

ALPHABETICAL BRAIN™ VOCABULARY
HUMANIST FAMILY BRAIN STUDY

DETAILS ABOUT YOUR AXONS

Brain Flash Card #4

September 4, 2018

WHAT ARE YOUR AXONS?
AND WHY ARE THEY SO IMPORTANT?

Your *axons* are the *thin threadlike fibers* called axon filaments, which extend from each cell body of your **100-200 billion neurons** to other *neurons*, or to your muscles, or senses, or internal organs, or glands, through special end terminals known as *axon terminal buttons*.

All of your **100-200 billion neurons** have nuclei (plural for "nucleus") capable of sending action potential spikes (ionic signals/impulses) to other neurons, muscles, senses, internal organs, or glands.

The *action potential spikes of biochemical current* (signals/impulses) that are generated by the *nucleus of a neuron* can cause neurons to connect with each other or with your muscles, senses, organs, or glands in order to activate them. They can flow through very short or very long filaments.

For example, your sciatica nerve, which is the longest nerve in your body, sends biochemical currents from the cell bodies in the *neuronal pathways* of your lower back down your two legs to the end terminal buttons at the other end of the *two axon filaments*, which both terminate at the back of the heels of your two feet.

Typically, at least **10,000-15,000 synapses** can attach to the end terminal buttons of an axon filament, but there can be as few as a single neuron for memories of some celebrities seen many times or revered relatives such as parents and grandmothers.

RECOMMENDATION: Print this pdf version and read it. Underline or color highlight the most important brain ideas to save them in your long-term memory. Then re-read your mashup of these ideas in a few hours and a few times during the next few days to take advantage of the *spaced-repetition* method of learning.

Voila! You will be able to use them in your serious introspective thinking about your *self-identity* and feel them in your *self-awareness*.

NOTE: neurons #2, dendrites #3, nucleus of a neuron #5, glial cells #6, synapses #7, plasticity #10, cerebrum #11, and prefrontal cortex #12.