



## A cognitive-based model of tool use in normal aging: Which components are at work?

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Mots-clés Aging [6], Apraxia [7], mechanical knowledge [8], semantic knowledge [9], Tool use [10]

Résumé en anglais While several cognitive domains have been widely investigated in the field of aging, the age-related effects on tool use are still an open issue and hardly any studies on tool use and aging is available. A significant body of literature has indicated that tool use skills might be supported by at least two different types of knowledge, namely, mechanical knowledge and semantic knowledge. However, neither the contribution of these kinds of knowledge to familiar tool use, nor the effects of aging on mechanical and semantic knowledge have been explored in normal aging. The aim of the present study was to fill this gap. To do so, 98 healthy elderly adults were presented with three tasks: a classical, familiar tool use task, a novel tool use task assessing mechanical knowledge, and a picture matching task assessing semantic knowledge. The results showed that aging has a negative impact on tool use tasks and on knowledge supporting tool use skills. We also found that aging did not impact mechanical and semantic knowledge in the same way, confirming the distinct nature of those forms of knowledge. Finally, our results stressed that mechanical and semantic knowledge are both involved in the ability to use familiar tools.

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