

Neuroplasticity

Neuroplasticity is how the brain changes, or adapts, as the result of an experience. Aphasia therapy promotes neuroplasticity and allows the brain to rewire and adapt to an injury by rebuilding neural connections. Kleim and Jones (2008) have outlined 10 Principles of Neuroplasticity that help to drive the brain to change.

10 Neuroplasticity Principles for Aphasia Therapy

1. Use it or lose it

As suggested in the name if you don't practice communicating daily, your communication skills can decline. Clients have often reported this in the context of taking a break from therapy. Although clients may take a break from therapy, they may choose to come back for "booster sessions," particularly if their environment is not conducive to frequent social or communicative interactions. Consider long-term treatment maintenance schedules.

2. Use it and improve it

At the same time, the more you communicate, the more your communication will IMPROVE. This is why Aphasia therapy is beneficial to clients. Focused practice on areas of weakness allows the brain to change and improve those skills. It is important for therapy to focus on both specific and functional targets.

3. Specificity

Your treatment plan matters! Aphasia therapy must be specific and personalized to your needs. Focusing on one aspect of communication does not mean all aspects of communication will improve. It is also important for speech language pathologists to utilize stimuli and create contexts similar to the targeted tasks.



Neuroplasticity

4. Repetition Matters

Repetition is key to inducing change in the brain. While you may be sick of repeating the same task in therapy, your brain requires hundreds of repetitions for neuroplasticity to take place.

5. Intensity Matters

Intensive Aphasia therapy has been shown to be beneficial to Persons with Aphasia. Frequency of sessions, as well as length of sessions, can play a role in promoting neuroplasticity. Several of our clients choose to be seen 4-5 times a week to increase the intensity of their therapy. If a client is limited by resources (i.e. time, financial, transportation), home practice and functional communication activities can help to supplement your therapy sessions and increase intensity.

6. Time Matters

Persons with Aphasia will often see the most progress within the first few months following their stroke. Therefore, quality therapy can be crucial during this time to maximize neuroplasticity. Although timing is important, as spontaneous recovery is believed to occur within the first 6-12 months following a stroke, Persons with Aphasia can continue to make gains in their communication skills for years beyond their stroke with effective therapy based on neuroplastic principles.

7. Salience Matters

Individualized treatment materials are extremely important. Treatment programs should use personalized treatment stimuli so that a person with aphasia is motivated to participate in the therapy task, as well as see the value in the tasks for their everyday lives. Integrative Reconnective Aphasia Therapy often asks clients to send pictures of hobbies, family members or other interests so that these pictures and topics can be used during our treatment sessions.



Neuroplasticity

8. Age Matters

Younger brains are more likely to experience training induced plasticity. Although younger brains may have a greater ability to replace function, they have fewer established pathways to support learned behaviors. It is important to note that individuals of all ages can benefit from rehabilitation, but plasticity will operate differently at different ages.

9. Transference

Plasticity in response to one training experience can enhance the acquisition of similar behaviors. It is important for speech language therapists to encourage and promote generalization to similar treatment targets. Use a variety of techniques to target the same underlying deficit, and approach it from a variety of angles.

10. Interference

Speech pathologists typically see interference during therapy when treating Apraxia of Speech. As a client begins to master new sounds, you see previously mastered sounds decline in accuracy until the new sounds are mastered. As patients focus on one skill, you can see other skills temporarily decline.

