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# Retrieval Practice Based On Recognition Memory: Testing the Retrieval Effort Hypothesis

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Background

- The finding that taking memory tests improves long-term memory and overcomes repeated studying is called retrieval practice effect or **« testing effect »**(1,2). While it has been much replicated within recall paradigms, a mechanistic account is still lacking. One way to move forward is to test predictions derived from current accounts
- The « Retrieval Effort Hypothesis » states that controlled (effortful) retrieval (e.g. recall) supports more elaborative and integrative processing than passive restudying, thus increasing the available retrieval cues (3,4)
- Since recognition memory involves much less controlled retrieval than recall, repeated recognition should not yield a retrieval practice effect, especially if familiarity alone supports recognition





+ Before final test, study duration was on average 11 minutes in the « Study-Test » group, 7.4 minutes in the « Study » group and only 6.3 minutes in the « Test » group



+ Still, « Study-Test » & « Test » conditions yielded better long-term memory (A,B), without increase in False Alarms (C), and « Test » condition led to better 25 minutes – retention (D)





# **Can recognition memory support a retrieval practice effect?**















processing, rather than slow, effortful, recollection



• When retrieval is constrained to fast and automatic processes (around 320 ms.), thus being mostly familiarity-based, the generation of elaborative retrieval cues and / or effortful (controlled) processing are quite unlikely. Even there, extensive restudying does not outreach retrieval practice. **Repeated automatic retrieval yields similar learning levels than extensive restudying**, up to a 6 months delay

# Familiarity-based recognition memory can support a retrieval practice effect, and resists to a 6 months delay similarly to restudying, thus challenging a core prediction of the « Retrieval Effort Hypothesis »

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