

ELECTRIFY YOUR BRAIN POWER!

*HOW TO TURN ON, TUNE IN AND TURN UP
YOUR INTELLIGENCE AND CREATIVITY.*

BY

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ELECTRIFY YOUR BRAIN POWER!

Whether you realized it or not, you influenced your mind with the last meal you ate. And you are doing so now as you read. Medical science has recently shown that the brain can expand and grow based upon many of the demands we place on it. However, what can be gained over time can also be lost. The old adage, we must "use it or lose it" applies to brain power, too. Unfortunately, we have been slow to pick up on the habit of "intellectual fitness". Too many of us have placed a higher priority on the physical fitness of our outside packaging rather than on expanding the "health" of our internal being.

In your body, hormones carry the brain's commands in the blood and nervous systems. You can only be at your "mental best" when your body is in total sync with your mind. The transmission of electrical signals within the brain is controlled by chemicals that stimulate electrical impulses, filling the gaps between each neuron, which either facilitates or discourages the leaping of a message from one neuron to the other.

Scientists have found that carbohydrate-rich food causes the brain to produce a chemical known as serotonin which retards brain cell firing and thus causes a relaxed sensation. Food rich in proteins, however, *help* in mental performance. Researchers have further discovered that when a person learns to change their *attitude*, changes in the immune system will also occur. This is because when one part of your body is ill, the other parts suffer as well. Therefore, your best "thinking" begins below the neck.

FOODS FOR THOUGHT

You "think" what you eat, so *watch* what you eat. You also work better, as your grandmother used to say, by taking time to eat a good breakfast. Sugar or glucose is considered one of the brain's favorite chemicals, yet our brain keeps very little of it on tap. Your glycogen storehouse, when you are running low on glucose, is the liver. A healthy balance of glucose in our bodies is important. To better maintain a constant level of this brain-stimulating food, you should choose protein-rich foods (meats, eggs, cheese, nuts and soybean products) over starches and sweets (white bread, pasta, corn, potatoes and fruits). Cut down on caffeine, tobacco and alcohol, too, because they tend to "liberate" glucose into the bloodstream. Although the functions of the brain are conducted by electrical leaps between nerve cells, this *flow* of electricity can either be triggered or held back by chemical *neurotransmitters*, which are ingested or absorbed into our bodies. The following is a more detailed description of some of these chemical neurotransmitters.

Tryptophan is an active ingredient in food from which the brain synthesizes the chemical *serotonin*. You need to minimize serotonin production when you want to be more alert and do "mental work". When you wish to relax, or to get a better night's rest, you should eat foods that are rich in tryptophan, to encourage production of serotonin. Why? Serotonin *subdues* the electrical transmission between neurons, which causes you to react slower and become more relaxed. Tryptophan is particularly plentiful in meat and dairy products (thus the advice of drinking a warm glass of milk before going to bed).

Combining carbohydrates with proteins also helps to carry tryptophans more effectively to the brain.

The vitamin B complex known as **choline** has been identified as a key brain stimulant to memory function. It works in the body to help convert proteins, carbohydrates and fats into fuel for the brain. If you are worried about cholesterol intake, then substitute cabbage and cauliflower for foods such as eggs. The more choline you have in your diet (within reason), the higher the level of this "fuel stimulant" you have available to your brain. Other B complex vitamins, including lecithin, Vitamin B1 (**Thiamin**), Vitamin B2 (**Niacin**), and Vitamin B6 (**Pyridoxine**) are important and are also considered "brain food". Pyridoxine produces two chemical transmitters in the brain, *dopamine* and *serotonin*. These chemicals, together, are more commonly found in meat, fish, bran cereal, watermelon and bananas.

Vitamin C (Ascorbic Acid) is still another brain stimulant. It helps with adrenaline and iron production in the body. Absorption of Vitamin C can be dramatically enhanced when it is taken along with an iron source. Despite the fact that most plants and animals can produce Vitamin C readily, we as humans cannot.

The brain food, **Vitamin E**, has been shown to help with alertness. *How?* Oxygen, which the brain requires a great deal of, is carried by hemoglobin (or iron) to the brain. If our diet, therefore, is low in iron, both the production and function of hemoglobin is impaired. Iron is also thought to play another important role as an effective

neurotransmitter. Research has shown that women need more iron than men. Many times iron deficiencies can be found as a major contributing factor in the development of senility. Deficiency in zinc is also thought to play a role in senility, as well. Zinc is found in high concentration in meats and seafood.

IMPROVING ENVIRONMENTALLY YOUR BRAIN POWER

Even subtle inputs of air ions and interior lighting help to improve and promote mental alertness in both our brain power and function. Unfortunately, environmental noise is one of the toughest elements to exclude from our environment. Noise, in general, has a negative effect, on our ability to function at peak performance. It has been known for some time that we respond well to music, especially when the music is embedded with positive affirmations. The wrong kind of music, however, can seriously impair our ability to perform even the simplest of mental tasks. Playing the right kind of music just loud enough to cover up many of life's irritating sounds has been considered by many to be an excellent technique for helping to improve, environmentally, your brain power.

Light, especially natural sunlight, helps our brain stimulate many of our thoughts and emotions. Scientists have also found that the *timing* of light is also important. Just as a poinsettia, for example, needs specific periods of light and darkness to bloom its red flowers, so do we need light. Sunrises and sunsets have always had an influence on human behavior. This may explain why we have the "blues" more in the winter and during prolonged, rainy and cloudy days. Your brain rhythms are important, too.

Melatonin is a chemical released by the *pineal gland* which helps regulate our daily and

seasonal brain rhythms. Natural sunlight directly effects and regulates the amount of melatonin the brain releases, causing us to feel at times more, or less, energetic.

Believe it or not, ions have effects on us, too. Negative ions, present in the atmosphere, especially before and after rain storms, have always played a role in changing our moods and helping to improve overall performance. Some man-made air purifiers with activated carbon filters are designed to work basically the same way by replacing positive ions with negative ions. Even certain allergies in the air can affect your brain's function and show up as outward physical signs that may impair, from time to time, our physical appearance. Facially, you may experience bags or dark circles under your eyes, ear lobes may look red and red patches may sometimes appear on your cheeks and neck. Of all the elements that environmentally affect our brain power, lead may rank as the single, greatest environmental threat to human intelligence. While lead-based paints are still somewhat of a problem, car exhausts today remain the main source of lead ingestion. Lead is dangerous because 90% of the lead that you absorb won't budge from your body. A calcium-deficient diet may also cause the body to draw ingested lead from the bones, where it is apt to lodge, thereby freeing it to do damage elsewhere in the body. Older people, children and pregnant women are especially at risk when it comes to lead and the damaging effects it has on their bodies and brain power.

BRAIN POWER DRUGS

The biggest three brain power drugs are (1) caffeine, (2) nicotine, and (3) alcohol. Within minutes of being ingested, **caffeine** stimulates the adrenal glands to release hormones which energize the central nervous system and cortex, your center of intellect within the brain. Many times, however, the short-term lift of caffeine from coffees, teas, and colas can turn into long-term "blahs" once the lift is gone. Whether you realize it or not, this roller coaster effect is not at all conducive to peak mental performance.

Nicotine, the second of the "Big Three" brain power drugs, is a poisonous substance that has long been used by chemical companies as an insecticide. The stimulating effect of nicotine on the brain doesn't last long (from 15 minutes to, in some cases, a half hour). An excellent "substitute" for nicotine, that produces the same effect on the brain, is an aerobic workout (though many smokers won't think twice about trading their cigarettes for a pair of gym shorts!).

Alcohol, the last of the "Big Three" brain power drugs, is sometimes referred to as the "gifted" chemical. Depending upon how much is consumed, alcohol can act as a food, drug or poison to the brain. At low dosages, alcohol increases the excitability of neurons and elevates *acetylcholine*, a well-known, neurotransmitter which is involved with memory function in the brain. However, after an initial period of alcohol stimulation, the acetylcholine level it produces drops and fatigue sets in. The trick to using alcohol as a brain stimulant is to drink just enough of it to stay on its "friendly" side and no more.

Besides impairing memory, alcohol interferes with the transportation, absorption and utilization of many needed nutrients in the bloodstream.

BUILDING A BETTER BRAIN

Just like a muscle, the mind will stiffen if it is not exercised frequently. There is now startling new evidence that the brain grows stronger, even physically larger, with regular use. The expansion of the brain is due to the increase in *dendrites* or tiny finger-like projections which protrude out on the sides of neurons which encompass each brain cell. The growth in dendrites allows more neurons to come in contact with one another so electrical impulses jump more easily between cells. Studies in neuron anatomy show that the adult brain sprouts these new "connections" between cells in order to meet the demands placed upon it by a stimulating environment. Reading is one of the best activities to keep your mental skills sharp. Learning poetry or a new language also helps to improve your brain power. Even physical exercise has been shown to help improve your brain power. In recent years, researchers have noticed that physical "inactivity" is accompanied by electrical and chemical changes which, in effect, numb the mind. The problem of losing some of your mental alertness is never really age-related. It is related, however, to boredom, routine, and to the danger of not "living" at all. Therefore, if you value your wits, don't act your age! Physical exercise has also been found to influence the flow of your body's *psychoactive* chemicals. These chemicals have been shown to help lift your mood and spirits. The more strenuous the exercise you participate in, the bigger the impression it will make on your mind.

Exercise helps with blood flow to the brain by helping to enhance your *cardiovascular* system. It also helps to reduce harmful fats in the arteries by clearing cholesterol from your blood vessels. Physical exercise helps to expand the size and quality of air supply to the brain by expanding your lungs, too. The brain needs oxygen to oxidize glucose in the production of electrical energy, that sparks our thoughts and feelings. Proper sleep is still another way to help build a better brain. Sleep, and its regularity, is vitally important to facilitate good transmissions within the brain. The **amount** of sleep needed, obviously, is different with every individual. Scientists have also discovered that sleep and wakeful mental activity seem to flourish at different temperature extremes. The warmer you are, for example, the sharper your mind.

Stress is still another deterrent to our mental well-being. Stress affects your attempts to build a better brain by closing down your span of attention. It tightens you up physically by anesthetizing muscles, making them lifeless and useless. The single most important factor that has been found in reducing stress, and enhancing our brain power, is learning to not take life so seriously. Stress stands for "Salespeople Taking Real Estate So Seriously". By easing up, you will learn to live longer, too!

Meditation is an excellent way to reduce stress and, therefore, improve brain power. It is an application of "behavioral medicine" that some scientists believe changes the central nervous system by improving a person's *signal to noise* ratio in the brain. How? The mind tends to work more efficiently when it has less mental chatter going on. Meditation can also help you have greater conscious control over functions of your body that have

traditionally been described as involuntary. Blood pressure, heart rate, and functions of your digestive tract are just a few of the seemingly involuntary systems that can be brought under your conscious control, through meditation. Other methods of helping to control stress include muscle relaxation, massage and positive mental visualization. Of these three, **visualization** seems the best at reducing stress, as well as helping to dramatically improve our overall performance. It is much easier, for example, to recall a person's name than it is to recall an image of the person's face. This is because we code information, subconsciously, more through acoustics than by visualization. It is easier, however, to recall the details of a particular scenic view, and increase performance, by remembering an image rather than the verbal description of the image. Visualization helps you to stay focused "inside" yourself, without being distracted by outside noises. It means keeping the mind focused on the here and now, the colors, textures, sounds and "details" of your visualization, while letting your mind get away from anxious, stressful thoughts. Peak performance can usually best be derived when you are not thinking about it, but instead relaxing and "letting it happen" through focusing on the enjoyment of your senses and through the redirection of thought.

Many scientists and researchers believe that modern society, as we know it, has discriminated against us by educating only the left side, or left hemisphere, of our brain. Our educational system, restricted predominantly to reading, writing, and arithmetic educates mainly the left hemisphere of our brain, leaving half of the brain's high-level potential, *unschooled*. People learn better when their instruction combines the use of pictures and words to translate into high-visual retention images. Most of us function

primarily either visually or auditorially in processing information, thus giving rise to the fact that in each of us, we show tendencies of being more right or left brain oriented. Unfortunately, the two hemispheres of our brain make no attempt to cooperate with each other, with the left side not knowing what the right side is doing. Even though the two sides function independently, they are physically linked. There have been some unique discoveries in helping to educate both sides of your brain simultaneously, a few of which will be shared with you in this article. But first, let's take a moment and explore your memory.

KEEPING YOUR MEMORY SHARP

Memory is found all over the brain and is not stored in any single place. Though experts cannot agree on what memory is, most do seem to agree on why certain memories are either selected for retention or allowed to evaporate. Apparently, there are three stages to the way information is stored in our memory. First, we store information through *impressions*. Conversations, the sensations of touch, smell, and so on are all believed to linger on for some time in the brain, available for recall through our dreams or through hypnosis. Second, memory is stored in short-term *clips*. These *clips* are selected for storage because you, for some reason, invested your attention in them and they will only permanently stay with you if you take the initiative to *memory peg* them consciously into your brain. This is done, as an example, by repeating the name of an individual you just met several times in conversation. This technique includes using their name, consciously, in conversation within seconds after it is told to you, as well as **imaging** it into your brain with what I call "out-of-the-ordinary" thinking. If you wanted to remember my name, for

example, you might associate it with the image of a potato chip walking in the door of a Morrison's Restaurant. It may seem corny, but this "out of the ordinary" thinking does indeed work. The visual association it evokes helps the right and left brains' memory to function together, simultaneously. Short-term memory is a stage where we sort out, in the brain, information that the brain determines may or may not be important for us. You increase the chances of holding on to a piece of information in this stage if you recall it a few times soon after committing it to memory. You cannot, however, rush this process. If you want to remember something for recall in your short-term memory even weeks later, you cannot rush the memory process through "cram" sessions.

The third stage is that of "long-term" memory. This stage is particularly vulnerable to impairment as we age. In the brain, loss of long-term memory is basically caused by (1) how the item was *registered*, (2) how it was *filed*, or, (3) how it was *retrieved*.

Mnemonic systems help with how information is registered in your brain by making an association with something off-color or already stored there. For example, every pilot knows that before landing they must GUMP; **G**as (check fuel selector valves), **U**ndercarriage (drop landing gear), **M**ixture (fuel to full rich) and **P**rop (full forward).

Rhyme and rhythm are also handy mnemonic memory aids. "I before e, except after ?".

Sure, you have the answer to this because we all memorized this simple rhyme in elementary school. Additionally, if you want to remember something, make up a story about it, or invent a picture of it to help "peg" it into your memory. *Chunking* is still another method that has proven to be a very effective way of enlarging our memory capacity. For example, to remember the numbers 2, 6, 4, 7, 9, 8, *chunk* (or group) them

into 26, 47 and 98. Nine *chunks* is usually about all our minds can handle. Each of these different memory retention methods can produce results but no two people will find them equally valuable. Experiment with them and use the systems which best suit you.

One of your memory's worst enemies is stress. Meditation, exercise and yoga are all helpful in reducing stress so the brain can re-focus on memory. As a speaker, I sometimes use *out of the ordinary* thinking to defuse a serious memory loss so I can function again. If I am speaking before a group, communicating and "thinking" simultaneously in front of them, and suddenly go blank, I look around at the audience and imagine that everyone but me, is wearing large, red clown wigs. It lightens me up, reducing the stress that may have built up inside of me, helping me regain my train of thought, and puts me back on track again. I'll stop and smile, take a deep breath and then continue onward. This *out of the ordinary* thinking allows my memory to almost immediately begin functioning again. I have also found that deep breathing helps to slow the pace and gives me time to allow important points to re-flow and more quickly "come to mind".

LEARNING TO BE MORE CREATIVE

Creativity is a mental capacity, much like memory or concentration, that can be developed at any age and one that depends on an investment of both patience and work. It is not only an art, but is a skill that can be taught to almost anyone. Creativity is the capacity to imagine or invent something new. Creative ideas don't come from *beyond* but rather from *within*. We are creative whenever we decide to open ourselves up to anything unknown. Even taking a different way home from work counts as being creative.

Creativity, though, also involves risk. In many cases it is threatening to people who take great comfort in the "status quo". It also takes courage on behalf of ourselves. Some psychologists believe that we create only when driven to do so, by the subconscious forces within us. There certainly is no shortage of painters and writers who had well-known problems with depression, alcoholism and stormy relationships, only to be driven "inside" to ultimate success. Others believe that when harmony occurs within a person's body and mind, harmony also occurs within the person's external world. Intelligence and creativity, however, are two entirely different things. Albert Einstein, as an example, was a "failure" in school. He flunked math. Rembrandt's IQ was no more than 110. Yet, both became highly creative and are recognized for their accomplishments for society.

Creativity, over the years, has often been associated with those individuals who have unusual lifestyles. Inventive geniuses have tended to be labeled as "strange", but superior. This is predominantly true because our right brain, responsible for creativity, is also our wild side; undisciplined, mystical, pictorial and child-like. The right side is able to unite seemingly unrelated bits of information, constantly shifting and sorting them into a variety of patterns that it offers to the left side as a means of making sense out of the world. The right brain suggests various ways of interpreting the world and the left brain picks the patterns it logically feels is best. The reason for this is that our left brain is responsible for the step-by step development of the thought process. For the most part, the left side also controls language and is the symbolic side of the brain. Furthermore, it is generally the dominant side, suppressing the right brain so completely at times that it often seems to be our complete "self" .

The right brain, while possessing the ability to create new patterns, lacks the verbal talent and dominance that the left brain has, in order to make us *aware* of the creative process. The left brain is, in fact, that little voice that talks to us all. The right brain is linked to the unconscious and connected to dreaming. Science has discovered that creativity is not "magic", but the result of increased interplay between the right and left brain.

One way to improve creativity is through the use of what I call **lateral** thinking. Most of us spend too much time on the *processing* of information and not enough on *perception*. Lateral thinking emphasizes the use of perception by involving skills that help us to look at the world in different ways. Lateral thinking helps us organize the information, through structure and association, making it easier to enter and retrieve information in your long-term memory, by making it more meaningful.

The creative process of lateral thinking has four distinct steps. The first step is known as the *preparation stage*. Usually the person expecting to gain new insights in creativity must already know well his or her own field. This explains why invention normally comes only in a person's chosen field of specialization. Since poets seldom seem to have visions about how to fix their own cars (only their own poetry), this has lead theorists to speculate that creativity is not some random revelation, but only the mental shuffling of what we already know into newer, more productive, patterns.

The second stage of creation is call *incubation*. Many great ideas have come only after a

period of time is spent away from the problem. The "click" or "flash" of brilliance surrounding a new idea is considered the third stage of creativity. This is known as the *illumination stage*. The fourth and final step in creativity is known as the *verification stage*. This is seeing that the actual idea, in fact, solves the problem.

The secret to lateral thinking involves following a pre-determined checklist of six specific items to help illuminate the creative process. The six items, combined together, help to address both right and left brain creativity. The steps include, (1) stating, (2) drawing, (3) smashing, (4) creating, (5) rearranging, and (6) re-visiting.

Stating is simply the process of defining, through written words, the specific problem to be solved. Once you have fully addressed the issue or problem which you wish to solve, then draw it. **Drawing** allows the right brain a chance to show, at its best, the creative process. Sketching out the problem in pictures "stimulates" the right brain. Next, **smash** the idea, or problem. Do this by answering questions about the problem that include the use of the following *empowering* words. These include, but are not limited to: Who, what, when, where, why, causes, strengths, weakness, types, parts, images, abilities, emotions, likes, dislikes, senses, sounds and characteristics. These empowering *trigger* words should be referred to again and again when smashing any problem.

After smashing the answer by using empowering words, then create. **Creating** is finding "solutions and uses" for the smashing ideas you have thus far come up with. Next, **rearrange** your discoveries into more "logical", left brain oriented, patterns. Just as you

put aside edge pieces, color combinations and like kind items in solving a jigsaw puzzle, you do the same in lateral thinking with the creative ground work you have already developed up to this point. Lastly, **re-visit** the problem by looking at it through the use of pyramids, chains, circles and connecting lines. Use pyramids to place your information in order of priority from top to bottom. Chains are connecting links between bits of information you have uncovered which represent sequences of events that do not repeat themselves. Circles are a series of events, in the uncovered information, that do repeat themselves. Connecting lines show the natural flow to, or between, the pyramids and circles of information you create.

By doing this simple brainstorming exercise with tough problems, you will find that your creativity towards solving any problem will dramatically increase. Use this "lateral thinking" formula to solve problems at work and in your relationships. Use it to increase productivity, help plan a wedding, or even a vacation.

You can also increase your mind's creativity through a workout of mental exercises. Just as you need to exercise your body, you need to exercise your mind. These exercises may include such tasks as encouraging your mind to provide imaginary movies, and then play them back while manipulating the images and scenes until the "movie" becomes a usable source of information for your work. This *creative daydreaming*, or visualization, can be more greatly enhanced when you reinforce your visual imagery with the use of the other senses as well. Learn to smell it, taste it, touch it, hear it and see it, but **don't** think about it. Just as with memory, by incorporating the use of all of the senses in creative

visualization you are expanding the development and use of your right brain. In order to play better golf, for example, try my "hit and run" theory. Just before you draw the club back, loosen your grip so the club feels relaxed in your hands. Breathe in deep and "smell" the freshness of cut grass (this helps to divert your attention away from the actual *thought* process of golf). When you smell it, while breathing in a second time, draw the club back and as you reach toward the top of your swing, say out loud the word "hit". Continue down through the swing and as you finish the swing, say "run". What possible good can this do? Plenty! First, it gives your verbal left thinking and rational side of your brain something to do. Your mind wants to think and say something, so give it something absolutely **harmless** to say and focus on that does not interfere with the "body" or right creative side, which we need so much in playing the game (whether it be golf or the game of life).

The result? You put both sides of your brain to work for you simultaneously. You "lose" yourself in the actions you say out loud, continually allowing yourself to break many of the false limits placed on you by your "logical" left brain. Your awareness becomes acutely heightened, while anxiety and self-conscious thought are completely forgotten. Total enjoyment of the game is, therefore, at its peak, pure and simple. I invite you to try this simple exercise with other types of activities, too.

The reason why visualization and sensory imagining seems to work so well in improving our creativity is because a good majority of our memories are stored in our subconscious and are found mostly in our non-verbal right brain. Scientists believe that these pictures

are stored in three-dimensional form, similar to holograms, or three-dimensional images that appear to "float" in mid-air. Additionally, using all of our available senses in imagery helps us to use both hemispheres of our brain, thereby letting *brainstorms of creativity* happen when least expected. In developing your creativity, stop worrying about the past and future. Learn to become completely immersed in the present. Worrying about the past brings on guilt and worrying about the future brings on anxiety. Either emotion can "gum up" your creative machinery. The more creative you become, the more internal peace you will have with yourself.

Start today turning on, tuning and turning up your brain power. Your increased intelligence and creativity will truly be electrifying!

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