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The contribution of visual information to upper limb movements in older adults

Visuomotor coordination is affected by aging, especially so when task difficulty is increased. I will present data examining how both age and task difficulty affect eye-hand coordination during upper limb tasks. Data from a recent multi-phase prehension experiment where 12 older adults (mean age = 74) and 11 younger adults (mean age = 20) moved objects from one location to another will be discussed. Older adults took longer to complete their hand movements and reached lower peak velocities than the younger adults. Group differences were most apparent when task difficulty increased: during pickup, older adults preferred to make an eye movement to the next target as soon as possible, but spent longer fixating the current target during placement, when accuracy requirements were higher, suggesting they employed a task-dependent eye movement strategy. I will end by outlining how upper limb movements are affected when visual information on hand position is removed.