Much like the rest of our physical anatomy, our brains will alter and adapt to changes in the environment. Neural plasticity, Neuroplasticity, or brain malleability, is the brain’s ability to create and reorganize neurons due to injury or disease (American Heart Association, 2013). Damage occurs to the brain during a stroke, and different strokes damage different areas of the brain, but all strokes have similar recovery paths. Stephanie, age 43, suffered a hemorrhagic stroke due to uncontrolled hypertension, or too high blood pressure. The best chance a person has to recover is by having their symptoms quickly identified, but the indicators of a stroke can be missed. In Stephanie’s case, after-care is crucial to rebuilding her neural plasticity. Depending on the area of the brain where the stroke occurred, Stephanie may endure long-term disability and several difficulties.

Stephanie’s stroke

When a stroke occurs, blood flow is drastically lessened, if not completely cut off. This kind of brain injury can be fatal or lead to serious physical and cognitive implications. This is why a stroke is a terrible occurrence. While Stephanie was undergoing a stroke, she suffered ischemia, which deprived the neurons of oxygen and glucose. This also impaired the sodium-potassium pump, a process in the brain which caused the neurons to fill with sodium; this made an excess of glutamate that over stimulated her neurons. This chain reaction can cause the neurons to die. Neurons are made up of the cell body, known as the soma, along with branching dendrites that are used as signal receivers, and an axon. The axon is used to conduct the nerve signal (Kalat, 2015).

After experiencing something that can do so much harm to your body and your internal organs, such as a stroke, it is important to start looking into means of rehabilitation. To rebuild neuroplasticity, repetition is key. Knowing where the stroke