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Brain Fitness 2

Introduction

Brain vitality and agility is vital for success in daily life for everyone, whether you are a student, professional, a stay-at-home-mom or are retired. This BRAIN FITNESS 2 CD-ROM contains fun and innovative exercises and tools that will provide your brain with a full mental workout.

Your brain requires novel and complex stimulation to build brainpower. This program provides just that! In just 20 minutes per day, BRAIN FITNESS 2 will help increase thinking ability, prevent brain aging, and hone all five cognitive functions of memory, language, concentration, visual/spatial skills and executive function. Moreover, it will provide you with the tools to monitor and track your progress.

How it Works

The way to improve is to continually challenge yourself. As you develop your abilities, BRAIN FITNESS 2 will automatically adapt to your progress and present ever increasing challenges. It is satisfying to succeed quickly and effortlessly, but the key to creating new neural pathways and keeping your mind sharp is to challenge yourself and “push the envelope”. You’ll see the coach recommendations highlighted by a yellow star as you start each new game. The yellow star designates the level of challenge we believe you are capable of, based on our scientific analysis of your past performance.

BRAIN FITNESS 2 will keep you informed of your progress as you perform the exercises (AKA Play the Games). Get your friends and family to play as well. Cultural memory, long-term memory, concentration, reasoning, and visual and spatial skills will all be tested in the Warm Up exercises.

BRAIN FITNESS 2 will also track your progress on the Warm Up exercises and will assign "Weak" and "Strong" areas to your tasks in the Coach area.
In the Coach session, choose from a variety of short and long exercises based on themes such as Strengths, Weaknesses, Random Workout, etc.. You can also attempt the "Total Workout" in the Coach section to challenge a broad spectrum of cognitive skills. Strive for the Challenge Sessions in Memory, Logic or Concentration and finally achieve cognitive ultra sharpness with the Grand Slam workout.

**Features**

- Developed by a team of leading doctors led by Dr. Bernard Croisile
- 12 Unique Exercises with multiple difficulty levels
- Hundreds of hours of unique exercises
- Cross functional training in all 5 major cognitive functions
- Variety of Coach Sessions - Warm Up, Total Workout, Special Challenges
- Track your performance improvements
- Review your performance against your peers - those in your same age, gender and education level
- Get detailed global performance reports emailed to you on demand
- Maintain all your performance results if you upgrade to HAPPYneuron online

**Benefits**

- Remember More
- Concentrate Better
- Think Sharper
- React Quicker
- Increase Confidence
- Sharpen Processing Speed

**Minimum System Requirements**

- Computer: PC (this product does not run on Macintosh)
- Operating System: Windows 95/98/ME/ME/2000/XP/Vista and NT - SP4
- Processor: Pentium 700 processor or higher
- Memory: 512 MB RAM
- Disk Space: 50 MB
- Display: 800 x 600, 32 bits
- CD ROM Drive: 4 x CD-ROM
- Sound Card, Keyboard, Mouse
Ancient Writing

Game Description

Compare ancient writing characters (Egyptian, Maya ...) or other writing systems (Japanese, Thai ...) and pick out the different characters. In this activity, it is critical for you to pay close attention to the characters. You must distinguish a set of characters and memorize them. From a second set of characters, your task will be to figure out which characters were not present in the first set.

Cognitive Function Exercised

In addition to your visual memory, this exercise primarily stimulates your attention, which is the cognitive process of selectively concentrating on one aspect of the environment while ignoring other things. Further, this task will stimulate your concentration and your visual analysis of the shapes of characters. Visual scanning skills and your ability to attend to detail will be put to the test.
Benefits to Daily Life

Whenever we are presented with a new set of symbols, such as when learning to navigate traffic signs for the first time or when learning a language with a unique alphabet, we use the skills from this activity. As humans, we are unique in how we use symbols and characters to represent our world. It is part of our innate ability to learn and create languages.

In terms of attention, consider everything that is stimulating your senses as you read this sentence. Perhaps there are background noises or a conversation nearby, the aromas of food or pangs of hunger, distractions in your peripheral vision, thoughts of things to do, recent conversations or events still fresh in your mind. Paying attention is resisting distractions.
Bird Songs

Game Description

Learn to recognize bird species by their song. You'll need to discriminate between images of different species of birds and also between different types of songs. At times, these differences may be subtle, which makes this task especially challenging.

Cognitive Function Exercised

This is a cross-modal task mainly involving the right tempo-parietal regions of the brain. The purpose of this game is to draw upon our working memories of visual and auditory characteristics of each bird, to practice visual-spatial scanning of the images on the screen, and to practice concentration for this type of material. In some cases, deductive reasoning is needed in order to choose the right match, eliminating the choices that have already been made and those that are most obviously wrong.
**Benefit to Daily Life**

In an increasingly noisy world, the ability to detect meaningful sounds in the midst of general background noise becomes very important. Our ability to distinguish such sounds can become less precise as we age. This game helps train the characteristics necessary to stay sharp in this area.
Decipher

Game Description

You are asked to decipher some famous quotations where the letters have been replaced, either by other letters or by symbols. To make the exercise easier, it is a monographical substitution in which each letter is always replaced by the same letter or symbol. Cracking these secret codes are perfect practice if you like mysteries or for the James Bond in you!

Cognitive Function Exercised

The primary brain area exercised is the pre-frontal and frontal cortex. The executive system is thought to be involved in processes such as planning, abstract thinking, cognitive flexibility, rule acquisition, initiating appropriate actions, inhibiting inappropriate ones, and selecting relevant sensory information. This deciphering exercise requires the collaboration of various cognitive skills: concentration, language (spelling, grammar rules, letter frequency), logic, and the capacity to make deductions from hypotheses.
Benefits to daily life

The dynamics of executive functioning influence our performance at school, on the job, our emotional responses, personal relationships, and social skills. However, executive functioning develops a little differently in each of us; each individual is uniquely stronger or more competent in some cognitive control areas and weaker in others.
Embroidery

**Game Description**

In this language game, a table with sixteen boxes appears and each box contains a letter of the alphabet. You must find the word hidden within the scramble of letters. You can choose seven, eight or nine-letter words. This is a deceptively challenging game, so clues are provided to help you find the correct answer.

**Cognitive Function Exercised**

The areas of the brain at work are the occipital lobe for processing incoming visual information and the left temporal lobe for language, verbal memory and information retrieval. Some exercises are more difficult than others as they simultaneously call upon several different skills. To succeed at this task, you will need to combine visual scanning and semantic memory. Many people process most language information using the left side of their brain.
Benefits to Daily Life

The skills called upon in this exercise are constantly used in our daily lives. For example, scanning for your name on a class list or scanning a monitor for airline flight departures to see if your flight is on time. Crossword puzzles also train your skills for word retrieval. It is about mentally searching through the language repository stored in long-term memory.
Heraldry

Game Description

The emergence of heraldry occurred across Western Europe almost simultaneously. Over time, distinct differences developed between the heraldic traditions of different countries. In this exercise you have to memorize the various elements in a coat of arms, with more or less complex shapes, colors and patterns. In addition, a distracting intermediary task intervenes to disturb the memorization process to give you more challenge. Let's see if you can distinguish the various shields, tinctures, ordinaries, crests and charges.

Cognitive Function Exercised

This exercise helps strengthen visual memory, spatial memory and visual concentration. Visual memory is a part of memory preserving some characteristics of our senses pertaining to visual experience. We are able to place in memory information that resembles objects, places, animals or people in sort of a mental image. Spatial memory can be considered a subcategory of visual memory because it relies on a cognitive map.
**Benefits to Daily Life**

We rely on visual memory to remember the details of everything we see. Remembering city landmarks, recalling the logos on grocery products or bringing to mind the shapes of various traffic signs all entail use of this function. Spatial memory, by contrast, entails recalling objects in relation to one another; for example, locations on a map or the positions of stores in a shopping mall. Concentration is involved in both functions since the abilities to store visual and spatial information in memory depends on the capacity to hold a visual display in mind long enough to process and record the details of what we are seeing and experiencing. Concentration is fundamental for a good memory.
Game Description

The task consists of a double ordering task. At the simplest level, you are presented with letters or words that you must put in alphabetical order. At the more complex level, the task involves alternating between words and numbers or, between two words from different categories. The difficulty and the interest lie in the skipping from one to another in a limited time.

Cognitive Function Exercised

The brain area exercised in this game is the prefrontal cortex. This exercise requires mental flexibility, inhibition, and sequencing abilities. In addition, this task requires visual-conceptual and visual-motor tracking. It also entails motor speed and attention functions. This game requires problem-solving skills that call on the brain’s executive functions. You must define a strategy to reach a desired outcome, calculate the right moves to reach the solution in the shortest possible time, and remember the rules of the exercise.
Benefits to Daily Life

Are you a multi-tasker? If so, you are able to shift your attention from one task to another without losing track of information. You are able to focus and sustain your attention while organizing and prioritizing information. These abilities are found in air traffic controllers, culinary staff at a busy restaurant and even chess players. In everyday life, you may use your executive functions when you are reorganizing your financial files or preparing the house for the holidays by simultaneously cooking and cleaning when everything has to be ready at a different time!
Points of View

Game Description

In this game, you are invited to train your abilities in visual-spatial representations. There are two steps to this task: first, deduce the location of the observer on a map according to what he sees and, second, deduce what the observer sees according to his location on a map. It is not always easy to mentally perceive the accurate 3-D spatial representation of a landscape from a map, or of a monument from a plan.

Cognitive Function Exercised

The parietal lobe integrates sensory information from different modalities, particularly determining spatial sense and navigation. This enables regions of the parietal cortex to map objects perceived visually into body coordinate positions. The parietal lobe involves functions such as the ability to discriminate between sensory stimuli, the ability to locate and recognize parts of the body and spatial orientation.
Benefits to Daily Life

Location, distance, direction, and perspective are characteristics of spatial orientation that affect how we gather, process, and express information. In everyday life you apply these skills when you are driving, when you are in a new environment, or reading a map. If you are designing your own house you will need to draw a floor plan or diagram of the rooms in your home as if you were looking down into the home through a glass ceiling. These skills would be essential. You may also use these skills when playing sports or dancing with a partner. Doubles anyone?
Private Eye

Game Description

You think you may be better than Sherlock Holmes or Inspector Clouseau? Well then, pull out your cloak and magnifying glass and exercise your sleuthing instincts with this conundrum. You will need a discriminating eye to peruse the grid full of intricate symbols and letters, and catch the sneaky suspect that does not belong. Find the impostor before the clock runs out. You can challenge yourself with various versions and levels of difficulty.

Cognitive Function Exercised

Primarily, this task will exercise your abilities for a specific type of attention called focused attention and concentration. Attention is the essence of focus. Any time you pay attention to something, and any time you ignore something, data is created in your brain. That data has value, but only if it's gathered, measured, and analyzed. In addition, this game requires good visual scanning and shape recognition skills.
Benefits to Daily Life

When you are rolled into the operating room at the hospital, you want to know that the surgeon is ready to concentrate on your procedure. When you board a jetliner for your next vacation destination, you want to know that the tower crew is attentive and ready to direct the pilot through dense airport traffic. Attention and concentration are vital in some professions. Even in our everyday lives, we all need to concentrate to avoid traffic accidents, to get the job finished, to remember important information. We also use our visual scanning abilities when we grocery shop, follow slide presentations at work or search for our child amongst many others when the bell rings at school. But with today's world filled with distractions, are we capable of concentrating as well as we used to? Find out for yourself with this game.
Seize the Keywords

Game Description
This exercise consists of reading a 10-line story and memorizing the order in which all the verbs appear. If you are attentive enough and understand the story, it is easy to remember the logical order of the verbs (as verbs imply action). Then, all the verbs are listed at random and you are asked to place them in the correct order, as found in the text.

Cognitive Function Exercised
The left tempo-parietal region is the main area at play in this game. This task exercises your linguistic aptitude and your episodic memory. The aim is to train your written comprehension skills and your memory for events, times, places and associated emotions by focusing on the key words and finding the logical links between them.
Benefit to Daily Life

This exercise will train your comprehension (receptive language) skills and provide practice putting a sequence of events in order so as to remember better. For example, whether you are trying to understand a difficult passage in a novel or recounting an important event, you will need these skills.
Shapes and Colors

Game Description

Strengthen your visual memory with this game. You must first memorize 6, 8 or 10 figures of various shapes and colors and then recognize them among slightly different ones.

Cognitive Function Exercised

This exercise calls upon your visual short-term memory. The primary area of the brain exercised is the right temporal cortex and the parietal regions. Visual short-term memory enables the brain to store visual information such as shapes and locations of objects.

Benefits to Daily Life

This exercise demands attention to detail and the use of discrimination and differentiation for shapes. Every day we encounter a myriad of different symbols and logos, including traffic signs, markers for shops and stores, even computer icons!
This Story is Full of Blanks

Game Description

Be an editor for a day by going through a text in which words are missing. You must then choose the correct word out of a list of words provided. To make it more creative and interesting, you can choose between prose, drama or poetry.

Cognitive Function Exercised

The main brain area at play is the left temporal lobe where the seat of language is located for most people who are right-handed. This exercise requires concentration, a solid vocabulary and good semantics which refers to aspects of meaning, as expressed in language.
Benefits to Daily Life

Everyday, we use the various aspects of language, oral comprehension and expression, and reading and writing. We exercise our vocabulary and grammatical skills when we write a letter, an essay or a report. We try to carefully choose the right word that expresses what we mean. On a daily basis we need to build coherent texts and in order to do that we must judiciously choose relevant and grammatically correct words out of our repertoire.
Writing in the Stars

Game Description

Heavenly inspiration is required for this new twist on the old cross-word puzzle. You are given a list of nine words. Only six of them connect with each other to form the five point star.

Cognitive Function Exercised

This exercise aims at training your capacity for logical reasoning. In order to determine which 6 words to choose from the list of nine, you have to try a number of logical combinations to find which positions of letters are common to two or three words.
The main brain area involved in this task is the pre-frontal cortex. This game trains your “executive functions”. This term refers to a set of mental processes that are involved in goal-directed activity. Executive functions include: keeping track of several pieces of information at once, making flexible changes in the plan as needed, thinking creatively to come up with a variety of possible solutions and generating and testing hypotheses in a systematic way.

**Benefits to Daily Life**

To carry out a shopping trip, especially in an unfamiliar environment where you have to visit many different shops, is an example of a situation that requires "multitasking" in everyday life. Also, making travel plans, keeping track of all your appointments, engaging in group dynamics at work or at a social event, to evaluate a colleagues ideas and then to reflect on the work are all examples of executive functioning.