- Friday, March 28, 2008
  Age, context and eye movements

  As is the case with many physiological functions, most ocular motor functions undergo a period of development during infancy and childhood, a period of relative stability in young adults and a period of decline in older adults. However, how we test ocular motility affects the outcome and this also varies as a function of age. Ocular motor performance of children but not adults is greatly improved with targets considered to be of interest. Consequently, ocular motor capacity of children is typically underestimated when conventional "spot of light" targets are used. In adults the type of target appears to have less effect than in children but the presentation paradigm greatly alters performance. For example prosaccades (saccades toward the presented target) and antisaccades (saccades away from the presented target) have different latencies depending on whether they are presented in blocks of like tasks (eg all prosaccades) or mixed blocks (both pro and antisaccades). By varying the testing conditions, performance in adults can be degraded to a level below that seen in children. It is therefore important to consider both age and target/task when determining whether or not a given ocular motor behavior is normal. These findings also give us clues as to the development of the inhibitory mechanisms involved in ocular motor processing.

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