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"...the art of remembering is the art of thinking...our conscious effort should not be so much to impress and retain it as to connect it with something else already there. The connecting is the thinking; and, if we attend clearly to the connected thing will certainly be likely to remain within recall."

Talks to Teachers on Psychology; and to Students on Some of Life's Ideals, XII. Memory (William James, 1910).

William James (1/11/1842-8/26/1910), an American philosopher and psychologist.

Stroke Educator, Inc. is committed to educating the wider public about stroke and the 50 state "Aim High for Aphasia!" Aphasia Awareness Campaign.

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Aphasia Insights!

Speech Therapy for People with Aphasia (PWA): Homework is more than just homework.

By Tom Broussard, Ph.D.

As long as I can remember, I liked homework. It was fun and a challenge to me. In my mind, it made me feel like I was "accomplishing" something as small as it was. I imagine that many of us have acquired habits like that that work for us, without

really knowing how those habits developed. The habit of "liking my homework" likely continued into my post-stroke



Elementary school playground spinner

world without any conscious reason to act on it other than my habit to do so.

"--the universally admitted fact that any sequence of mental action which has been frequently repeated tends to perpetuate itself; so that we find ourselves automatically prompted to *think*, *feel*, or *do* what we have been before accustomed to think, feel, or do under like circumstances, without any consciously formed

purpose, or anticipation of results." (James, 1887).

After my stroke, I received a modest amount of "homework" from my therapist. There were 30-minute sessions (usually on Mondays and Thursdays) and I did two homework stints after each one. After several days without therapy (and, as a result, no homework), I could *feel* the absence (and as a result, the habitual *need*) for homework.

"It scarcely, indeed, admits of doubt that every state of ideational consciousness which

is either very strong or is habitually repeated, leaves an organic impression on the cerebrum; in virtue of which that same state

may be reproduced at any future time, in respondence to a suggestion fitted to excite it..." (James, 1887).

Of course, I couldn't describe it back then. It was just a feeling. But I acted on it (likely using the habits that I had created earlier) looking for more homework on my own. I did it with no conscious idea that the language activities (including my homework) were highly therapeutic. The activities *themselves* are the active ingredients of aphasia recovery and language improvement whether at therapy *or* at home.

The prescription for day-to-day homework (reading, writing, speaking) for PWA is very useful but rarely discussed.

The factors of the tool consist of (if not demand) persistent, repetitive, and consistent "homework" over months, if not years of activity that create (or maintain) the habits needed to continue to learn.

It requires the discipline and the effort to sustain the continuity that is needed over and above the therapeutic activities provided during therapy sessions.

Conventional speech therapy "homework" doesn't do anything to prepare (or cram) for certain quizzes or tests at the next session. The "homework" is the *process* itself.

If the "homework" isn't persistent, repetitive, consistent, and daily (i.e., writing in a diary, speaking, reading, or recording one's voice), then the growing aspect of the subsequent learning will be less.

PWA's language deficits often do improve over time, but without any real understanding of the *process* by which improvement occurs.

In many ways, it just "happens" without any overt conversations (with the therapist or the family) to create a strategic plan to "work on this or that" and identify the real

prescription that requires months (or years) of practice and work to establish the continuity of activities leading to ongoing neural plasticity.

"A tendency to act only becomes effectively ingrained in us in proportion to the uninterrupted frequency with which the actions actually occur, and the brain "grows" to their use." (James, 1887)

Many PWA (myself included) are not aware that their day-to-day activities are part and parcel of the cascading effect of experience-dependent neural plasticity. Habit drove me daily in a way that the activities of intermittent speech therapy could not.

We have the tools, but we have to *use* them persistently, repetitively, and consistently to induce and maintain plasticity. Daily homework is a necessity to acquire the habitual activities that are needed to undertake lifelong learning and personal therapy for life.

The elementary school playground spinners are a useful metaphor for aphasia recovery and the persistent, repetitive, and consistent homework that is needed.

Once the spinner is up to speed, it doesn't take much to keep it going. A regular, persistent "push" keeps the speed up for much less energy and effort than the start. Homework is one of the many pushes for aphasia recovery.

"The next result is that habit diminishes the conscious attention with which our actions are performed." (James, 1887).

Formal therapeutic activities likely induce a plasticity spike that fades without the next "push." Day-to-day homework maintains the persistent stimuli (experience-dependent activities) and continuity that keep the spinner going.

Homework is more than just runof-the mill *homework*. It cannot be an option or an afterthought. Homework (for people with aphasia) requires a continuous push to keep and sustain the neural machinery, spinning on day one.

Signed: The Johnny Appleseed of Aphasia Awareness.

References:

James, William. The Laws of Habit. *Popular Science Monthly*, Vol. 30, February 1887. 1-16