The goal of this thesis is to design an experiment that researches how frequency of use and grammatical structure affect sentence comprehension in speakers with aphasia. An additional objective is to verify this design in an experiment on healthy speakers. Introduction to the topic of aphasia is provided from a linguistic perspective, followed by a description of usage-based approach to aphasiology, which will be utilised in the practical part of this thesis. The practical part of the thesis consists of a corpus-based research on the use of reflexive constructions in Czech, followed by an experiment that tests comprehension of such sentences in healthy speakers. Using corpus data, a set of experimental items that can be used to test the comprehension of reflexive sentences was created. The experiment verified that the healthy participants evaluate the grammaticality of these sentences as expected in the vast majority of cases. The results of the experiment show a weak effect of sentence structure and no effect of frequency of use and verb lemma on comprehension. This indicates that healthy speakers find these sentences easy to process and that the design is valid. Based on these results, a design of an experiment that tests reflexive sentence comprehension in Czech speakers with aphasia is proposed.