

Motor Recovery after Stroke: The 3 Keys

October 9, 2015



Motor recovery after stroke involves practicing your rehab exercises *while also applying these 3 key concepts*:

- Neuroplasticity
- Repetition
- Feedback

Once you start applying these 3 factors to your rehabilitation efforts, you'll be able to reap much larger benefits from your rehab exercises. You'll be working smarter so that you don't have to work harder – although, your body always appreciates hard work. Let's get to it.

Neuroplasticity Helps Improve Motor Function after Stroke

The most [fundamental concept](#) behind motor recovery after stroke is [neuroplasticity](#). While we wrote a whole article on the phenomenon, we'll summarize the important stuff here.

Let's say that your brain is an office full of file cabinets that each contain information about a particular task or interest. When a stroke occurs, it damages some of the file cabinets and prevents you from accessing the files stored in it.

For example, if the damaged file cabinet contained all the documents on fine motor skills, it would make it hard for you to move your fingers because your brain can't access that information anymore. That's when neuroplasticity comes into play.

Neuroplasticity allows your brain to transfer functions once held in damaged areas of the brain over to new, healthy areas of the brain.

So using our office example, neuroplasticity allows you to take the information from the damaged file cabinet and move it to a new file cabinet where you can access it like normal again – it's just in a new place.

As you can see, this phenomenon is highly beneficial for stroke recovery. Now let's discuss how to get the most out of it.

Repetition Reinforces Neuroplasticity to Improve Motor Function

With neuroplasticity, you'll be able to move information from a damaged file cabinet to a new one.

The only catch is that the new file cabinet is in a completely new location – and you were *really* used to it being in the old file cabinet.

So remembering to look in the new location will require constant reminders and plenty of reinforcement to help your brain remember where it put the information.

To help your brain get used to the new placement of information, you'll need to utilize a high number of *repetitions* during your rehab exercises.

“Oh great. More work.”

If that was your first reaction, hang on there – it's not quite what it seems.

Yes, you'll be working more, but you'll also be working smarter; and in the long run, **you'll end up working less.**

You see, when you [repeat your rehab exercises](#) over and over, it helps reinforce the motor skills that you're relocating.

If you were to get lazy and allow too much time to pass between rehab exercises, your brain will have a very hard time remembering where the new file cabinet is – requiring much more effort down the line.

So when you're diligent about your rehab exercises now, you'll have an easier time accessing the relocated information later.

And the more you practice, the easier it will get. (Just be sure to get [adequate rest and sleep](#), of course).

Feedback Allows Motor Function to STICK

Now let's discuss the [importance of feedback](#) for motor recovery after stroke.

While your brain is busy moving things around, it needs to know that it's doing it *correctly*.

So your rehab exercises need to have clear, visual feedback that you're doing it correctly or incorrectly. This is what will make your rehab exercises STICK.

For example, if you're moving beans from one bucket to the other to work on your fine motor skills, seeing the beans in the other bucket is visual feedback for doing it correctly. As long as you can see that you're doing your exercise correctly, you'll benefit from the exercise.

This is the principle behind improving fine motor skills with the MusicGlove, where you get direct feedback with each finger pinch. So make sure that your rehab exercises provide you with clear, visual feedback so that you can maximize your recovery.

And there you have it – the 3 keys to motor recovery after stroke.