



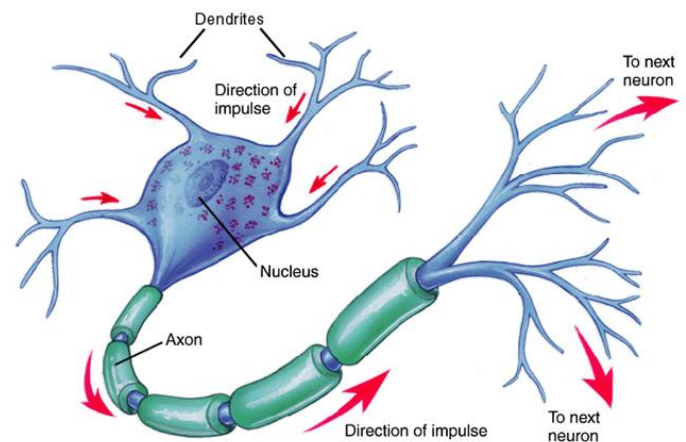
OPTIONS CENTER EDUCATION TOPIC



Physiological Basis of Brain Gym® Lecture on an audio tape by Carla Hannaford, Ph.D.

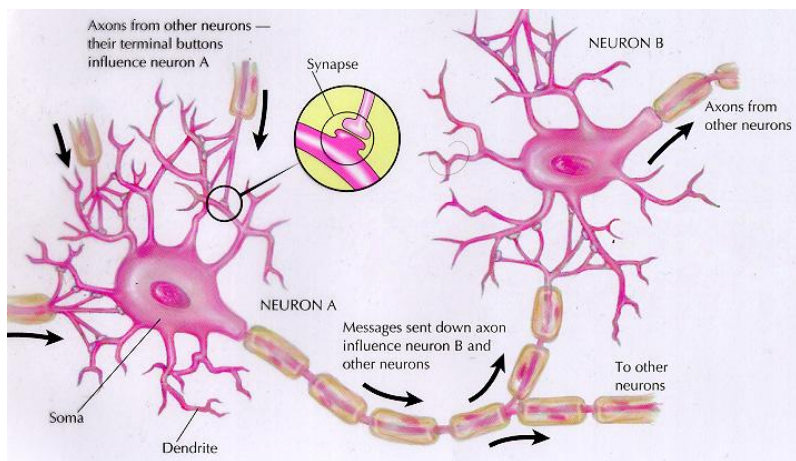
The more we move, the more interconnections we make with our brain--integrative, energetic thinking. This is how people learn, through movement. Hopefully, in the next ten years, education will catch up to that and it will be integrated into our school systems. Other systems of the body wake-up when you move. Then, you start to add sensory which then adds application and what happens? You learn. When we learn, we must be assured one of two things. One, that there is going to be something there to support us--that we can step out onto something that is solid. And two, we will be taught to fly. And I believe that Brain Gym® gives us both. It gives us that solid thing to step out on--the body mind connection. And it gives us wings to fly beyond our limitations.

Physiologists and educators throughout the world are looking at the fact that it is essential that we move. When you move, you start to stimulate the motor cortexes of the neuro cortex of the brain. When that occurs, you start getting a diffusion effect that occurs throughout the brain stimulating its various parts. This, then, affects your senses, your major thought areas, and your major memory centers.



In order to explain how kinesiology works you have to start at the neurons. Within your body you have between 10 and a hundred trillion neurons. These neurons are in place inside

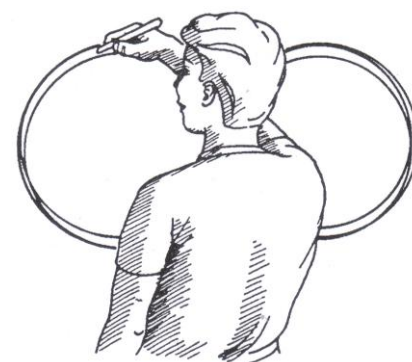
your body at the age of six months. After that, it is difficult to produce any more, although it has been proven within the last couple of years that it is possible. If you look at the picture of the neuron, you can see it has a cell body. It also has a long extension which is called the axon which is how the brain sends information from one area to another. The swapping of information from one area to the next is called impulses. These nerve impulses can travel at the rate of 488 feet per second.



So how does learning occur? It occurs through a system of neuron nets that are set up within the body. Babies are born with very few neuron nets, but as time passes and experiences occur the neurons start forming

connections. For instance, there will be a neuron in one spot for mom or the sound of her voice. And a neuron in another area for her face, one for the smell of her body, and maybe one for milk. All of those neurons start making connections, and as those connections are being made, the nerve net grows and grows creating a motor sensory pathway. The way you learn is by all the connections that come into you.

A Brain Gym® exercise called Lazy Eight's is for the eyes. You're relaxing the eyes which helps bring them into all visual fields, rather than only the peripheral field. So what does Brain Gym® do?



When doing Brain Gym® exercises, you're bringing attention to the fore brain and bringing blood up and away from those survival centers in the limbic and reptilian brain. All of the exercises, such as cross crawls, bring attention to the neuro cortex. They access the occipital lobe and when humming is added the temporal lobe is accessed as well as the neuro cortex of the two hemispheres.



Brain Gym® stems from the premise that a body-mind connection is monitored or managed in large part by the brain. The different parts of the brain have different functions and have specific connections in the body. By isolating different parts of the body and working with them simultaneously, specific parts of the brain are stimulated and integrated because they have been forced to work together. The results include improved whole body coordination, balance, relaxation, improved hearing and visual perception and more positive attitudes. Although written specifically to assist children with learning, reading or writing disabilities, the basic principles involved can be transferred to all ages.

Source for Lazy Eight drawing: *Alternative Health Care: Space Age Interpretations of Age-Old Truths*, pg. 143.

Source for Cross Crawl drawing: *Alternative Health Care: Space Age Interpretations of Age-Old Truths*, pg. 141.

**The preceding was taken from an audio taped lecture by Carla Hannaford.*

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