



CIAT

Prof Friedemann Pulvermüller

Intensive communicative aphasia therapy

We have developed a **new method for the therapy of aphasia**, which practices language in communication context in an intensive manner. The new method has been called Constraint-induced aphasia therapy, or CIAT 1.

Constraint-induced aphasia therapy is based on principles from brain science: **Learning within the brain is best when we repeatedly practise the skills we want to learn**. Learning is accomplished when nerve cells frequently fire together. The more frequently nerve cells fire together, the better we learn. For this reason, **language training is performed in a very intensive manner**, several hours per day (high therapy frequency).

We also know from neuroscience that the brain systems for language and action are heavily interwoven with each other 2. Hearing a word may automatically activate the motor system and performing actions may help us to understand words 3. Therefore, in the therapy, language is practised in the context of actions. **Language is used in games** where it is important to use and understand words, just as in everyday life.

Language therapy is administered three or more hours per day for two weeks, providing ample practise for participants. In so-called "language games" (often in form of card games), participants exercise basic and also more advanced language skills such as making a request, answering questions etc. Specific exercises and level of practise are tailored to the patients' needs. In a group setting, **participants help each other** out while practising these language skills. **Techniques and skills acquired in the therapy are intensively practised at home as well**.

We could demonstrate in a randomised clinical trial that **CIAT leads to language improvements, even in patients with chronic aphasia several years after their stroke** 1. In a neuroimaging study, we recently showed changes in the brain's processes of language after Constraint induced aphasia therapy 4.

References:

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