

SACCADOMETRY AND MOVEMENT INHIBITION

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Abstract

To reveal some functional constraints of the saccade inhibitory neuronal circuits, we investigated the influence of response monitoring in human. The subjects were instructed to perform a stop signal task in which the probability of stop trial occurrence was manipulated. The purpose of the work was to evaluate the time course necessary to adapt the behavior to changes in the occurrence of stop signal. Our results show that humans are capable to spatially monitor the relative probability event of stopping and to finely and quickly modulate their ability to inhibit a response. These results have important consequence to apprehend pathologies in which, an inaccurate control of inhibitory process results in a loss of fundamental capability of behavioral adaptation.

Keywords: saccade, countermanding, spatial inhibition