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Eye movements change according to peripheral information

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We use our central vision to distinct a target from distractors, and peripheral vision is important in planning and controlling saccadic eye movements, therefore central information analysis and selection of next saccadic targets can affect saccades, fixation duration and time needed to complete the visual search task [Liversedge and Findlay, 2000, Trends in Cognitive Sciences, 4(1), 6-14]. Methods are developing to train saccades, fixations and information processing via magnocellular flow [Kanonidou, 2011, Hippokratia, 15(2), 103-108; Sireteanu et al, 2008, Annals of the New York Academy of Sciences, 1145, 199-211]. In our research, we want to know how peripheral information influences eye movements and task efficiency during a visual search task. A participant has to find specific letters in the visual search task that differs in peripheral information – distractors have different colour and/or thickness than the target. From the results, peripheral vision helps to find the most efficient scanning algorithm to find the target using less saccades and fixations. As far as peripheral information changes, there are changes in number of fixations, fixation duration or both. When distractors and targets are the same in size and colour, more time is needed to scan each symbol and find the target.