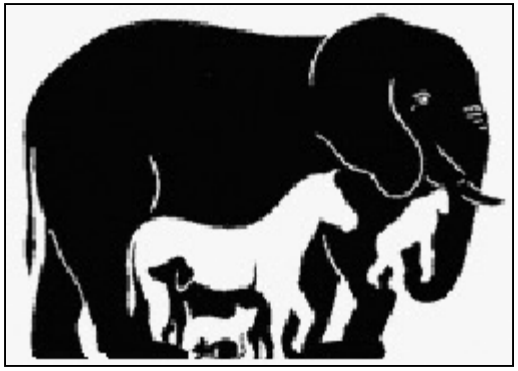


Unit 1 Training Your Brain Part 1

D. Brain Exercises

a. Test your recall

b. Do math in your head



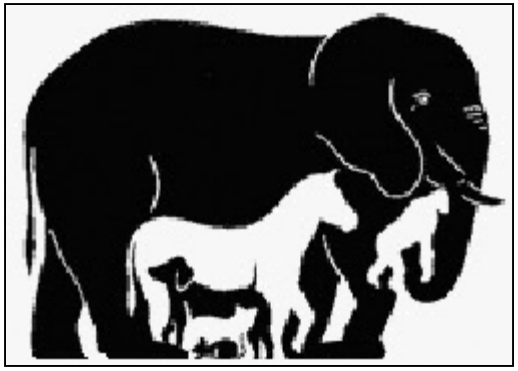
Unit 1 Training Your Brain Part 1

D. Brain Exercises

a. Test your recall

b. Do math in your head

c. Learn a foreign language



Unit 1 Training Your Brain Part 1

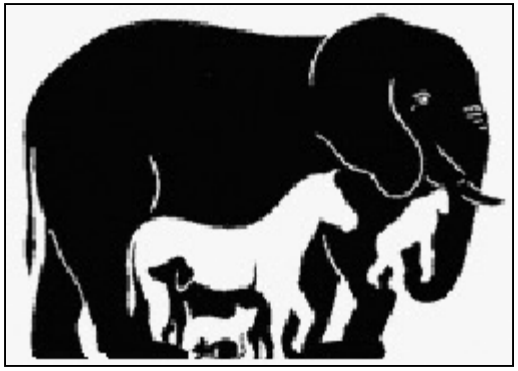
D. Brain Exercises

a. Test your recall

b. Do math in your head

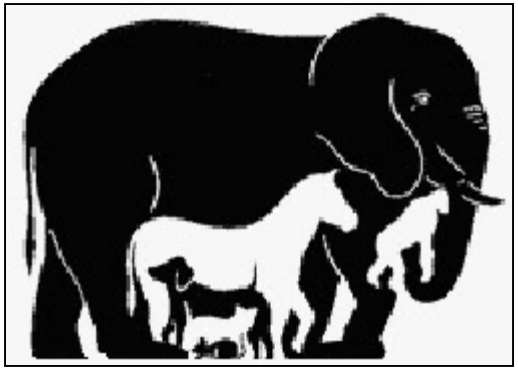
c. Learn a foreign language

d. Create word pictures



Unit 1 Training Your Brain Part 1

D. Brain Exercises



a. Test your recall

b. Do math in your head

c. Learn a foreign language

d. Create word pictures

e. Refine your hand-eye abilities

Unit 1 Training Your Brain Part 1

f. Refine your handedness

Unit 1 Training Your Brain Part 1

f. Refine your handedness

i. **Brush teeth with your non-dominant hand**

Unit 1 Training Your Brain Part 1

f. Refine your handedness

i. **Brush teeth with your non-dominant hand**

ii. **Shower with your eyes closed**

Unit 1 Training Your Brain Part 1

f. Refine your handedness

i. Brush teeth with your non-dominant hand
ii. Shower with your eyes closed
iii. Switch around your morning activities

Unit 1 Training Your Brain Part 1

f. Refine your handedness

i. Brush teeth with your non-dominant hand
ii. Shower with your eyes closed
iii. Switch around your morning activities
iv. Turn familiar objects upside down

Unit 1 Training Your Brain Part 1

f. Refine your handedness

i. Brush teeth with your non-dominant hand
ii. Shower with your eyes closed
iii. Switch around your morning activities
iv. Turn familiar objects upside down
v. Switch seats at the table

Unit 1 Training Your Brain Part 1

f. Refine your handedness

i. Brush teeth with your non-dominant hand
ii. Shower with your eyes closed
iii. Switch around your morning activities
iv. Turn familiar objects upside down
v. Switch seats at the table
vi. Make a game of it

Unit 1 Training Your Brain Part 1

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i. Brush teeth with your non-dominant hand
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vi. Make a game of it
vii. Draw a map from memory

Unit 1 Training Your Brain Part 1

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Unit 1 Training Your Brain Part 1

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iv. Turn familiar objects upside down
v. Switch seats at the table
vi. Make a game of it
vii. Draw a map from memory
viii. Challenge your taste buds
ix. Engage your senses

Unit 2 Activity 1 - Workshop

- The "Stroop" Test
- Quick quiz
- 30 word list
- Rebus problems
- Optical illusions
- Feedback

1	red	purple	green	brown	blue
2	green	red	brown	blue	purple
3	purple	brown	blue	green	red
4	red	blue	purple	green	brown
5	blue	brown	green	purple	red
6	purple	brown	red	blue	green
7	green	purple	blue	brown	red
8	red	brown	green	purple	blue

Unit 3 Training Your Brain Part 2

Unit 3 Training Your Brain Part 2

A. Positive Thought Control

Unit 3 Training Your Brain Part 2

A. Positive Thought Control

Controlling thinking is easier than you think

Unit 3 Training Your Brain Part 2

A. Positive Thought Control

Controlling thinking is easier than you think

B. Talking Like a Teacher

Unit 3 Training Your Brain Part 2

A. Positive Thought Control

Controlling thinking is easier than you think

B. Talking Like a Teacher

To teach is to learn twice – Joseph Joubert

Unit 3 Training Your Brain Part 2

A. Positive Thought Control

Controlling thinking is easier than you think

B. Talking Like a Teacher

To teach is to learn twice – Joseph Joubert

C. Storytelling

Unit 3 Training Your Brain Part 2

A. Positive Thought Control

Controlling thinking is easier than you think

B. Talking Like a Teacher

To teach is to learn twice – Joseph Joubert

C. Storytelling

D. The Sonata Effect

Unit 3 Training Your Brain Part 2

A. Positive Thought Control

Controlling thinking is easier than you think

B. Talking Like a Teacher

To teach is to learn twice – Joseph Joubert

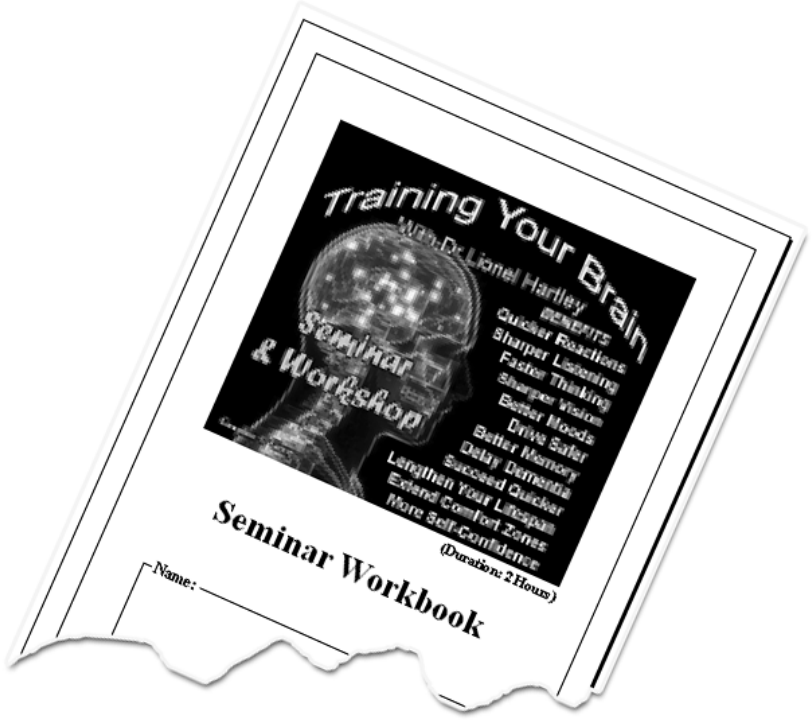
C. Storytelling

D. The Sonata Effect

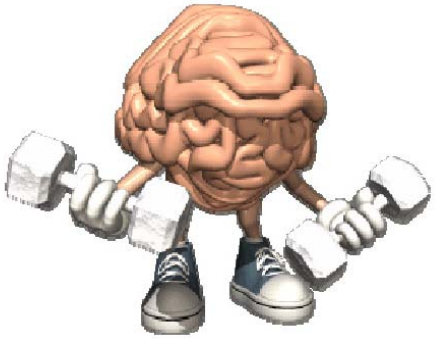
Use music to tune up your thinking

Unit 4 Activity 2 Active Listening

See Seminar Workbook, page 10

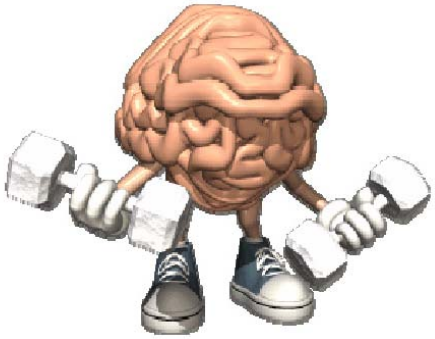


Unit 5 Maintaining Your Brain Part 1



Unit 5 Maintaining Your Brain Part 1

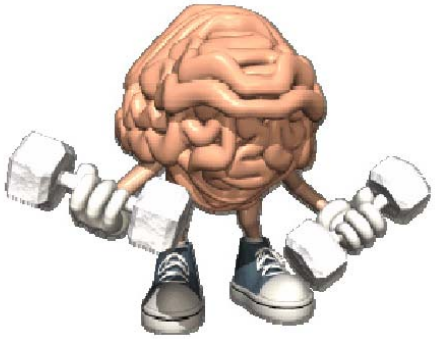
A. Don’t Bounce Your Brain



Unit 5 Maintaining Your Brain Part 1

A. Don’t Bounce Your Brain

B. Food for Thought

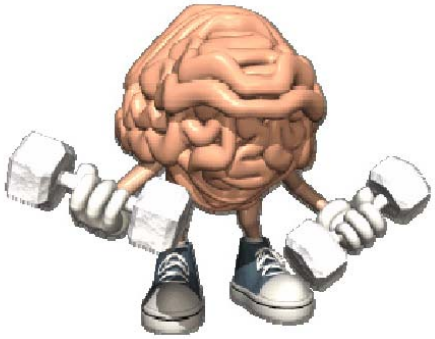


Unit 5 Maintaining Your Brain Part 1

A. Don’t Bounce Your Brain

B. Food for Thought

C. Sleep on it



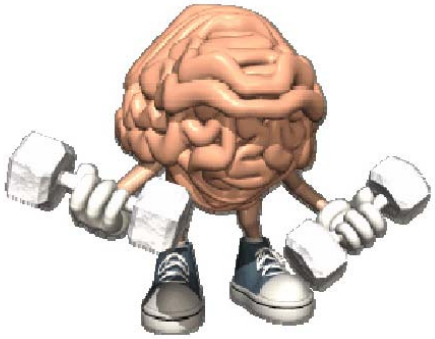
Unit 5 Maintaining Your Brain Part 1

A. Don’t Bounce Your Brain

B. Food for Thought

C. Sleep on it

Never underestimate the power of a good night’s rest. (www.lrhartley.com/sleep)



Unit 5 Maintaining Your Brain Part 1

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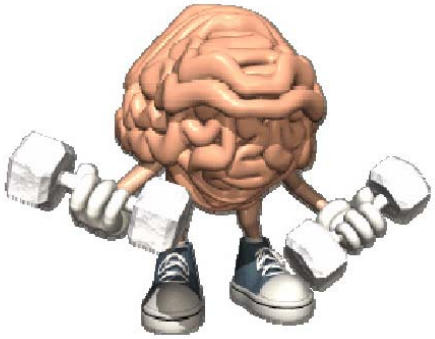
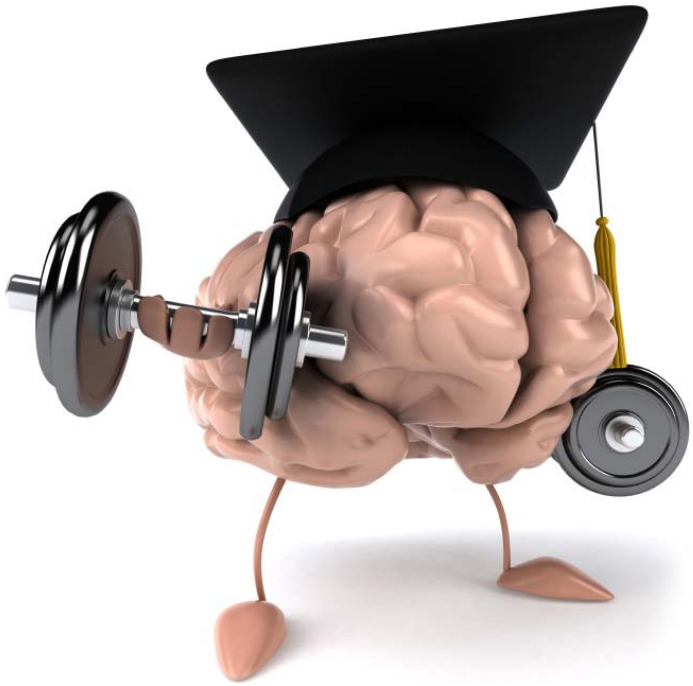


D. Brain and Brawn

Unit 6 Activity 3 - Aerobic Input



Stand, presenter will demonstrate, we will all practice a few times and then sit down again

Unit 7 Maintaining Your Brain Part 2

A. Brain Washers

Unit 7 Maintaining Your Brain Part 2

B. Brain Busters

Manage Anxiety, Stress & Depression

Some strategies for coping are:

- ✓ **Progressive Relaxation** **(www/lrhartley.com/relax)**
- ✓ **Re-directing internal stress into external action**
- ✓ **Seeking support**
- ✓ **Ensuring a balance of work and recreation**
- ✓ **And letting go of things outside your control**

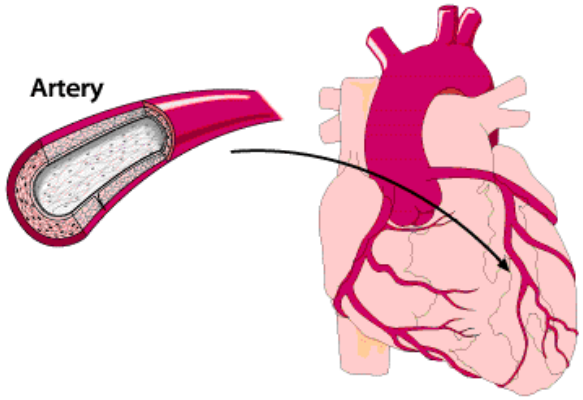
Password: relax05

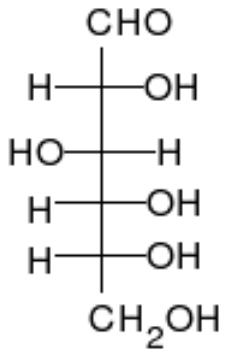
Unit 7 Maintaining Your Brain Part 2

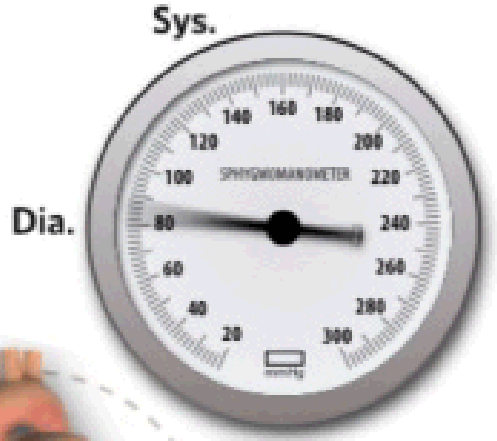
- **C. Brain Bloaters**

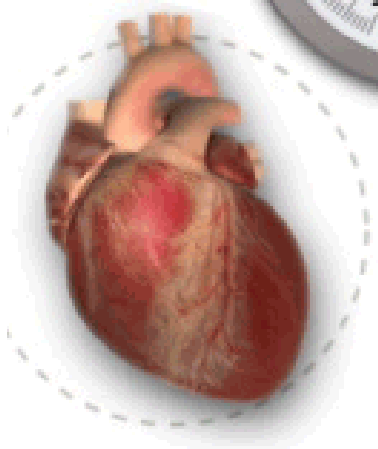
  Check Your Blood Pressure,

  Diabetes and Cholesterol









Unit 7 Maintaining Your Brain Part 2

D. Brain Cloggers

Unit 7 Maintaining Your Brain Part 2

D. Brain Cloggers

- **GIGO**

Unit 7 Maintaining Your Brain Part 2

D. Brain Cloggers

- GIGO
- Alcohol and other drugs

Unit 7 Maintaining Your Brain Part 2

D. Brain Cloggers

- GIGO
- Alcohol and other drugs
- Associations
  - You *are* the company you keep

Unit 8 Reclaiming Your Brain

Unit 8 Reclaiming Your Brain

A. Build Your Brain's Cognitive Reserve

Unit 8 Reclaiming Your Brain

A. Build Your Brain's Cognitive Reserve

B. The "Nun Study"

Unit 8 Reclaiming Your Brain

A. Build Your Brain's Cognitive Reserve

B. The "Nun Study"

Seek some sisterly guidance

Unit 8 Reclaiming Your Brain

A. Build Your Brain's Cognitive Reserve

B. The "Nun Study"

Seek some sisterly guidance

C. Spirituality

Unit 8 Reclaiming Your Brain

A. Build Your Brain's Cognitive Reserve

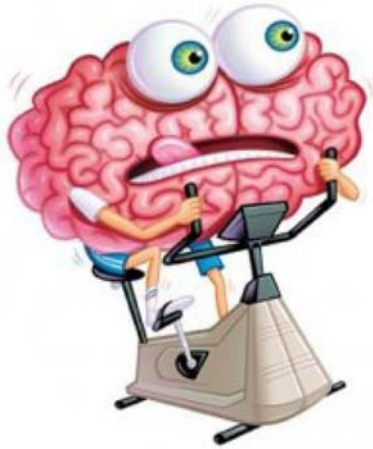
B. The "Nun Study"

Seek some sisterly guidance

C. Spirituality

D. Summary

Question Time



Your feedback is invited:
www.lrhartley.com/trainbrain
***or* admin@lrhartley.com**

My Word List

1._____	16. _____
2._____	17. _____
3._____	18. _____
4._____	19. _____
5._____	20. _____
6._____	21. _____
7._____	22. _____
8._____	23. _____
9._____	24. _____
10. _____	25. _____
11. _____	26. _____
12. _____	27. _____
13. _____	28. _____
14. _____	29. _____
15. _____	30. _____

Few people retain and write down all 30 words.
If you did so, you're ready for tougher memorization tasks.
If you remembered fewer than five words, you may be out of practice at memorizing, and probably didn't use a system. Try it again at home.

www.lrhartley.com/trainbrain

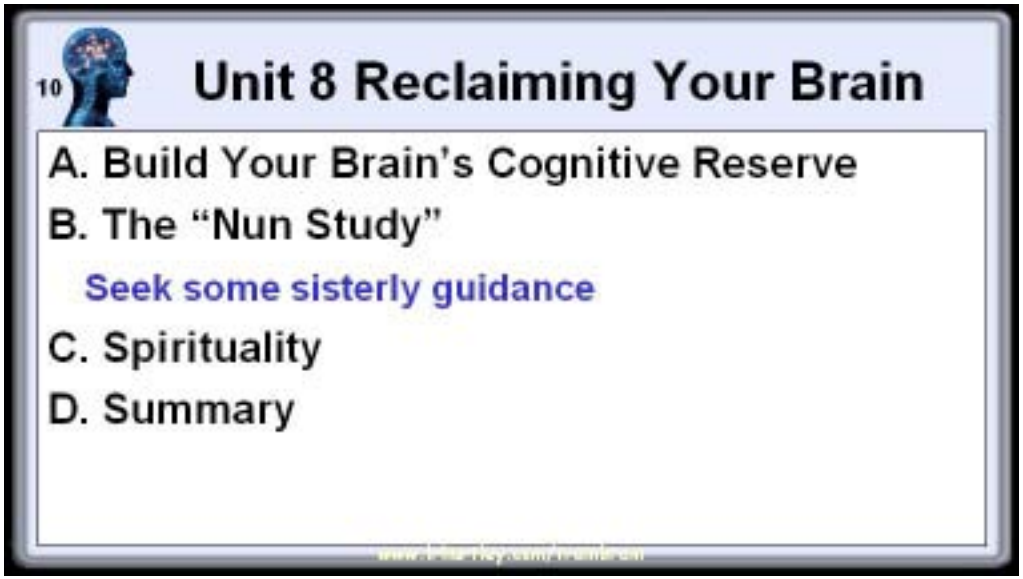
(Duration: 2 Hours)

Seminar Workbook

Name:

Program

Introduction	**(10 Minutes)**
Unit 1 Training Your Brain Part 1 **A. Boosting Working Memory** **B. Your Recollection Kit** **C. Focused Attention** **D. Brain Exercises**	**(15 Minutes)**
Unit 2 Activity 1 - Workshop	**(20 Minutes)**
Unit 3 Training Your Brain Part 2 **A. Positive Thought Control** **B. Talking Like a Teacher** **C. Storytelling** **D. The Sonata Effect**	**(15 Minutes)**
Unit 4 Activity 2 Active Listening	**(10 Minutes)**
Unit 5 Maintaining Your Brain Part 1 **A. Don't Bounce Your Brain** **B. Food for Thought** **C. Sleep on it** **D. Brain and Brawn**	**(15 Minutes)**
Unit 6 Activity 3 - Aerobic Input	**(5 Minutes)**
Unit 7 Maintaining Your Brain Part 2 **A. Brain Washers** **B. Brain Busters** **C. Brain Bloaters** **D. Brain Cloggers**	**(15 Minutes)**
Unit 8 Reclaiming Your Brain **A. Build Your Brain's Cognitive Reserve** **B. The "Nun Study"** **C. Spirituality** **D. Summary**	**(15 Minutes)**
Question and Answer Session	



Notes:

Anxiety has four main elements

a. Insecurity

Something bad is going to happen

b. Helplessness

There is nothing I can do

c. Isolation

There is no one to help me

d. Response

Fight, flight, freeze, fling, faint, fortify

Notes:

1 Unit 1 Training Your Brain Part 1

A. Boosting Working Memory

Put your mind to work in the right way and it could repay you with an impressive bonus.

B. Your Recollection Kit

The difference between mere mortals and memory champions is more method than mental capacity.

Working memory is the brain's short-term information storage system.

Notes:

9 Unit 7 Maintaining Your Brain Part 2

D. Brain Cloggers

- GIGO
- Alcohol and other drugs
- Associations
  - You *are* the company you keep

The difference between mere mortals and memory champions is more **method** than **mental capacity**.

Notes:

Anxiety: How to help yourself

- Postpone major life changes
- Resolve personal conflicts as they arise
- Simplify your life by making your schedule less hectic
- Take part in enjoyable activities and learn to relax
- Maintain a healthy lifestyle
- Consider your diet
- Physical exercise
- Get plenty of rest and sleep
- Deep-breathing exercises
- Massage
- Dry skin-brushing
- The lower-extremity cold-water rub
- Learn a relaxation technique and practice it
- Call a trusted friend or family member
- Regular check-ups (medical or mental health)

(Source: www.lrhartley/selfesteem)

Food for Thought

You are what you eat, and that includes your brain.

Start the day by eating breakfast.
E.g. Beans on toast, wholemeal cereal or toast with Marmite.

Lunch could be omelette, salad and a yoghurt dessert. Eggs are rich in choline, which your body uses to produce the neurotransmitter acetylcholine. Other sources of choline are salmon, chickpeas, split peas, navy beans, pasta, rice, spinach, beets, wheat products and peanuts.
Yogurt contains the amino acid *tyrosine*, needed for the production of the neurotransmitters dopamine and noradrenalin, among others. Other tyrosine-containing foods are peanuts, almonds, avocados, bananas, lima beans, pumpkin seeds and sesame seeds.

Include a **snack** mid-afternoon to maintain your glucose levels.

For the **evening meal**, fish is brain food because of omega-3 fatty acids. Other sources of omega-3 fatty acids are nuts and seeds (such as flaxseed, chia seeds, and walnuts) and also plant oils (such as flaxseed oil, soybean oil and canola oil).

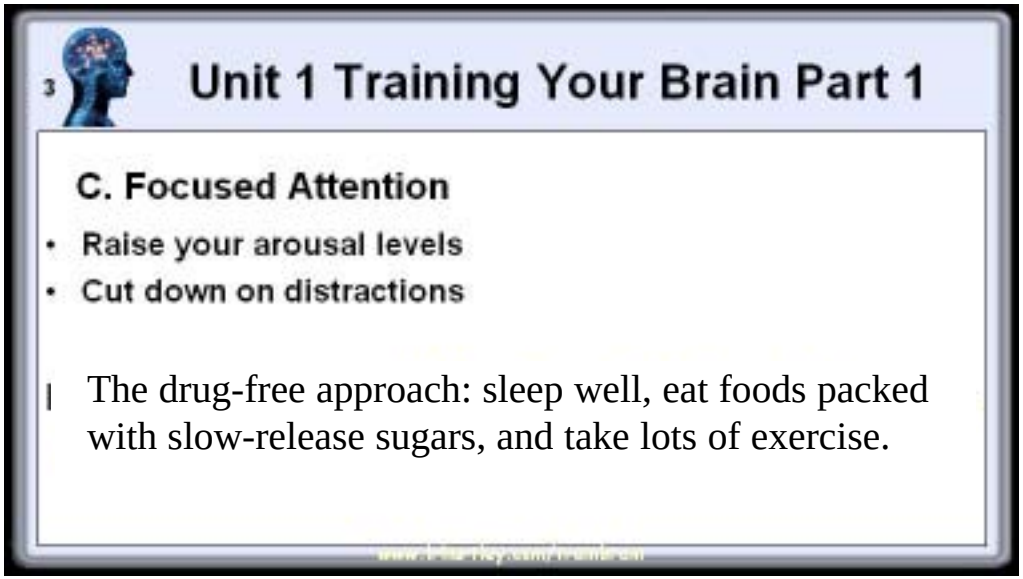
Finish your evening meal with strawberries and blueberries.

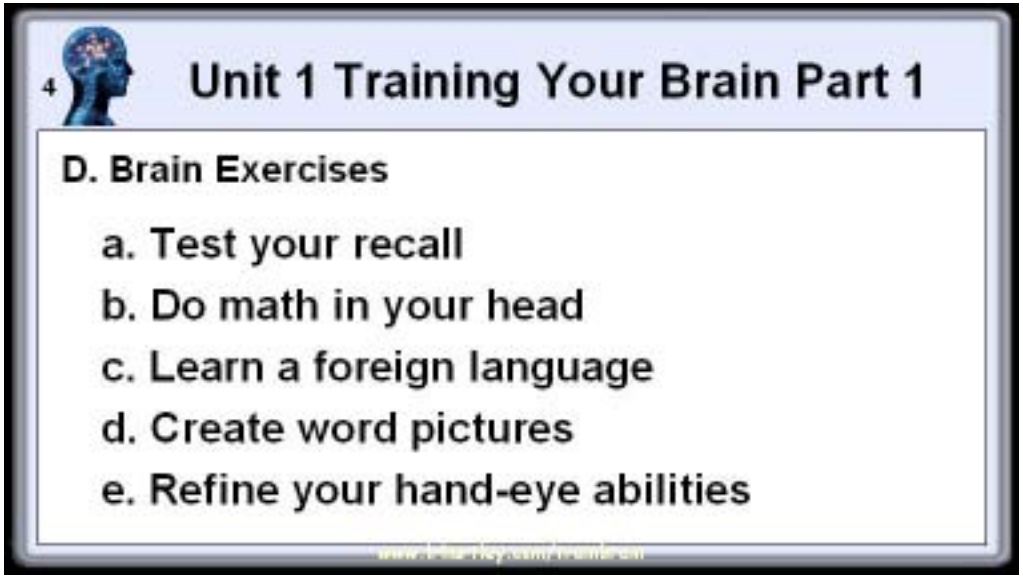
Avoid excess food. Reducing calories can help slow age-related brain changes.

Notes on this page are a general guide only. Let common sense prevail.

As a general rule, good nutrition for the body is good nutrition for the brain.

Paying attention is a complex mental process, shifting between zooming in on detail and stepping back to survey the big picture. So unfortunately there is no single remedy to enhance your concentration. But there are a few ways to improve it.





5

Unit 1 Training Your Brain Part 1

f. Refine your handedness

i. Brush _____ with your non-dominant hand

ii. _____ with your eyes closed

iii. Switch around your morning _____

iv. Turn familiar objects _____ , literally

v. Switch _____ at the table

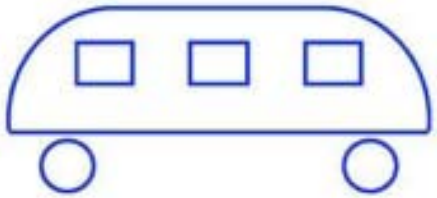
vi. Make a _____ of it

vii. Draw a _____ from memory

viii. Challenge your _____

ix. Engage your _____

In which direction is the bus pictured below traveling?



Notes:

7

Unit 5 Maintaining Your Brain Part 1

A. Don't Bounce Your Brain

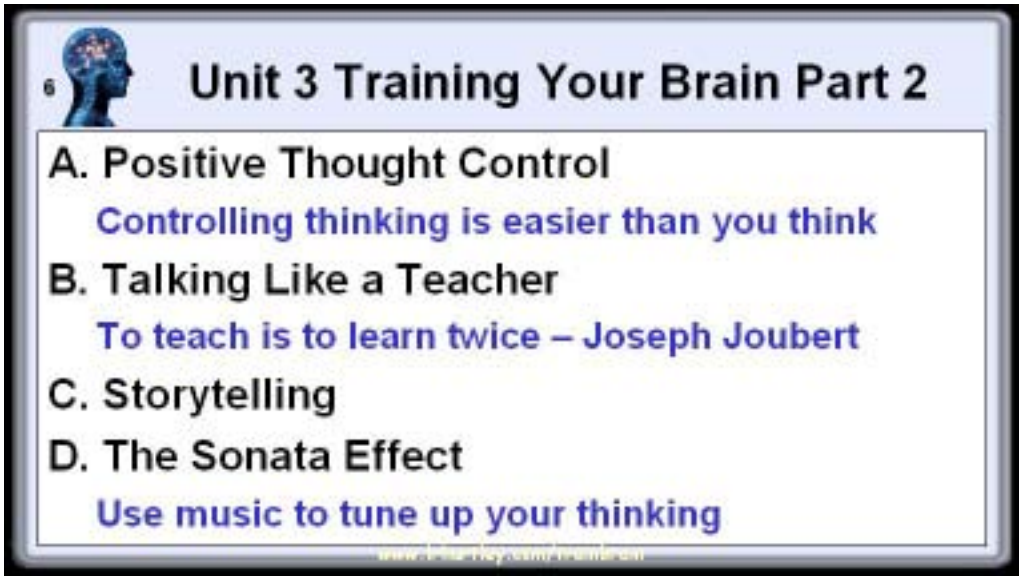
B. Food for Thought

C. Sleep on it

Never underestimate the power of a good night's rest. (www.lrhartley.com/sleep)

D. Brain and Brawn

If you go to *www.lrhartley.com/sleep*, there are some useful resources there to help you with sleep.
For example in answer to a seminar question, you will find this snippet:
"Magnesium deficiency can cause insomnia.
Lack of potassium can lead to difficulty staying asleep throughout the night.
Vitamin D deficiency has been linked to excessive daytime sleepiness".



Unit 4 Activity 2 Active Listening

Listen to the music being played at the commencement of this activity.

• What did you hear? What instruments in particular produced the sound you heard? Did any of the instruments stand out to you?

• How did the music make you feel? Why?

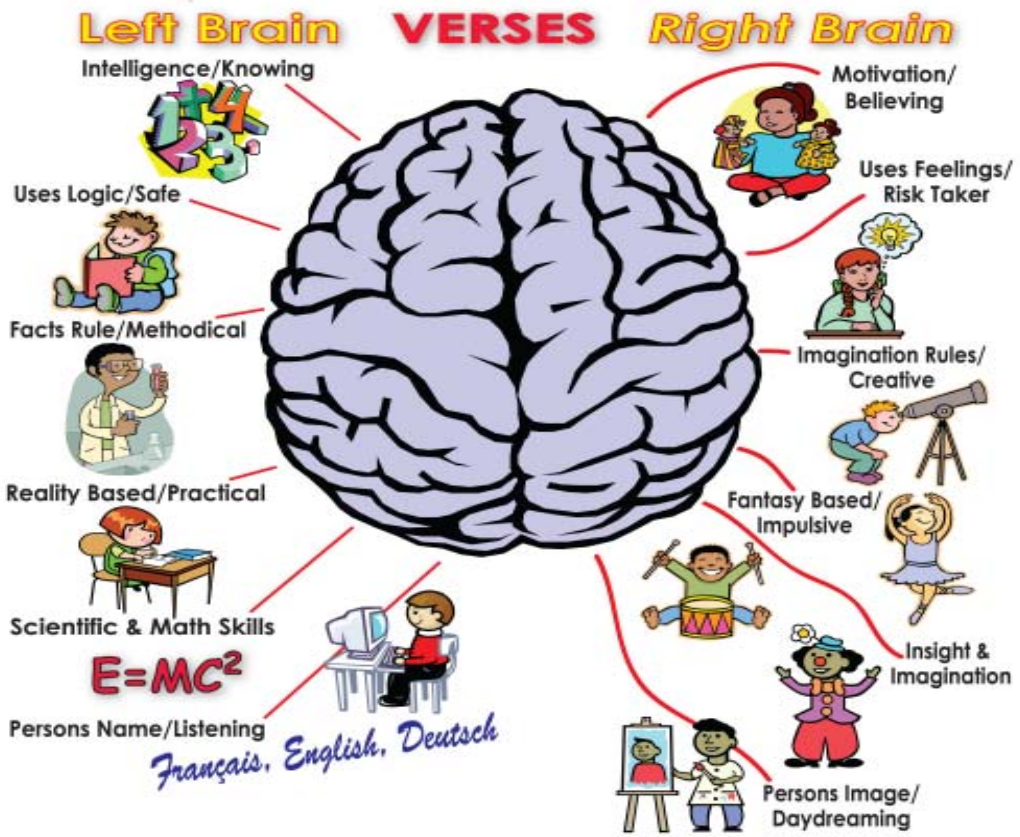
• Does this music remind you of anything in your life?

• What did you think about as you listened to this music?

• What word best describes this music? Why did you choose that word?

• What can you say about the repetition in the music?

• Do any stories come to mind from your listening? Plan on sharing your story.



LEFT BRAIN FUNCTIONS	RIGHT BRAIN FUNCTIONS
uses logic	uses feeling
detail oriented	"big picture" oriented
facts rule	imagination rules
words and language	symbols and images
present and past	present and future
math and science	philosophy & religion
can comprehend	can "get it" (i.e. meaning)
knowing	believes
acknowledges	appreciates
order/pattern perception	spatial perception
knows object name	knows object function
reality based	fantasy based
forms strategies	presents possibilities
practical	impetuous
safe	risk taking

Quick Quiz

Which month has 28 days? _____

What's the easiest way to double your money? _____

What has a face and two hands but no arms or legs? _____

What 4 days of the week start with the letter 't'?

_____ _____ _____ _____

What goes up and doesn't come back down? _____

If two's company and three's a crowd, what are four and five? _____

What has a thumb and four fingers but is not alive? _____

What occurs once in every minute, twice in every moment and yet never in a thousand years? _____

If there are 4 apples and you take away 3, how many do you have? _____

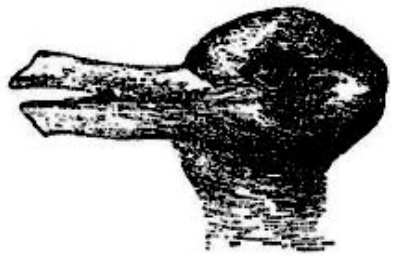
Where do fish keep their money? _____

How did the soccer fan know before the game that the score would be 0-0? _____

circle	pilot	tubing	apple	midnight	sleigh
bread	rope	pottery	mind	bell	folder
dog	office	shape	head	problem	train
sister	map	edge	kite	flap	account
coat	thunder	section	brand	point	wallet

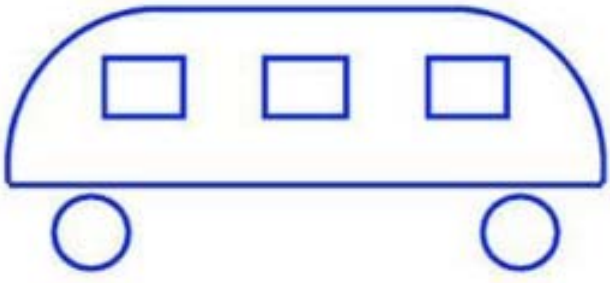
Rebus Problems

1. ICE^3
2. 123456789 US
3. UWIN + ULOSE +
4. DAYDAYOUT
5. HIJKLMNO
6. NaNaFISH
7. EARTH EARTH
8. 222 Day
9. CHARGE
10. $0.00 all all all all
11. ME Repeat
12. TAKE A PETS
13. DON
14. PANTS PANTS
15. LANG4UAGE
16. GO IT IT IT IT
17. Cut Cut Cut Cut
18. BIG BIG IGNORE IGNORE
19. TOUCH
20. 2NAFISH



Workbook Answers Page 1

Page 6: In which direction is the bus on page 6 travelling?



There is no door visible so the door must be on the other side. With a Right-Hand Drive vehicle (Such as in UK and the antipodes - Australia, New Zealand, etc) the bus is travelling to your right. For a Left-Hand Drive vehicle such as in USA, the bus is travelling to your left.

Workbook Answers Page 2

What word(s) are pronounced differently just by capitalizing the first letter?
Several including job & Job, polish & Polish, and an American would pronounce the name Herb differently to the plant herb (’erb).

Take the “Stroop Test”* to test your reaction time. First, read the written colour names of the words (regardless of the ink colour). Next, say the colour of the letters (regardless of the written word). See how fast you can do it and how accurate you are.

Quick quiz
Which month has 28 days? All of them of course!

What’s the easiest way to double your money? Put it in front of a mirror.

What has a face and two hands but no arms or legs? A clock

What 4 days of the week start with the letter ‘t’? Tuesday, Thursday, today and tomorrow.

What goes up and doesn’t come back down? Your age.

If two’s company and three’s a crowd, what are four and five? 9

What has a thumb and four fingers but is not alive? A glove.

***** The “Stroop Test” (Developed by Stroop, 1935)

Workbook Answers Page 3

What occurs once in every minute, twice in every moment and yet never in a thousand years? The letter m.
What occurs twice in a week, once in a year but never in a day? The letter e.

If there are 4 apples and you take away 3, how many do you have? You took 3 apples so obviously you have 3.

Where do fish keep their money? In the river bank.

How did the soccer fan know before the game that the score would be 0-0? The score is always 0-0 before the game.

Rebus- Answers

1. Ice Cube
2. Count on us
3. You win some,
   You lose some
4. Day in, day out
5. H2O (h to o)
6. Tuna Fish
7. Down to Earth
8. Tuesday
9. Who's in charge?
10. Free for all
11. Repeat after me.
12. Take a step backwards
13. Domino
14. A pair of pants
15. Foreign Language
16. Go for it
17. A cut above the rest
18. Too big to ignore
19. Touchdown
20. Tuna Fish