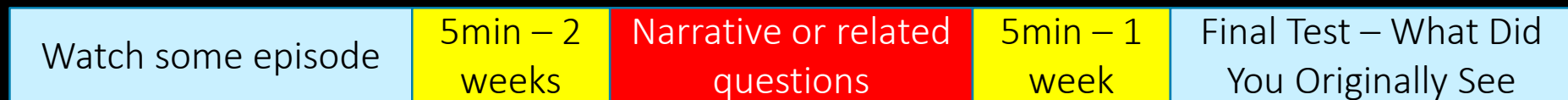


What Have We Learned About Eyewitness Memory?

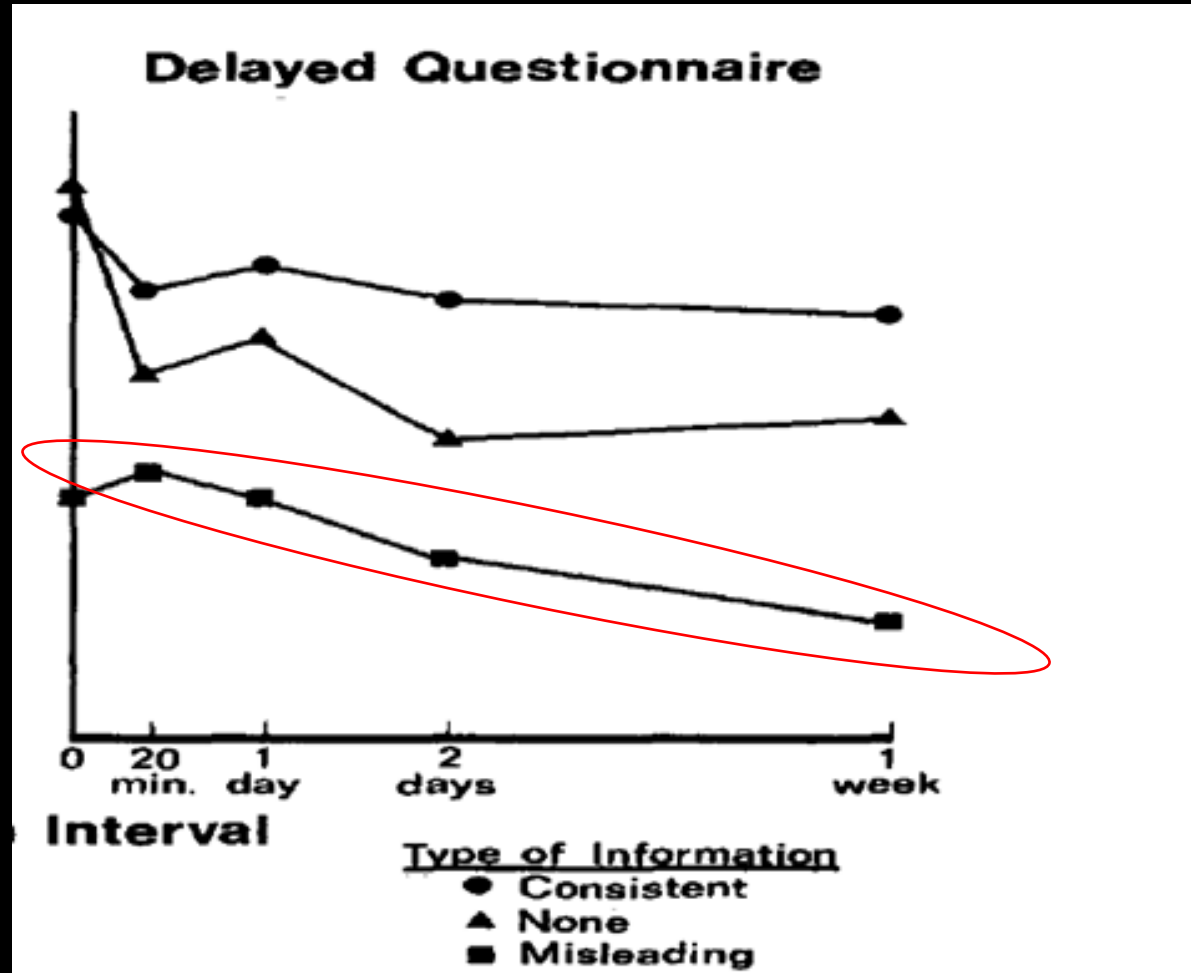
Ayanna K. Thomas, PhD

Tufts University

Studies about Misinformation



Semantic Integration of Verbal Information into Visual Memory



Misleading post-event information
negatively affects memory for the
original event

Can Investigators Rely
on Witness Reports?

What does misinformation do to memory for what was originally experienced?

Most people believe that memory is reproductive in nature. This belief results in limited critical evaluation of “retrieved” information. We retrieve something, we generally think that it must have happened.

What happens if people are given information about how memory works? What if witnesses are encourage to think about how and why some information came to mind? Might this information result in changes in the way they approach evaluation of memory?

Exercising Metacognitive Control Over Memory

Towards a Psychology of Memory Accuracy

General Scope of this Talk

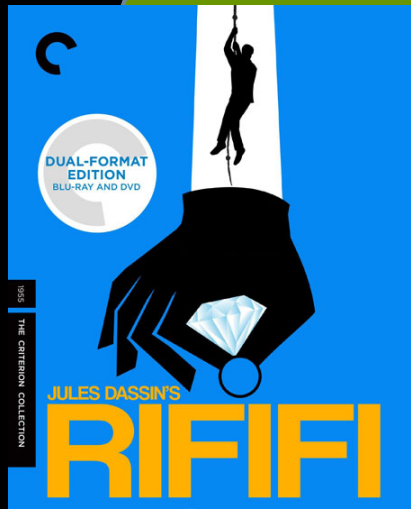
- I. How a witness is questioned matters
- II. How often a witness is questioned matters
- III. Who the witnesses are matters
- IV. How the witnesses feel matters

How to Question a Witness

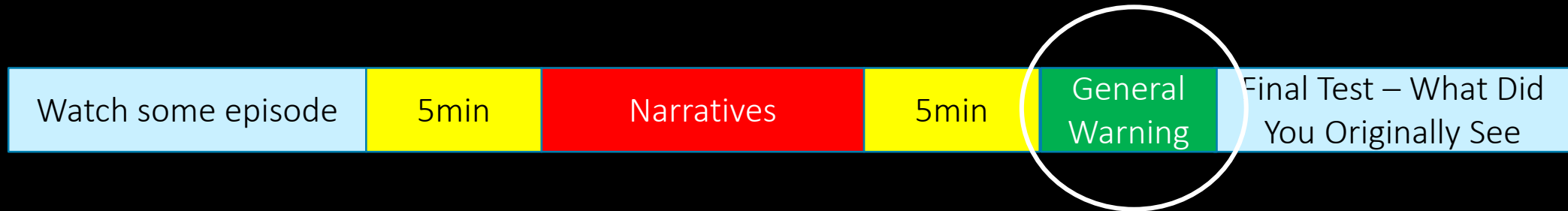


From a drawer that holds valuables, he removes a piece of **jewelry**. (neutral)

From a drawer that holds valuables, he removes a **necklace**. (misleading)

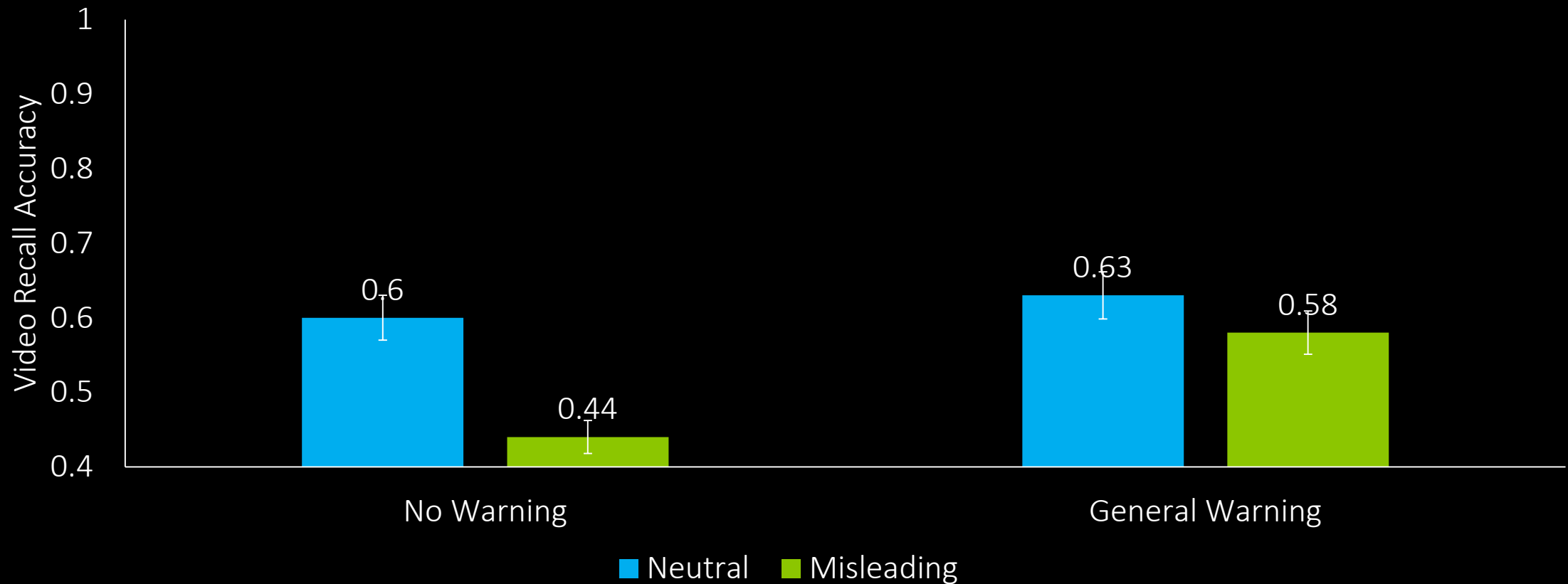


When Told to Generally Question Information



“You will have to answer questions regarding the episode you previously watched. We just played a narrative of that episode; however, we are uncertain as to the source of the narrative. Therefore, we were unable to verify the accuracy of the narrative. As such, base your answer only on what you saw in the episode, and not on what you heard in the narrative.”

When Told to Generally Question Information



Telling the Witness that Some Information is Known to be Incorrect

What does the thief take from the drawer? (hint: it is not a necklace)

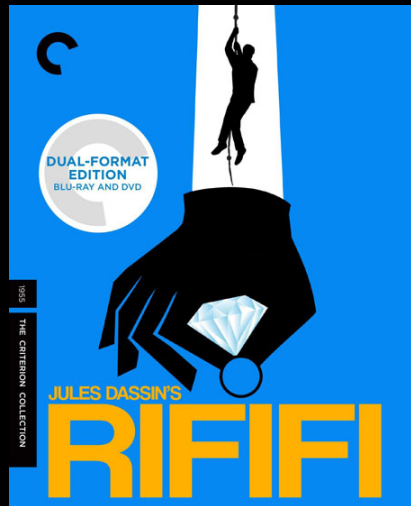
Watch some episode

5min

Narratives

5min

Final Test – What Did
You Originally See

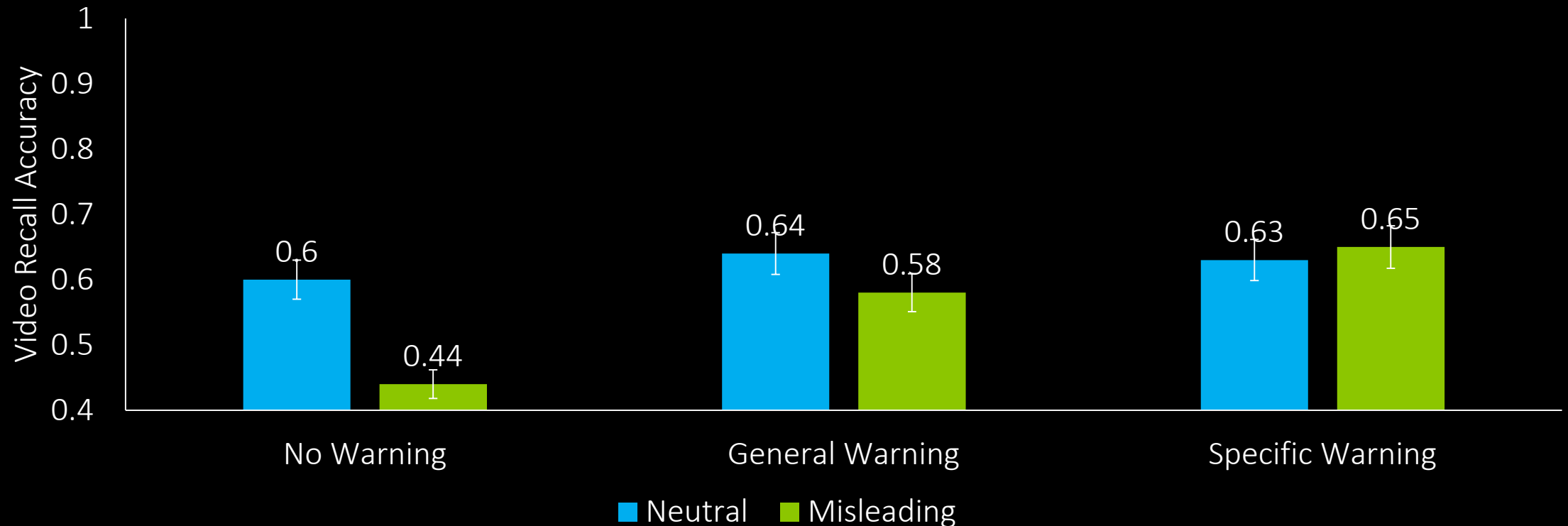


From a drawer that holds valuables, he removes a **necklace**.

What did the thief remove from the drawer?

Hint: not necklace

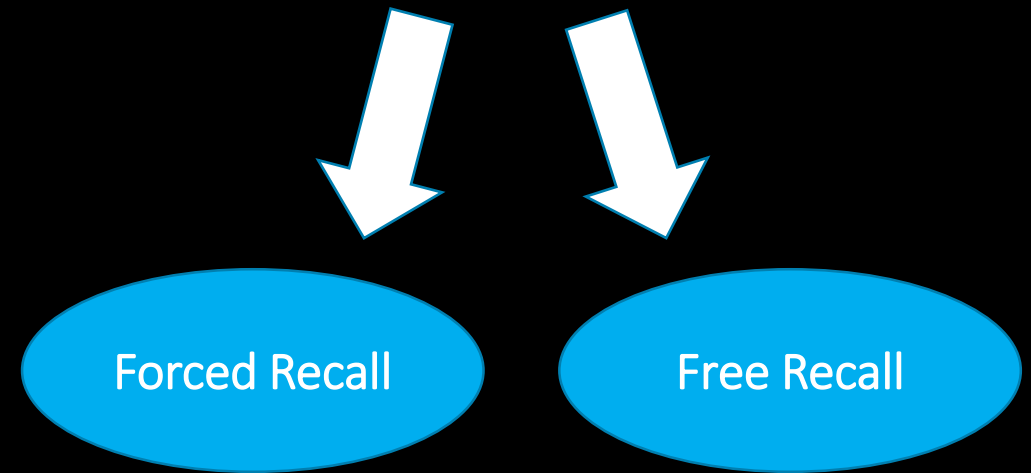
We Know This Specific Information is Wrong



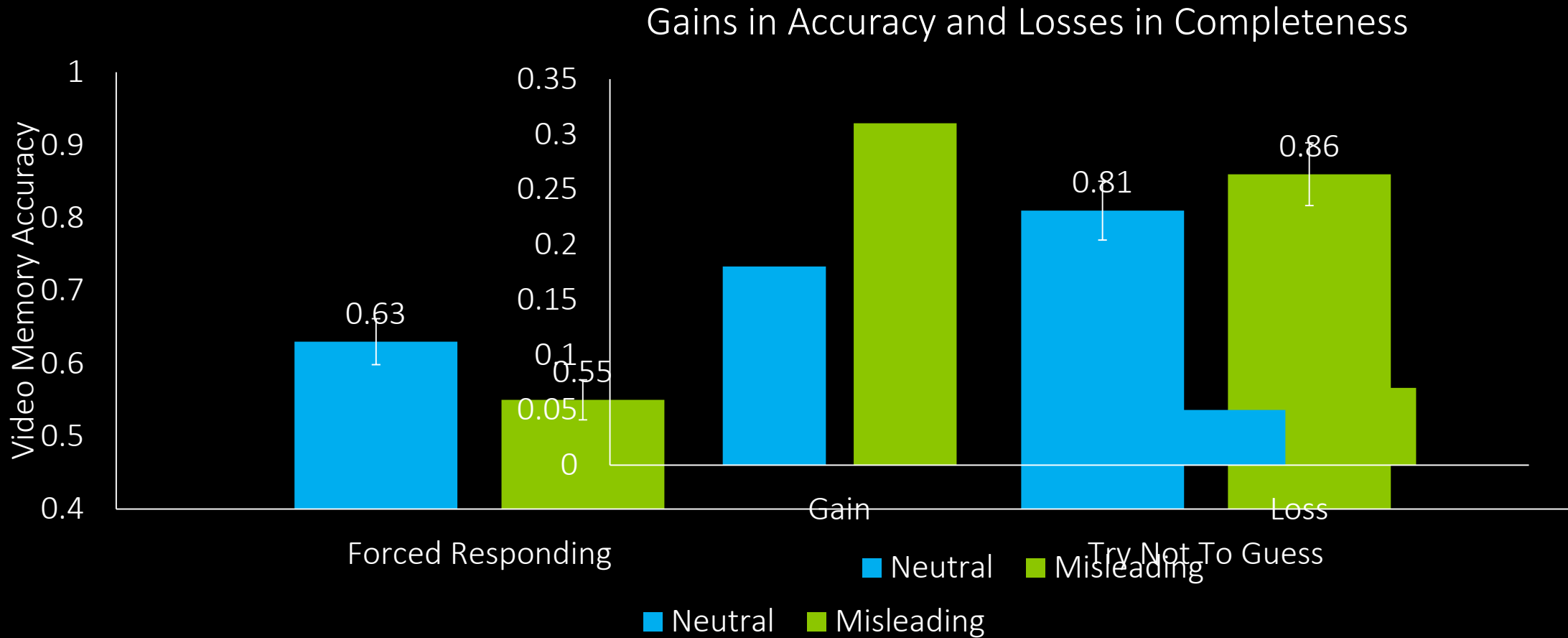
Warnings at retrieval encourages metacognitive processes

Retrieval-based monitoring

Forcing Responding vs. Encouraging Accuracy: Retrieval Based Control



Forcing Responding vs. Encouraging Metacognitive Control



What Do These Studies Tell Us About How to Question a Witness?

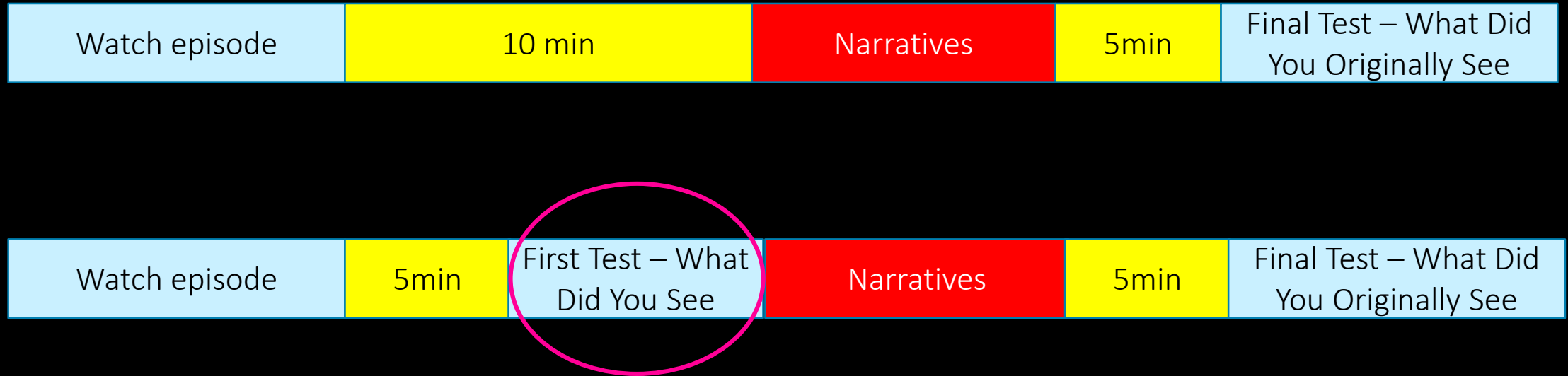
Post-event information (misinformation) does not overwrite, destroy, memory for original details.

General and specific warnings about interfering information can improve the efficacy of the search for original event details

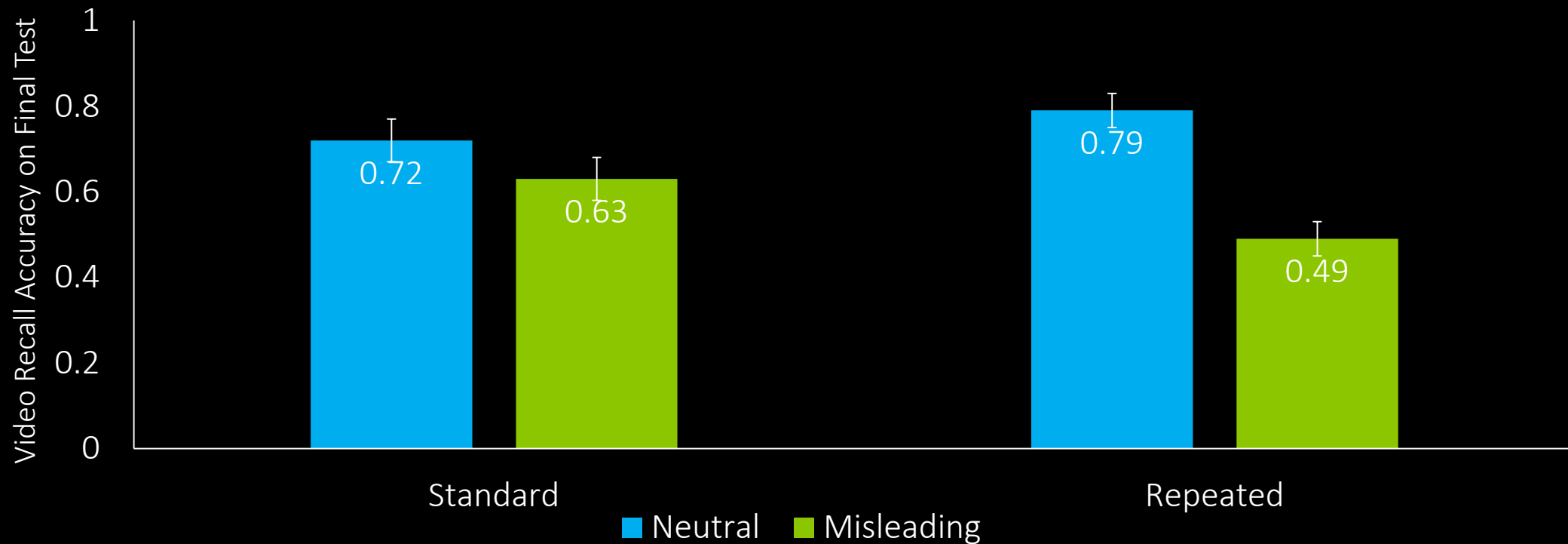
Allowing people to exercise control (use metacognitive processes) when answering questions improves accuracy

When and How Often to Question a Witness

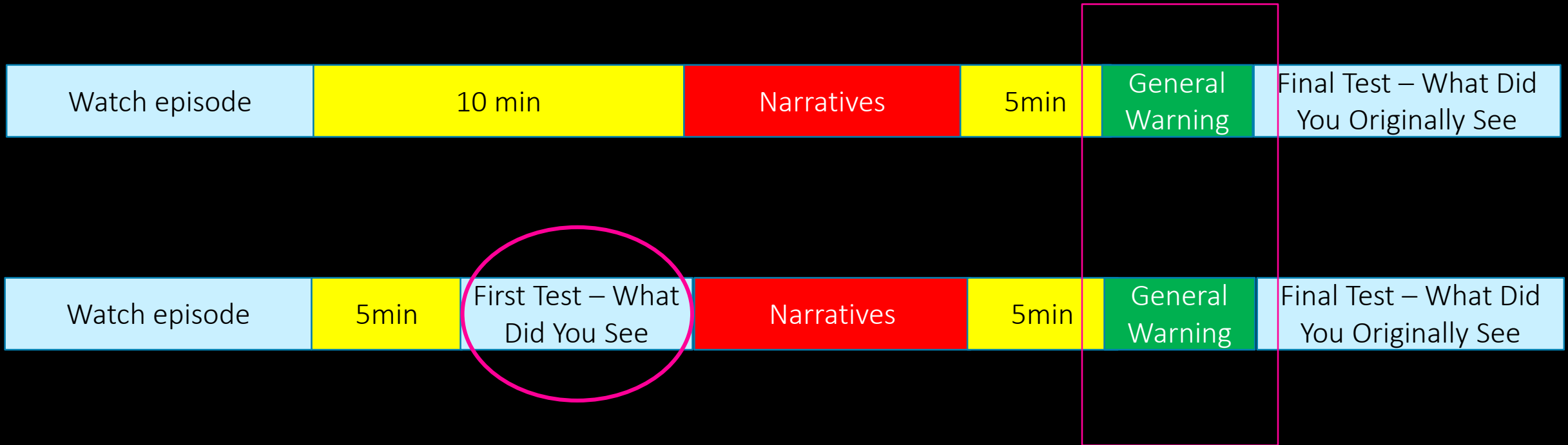
Introducing Retrieval *Before* Misinformation



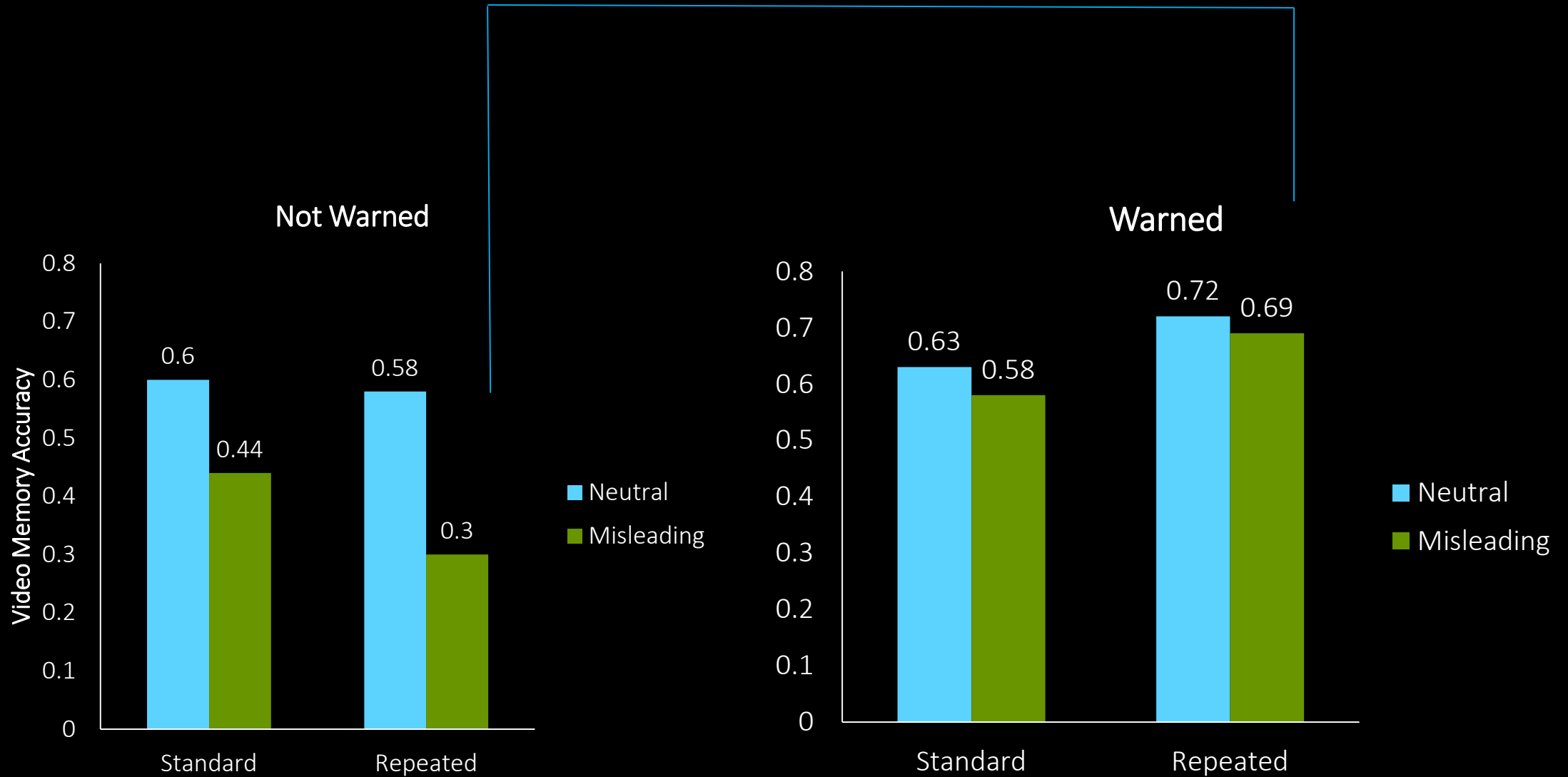
Does Early Testing Help?



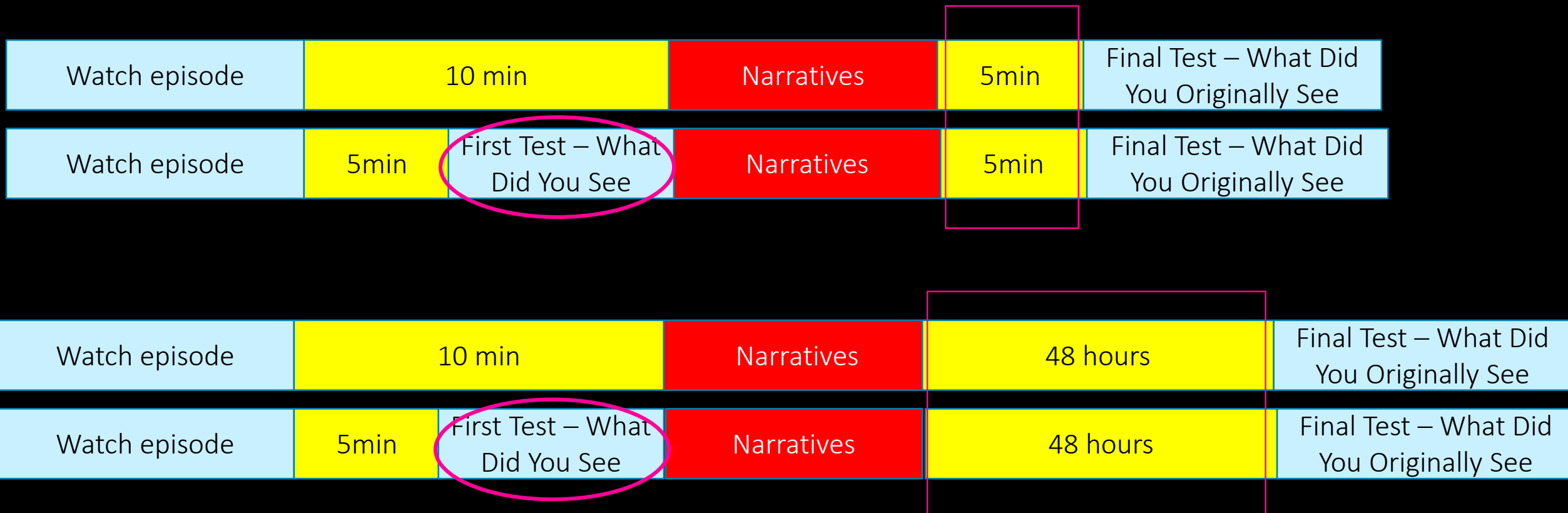
Introducing Retrieval *Before* Misinformation and Warning



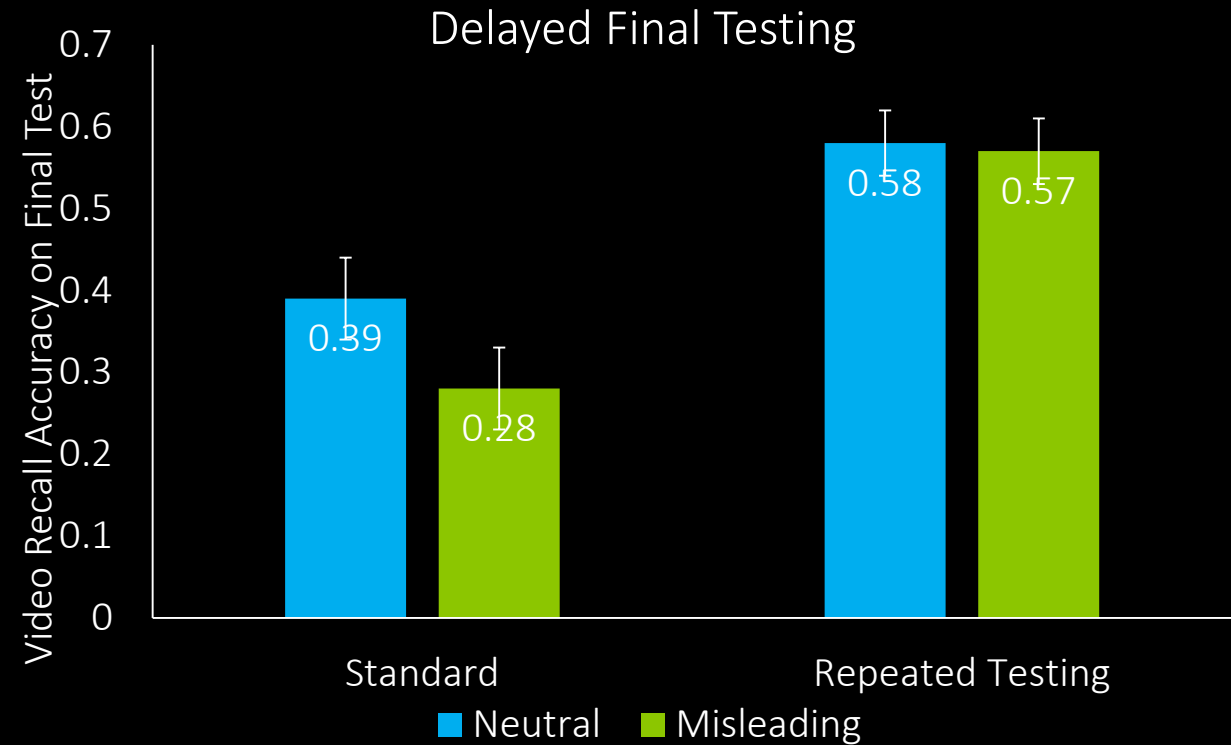
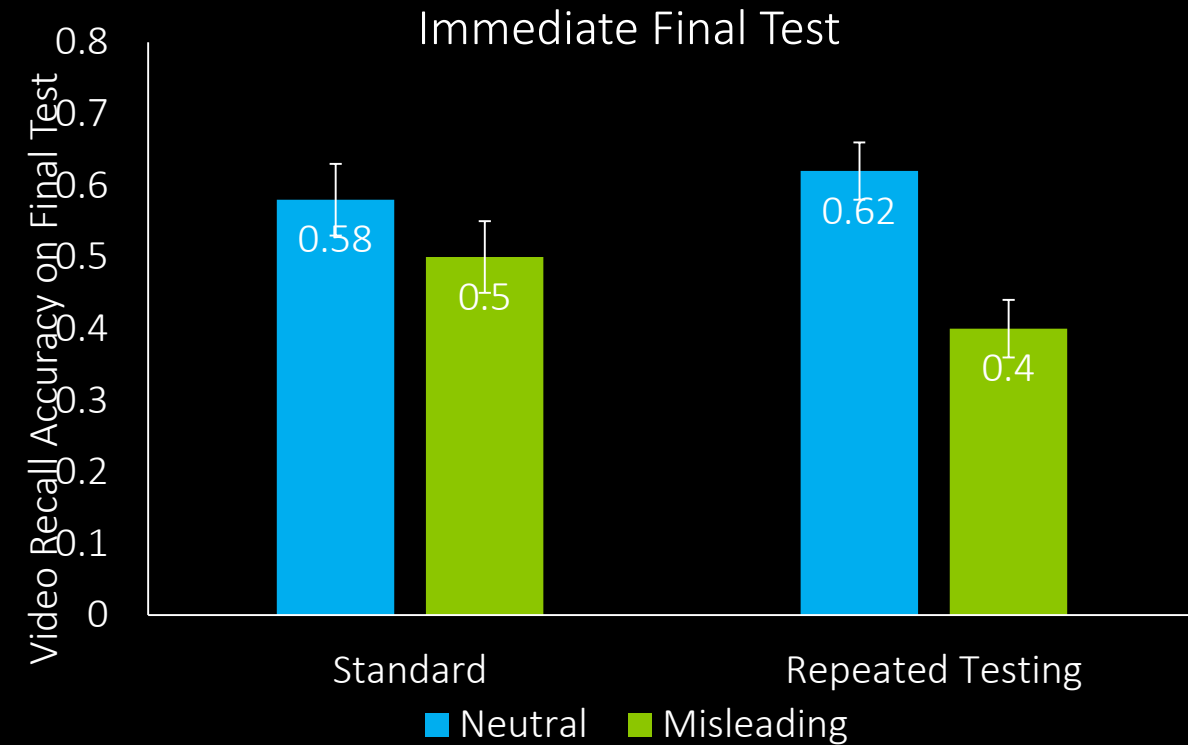
Warning in the Context of Repeated Retrieval



Introducing Retrieval *Before* Misinformation



Timing of Tests



What Do These Studies Tell Us About How Often to Question a Witness?

Retrieval can cut both ways (double edge-sword)

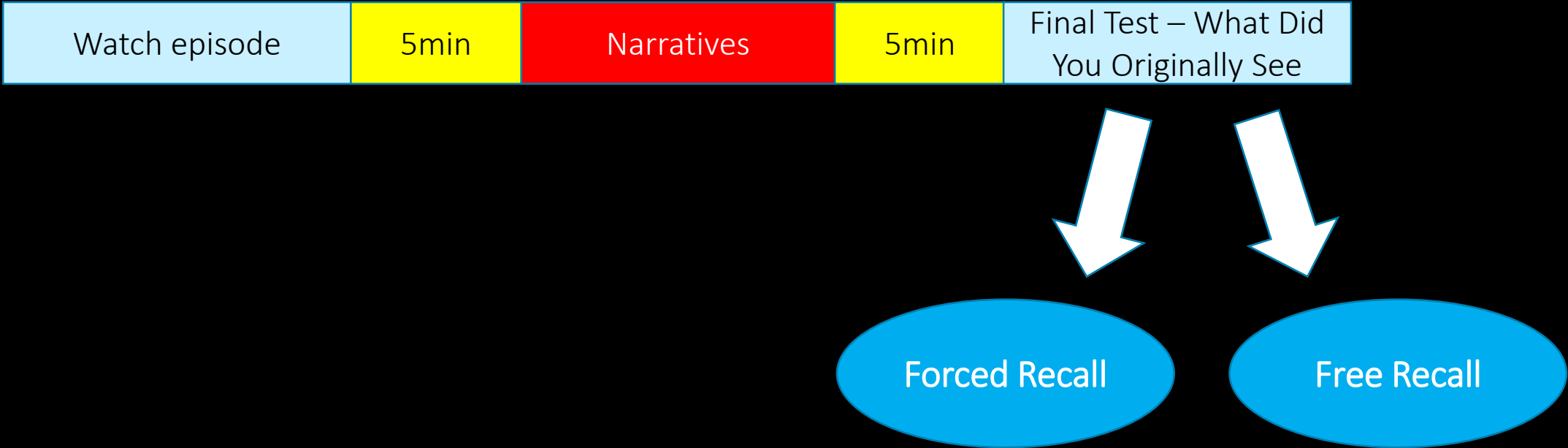
Increase errors when retrieval occurs prior to misinformation

Repeated retrieval improves long term retention and source discrimination

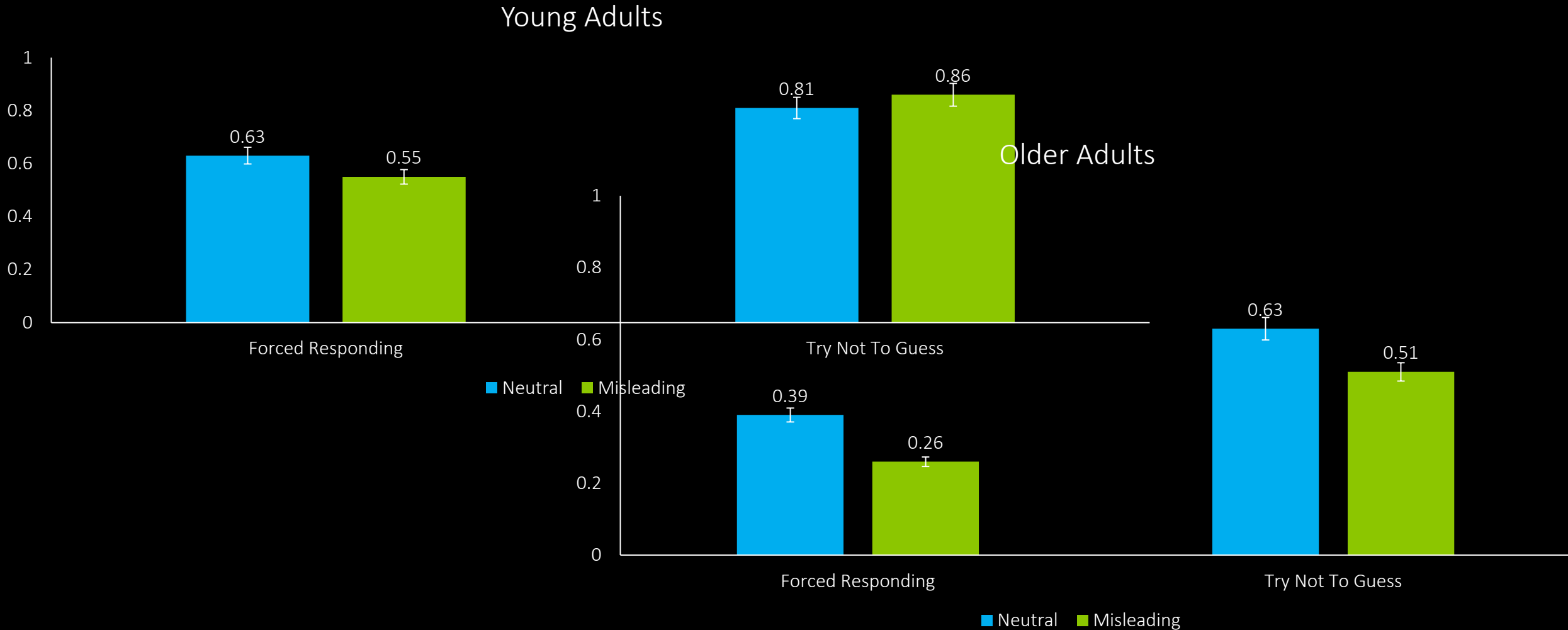
Who The Witness is Matters

Focus on Older Adults

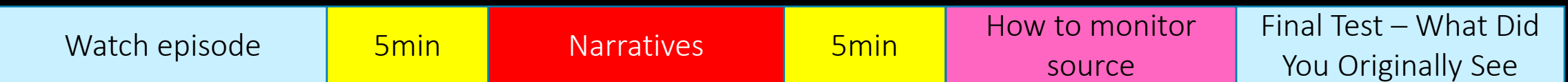
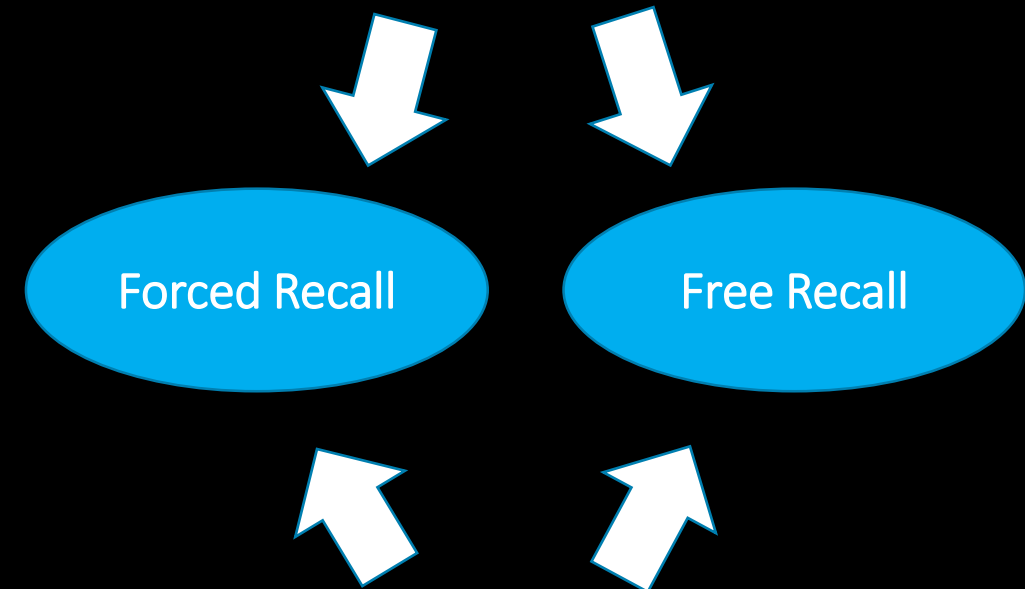
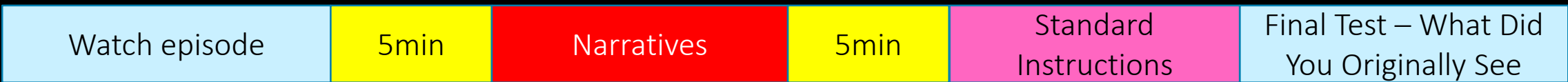
Older Adults Encouraged to be Accurate: Metacognitive Control at Retrieval



Forcing Responding vs. Encouraging Accuracy

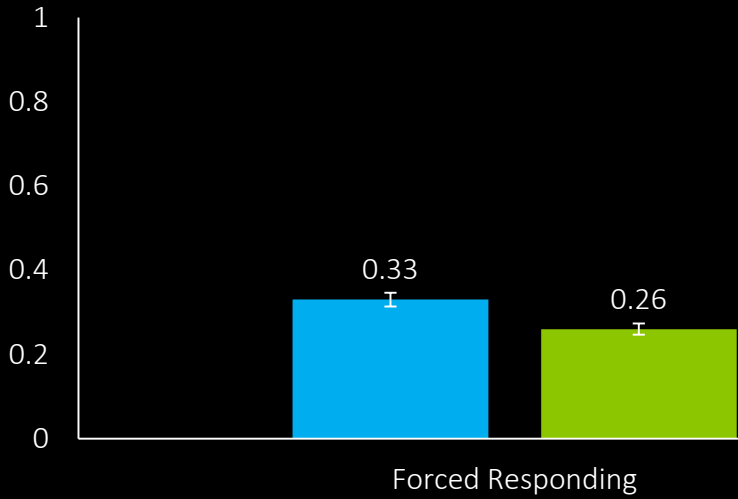


Encouraging Accuracy is Not Enough

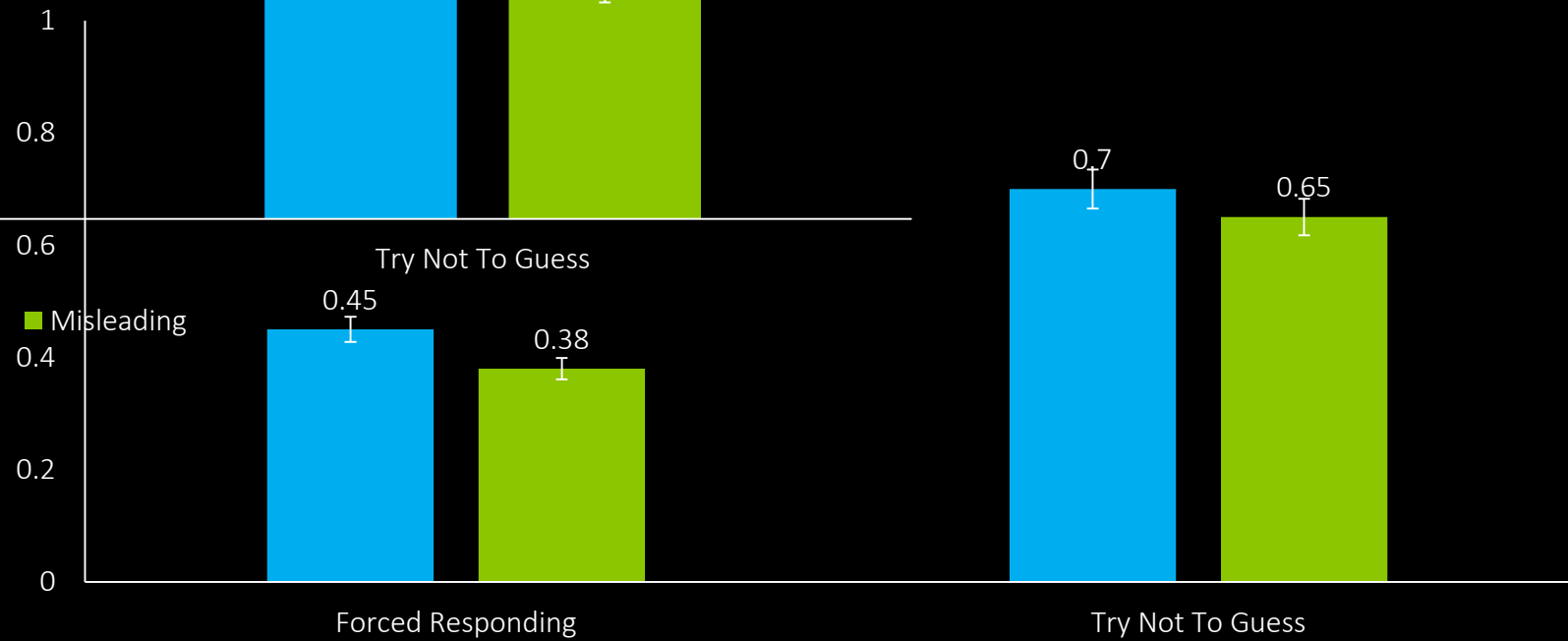


Encouraging Accuracy with Additional Support

Older Adults – No Support



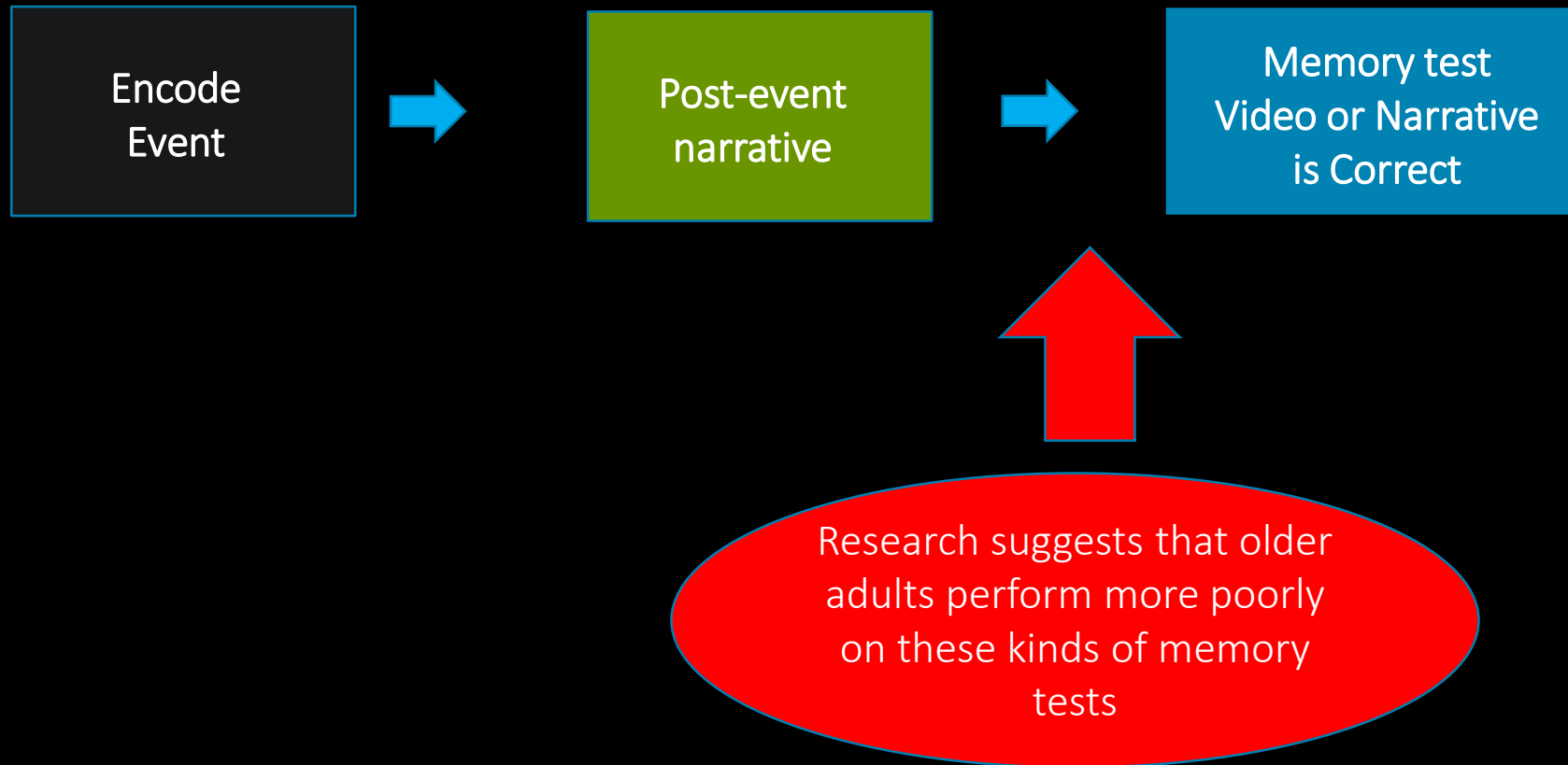
Older Adults Support



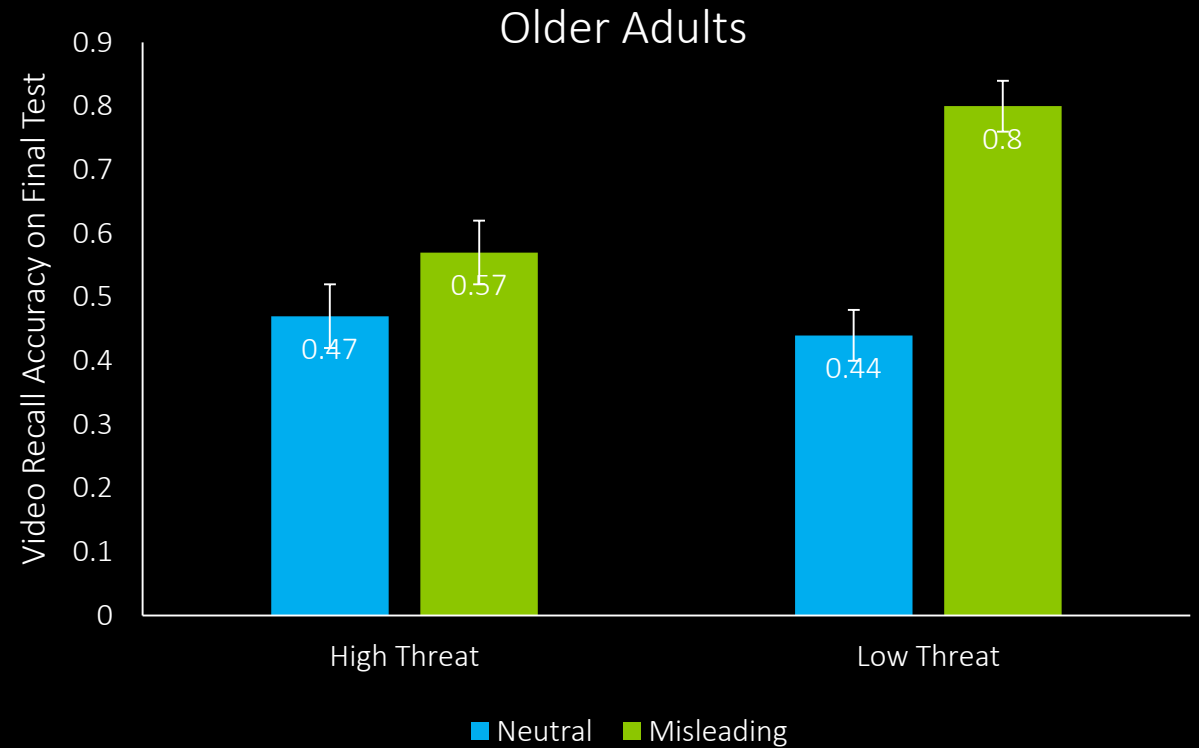
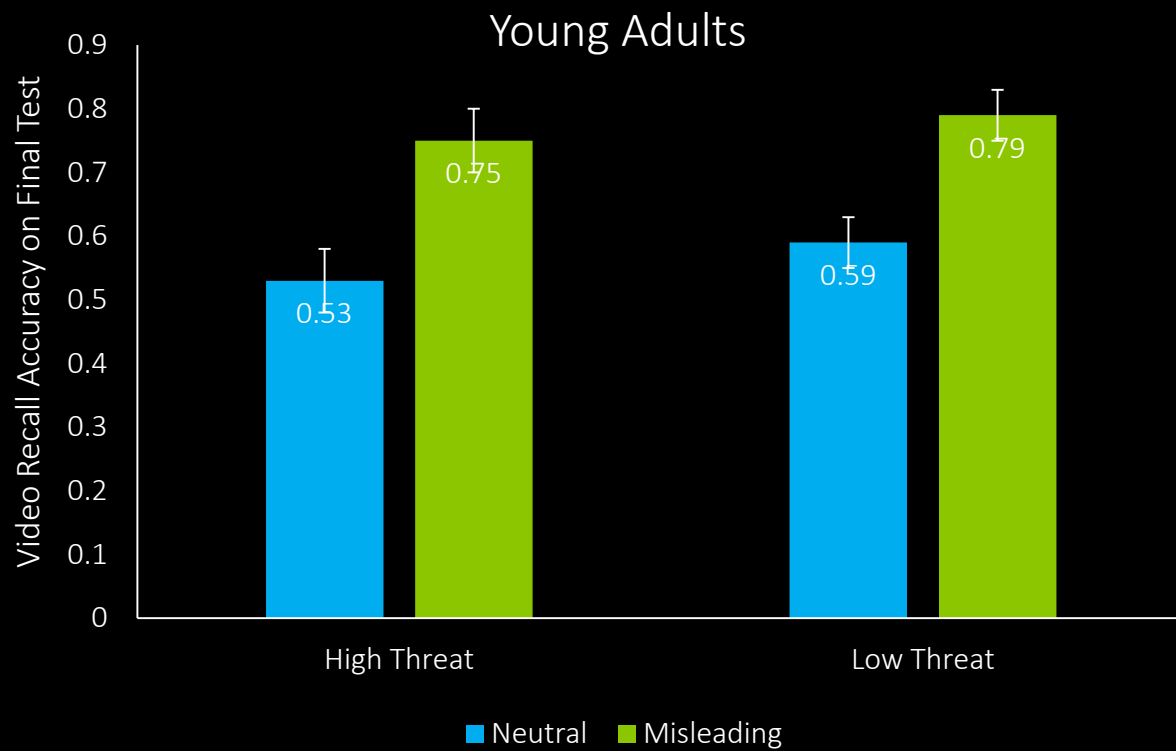
■ Neutral ■ Misleading

How The Witness Feels Matters

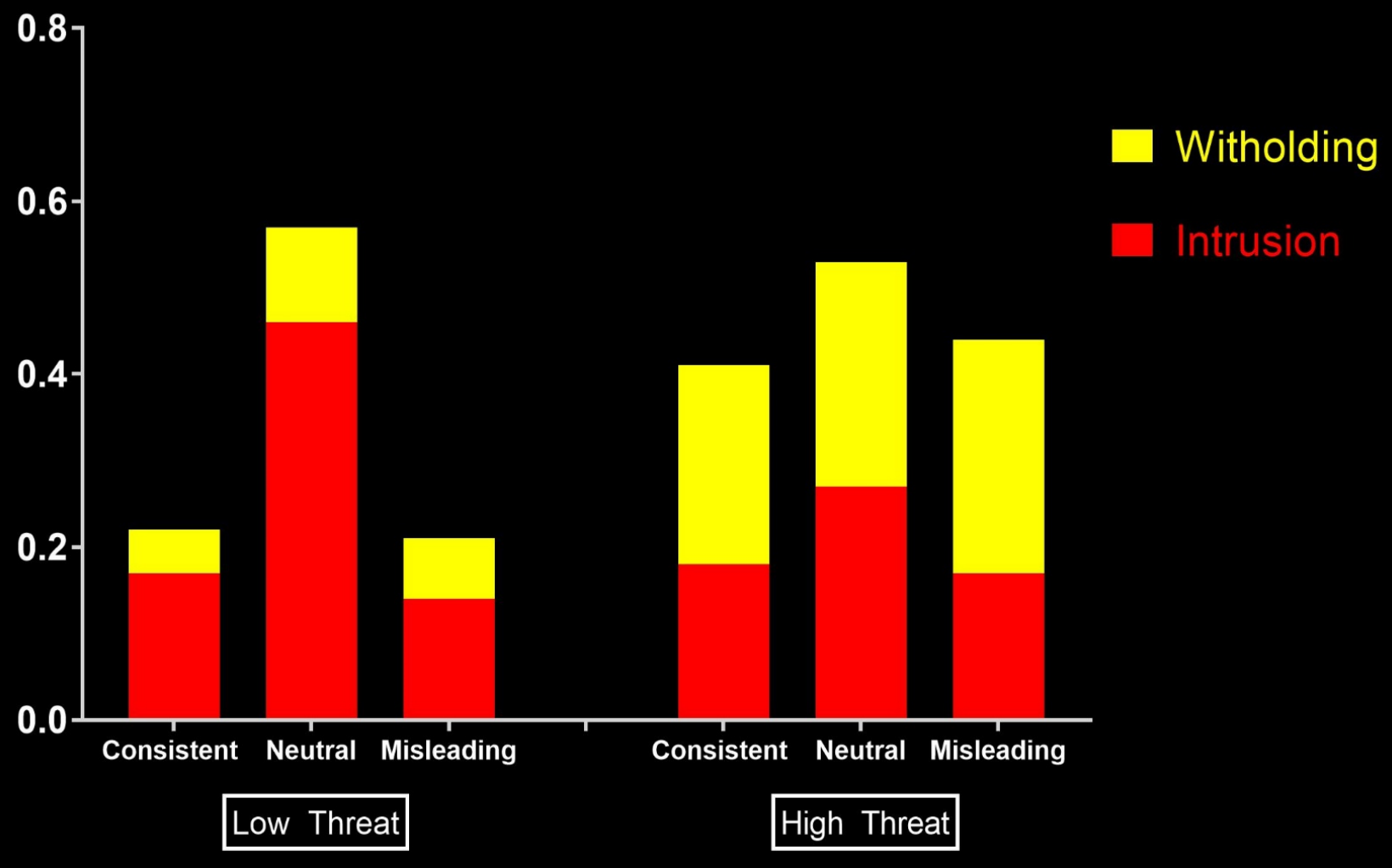
Misinformation and Anxiety About Memory



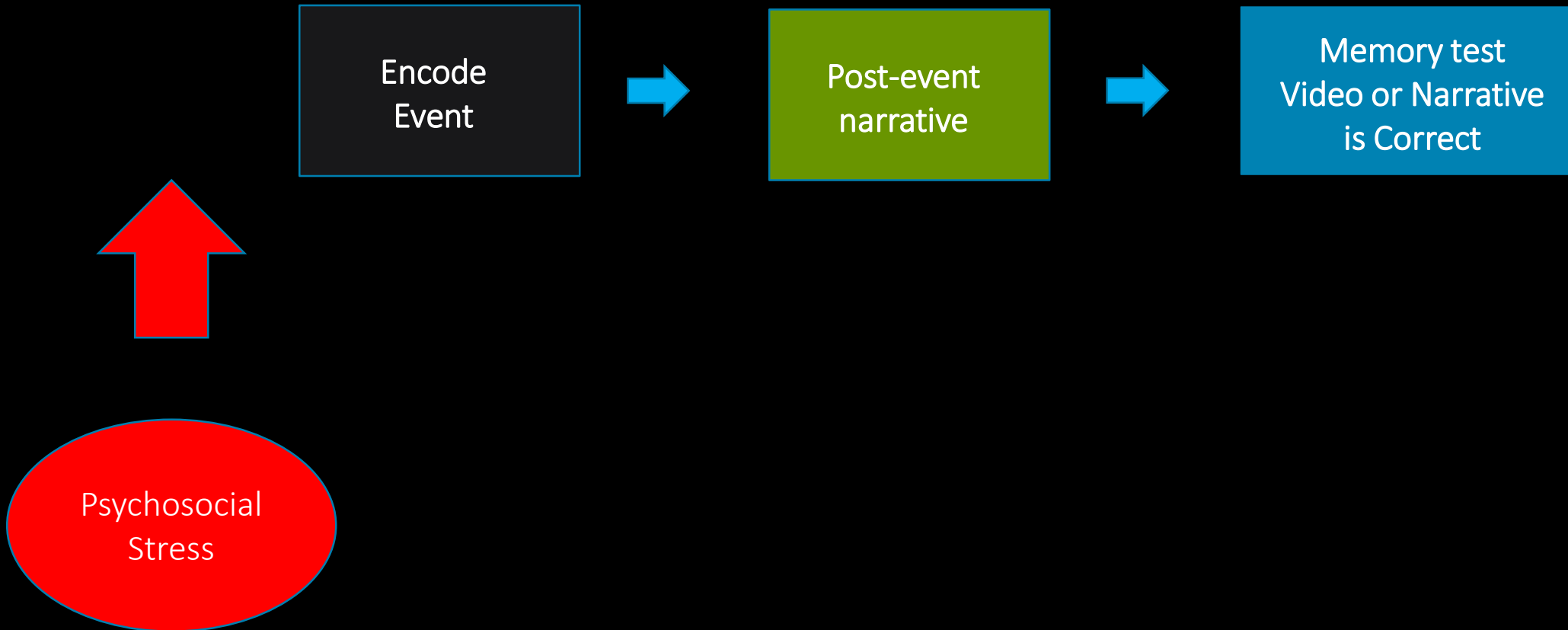
Anxiety over Reporting

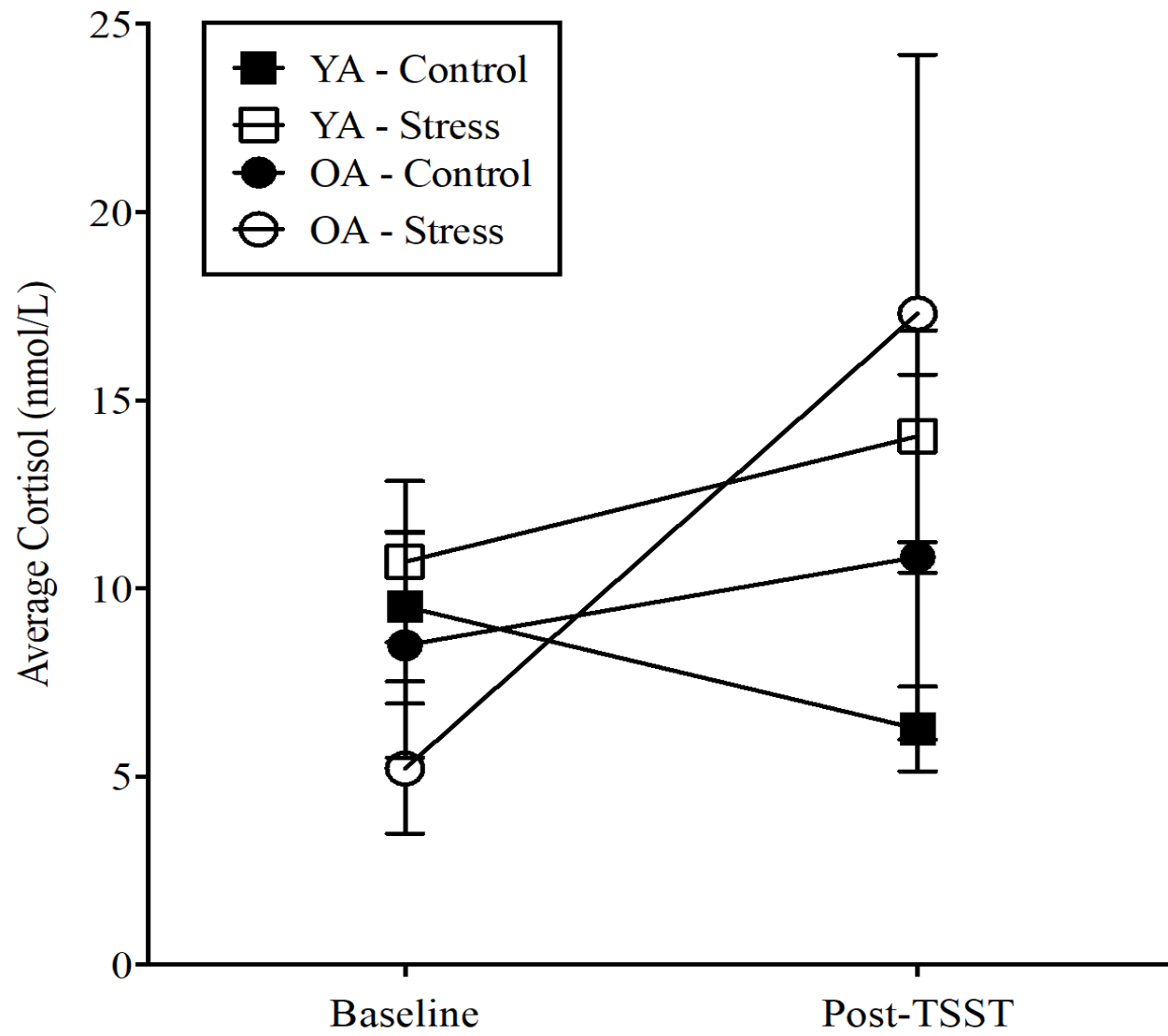


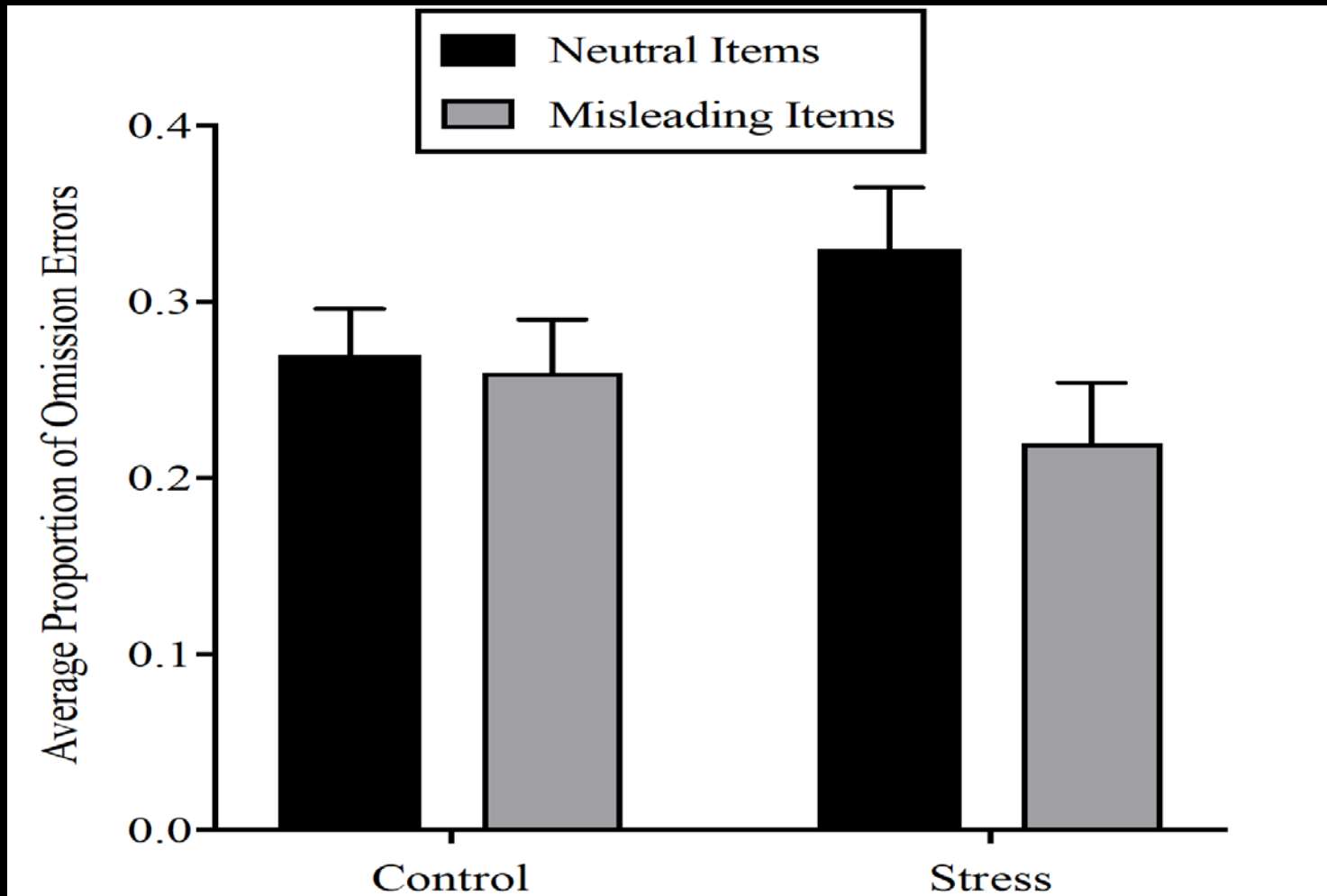
Older Adults



Misinformation and Anxiety About Memory







Who the witness is and how the witness feels matters

Older adults – biased responding hard to override

Anxiety about memory or performance may result in a change in control processes – resulting in more losses of correct information

Learning information under stress also results in a change in control processes



Memory is reconstructive and prone to error, but witnesses can exercise control

Metacognition in this context is extremely important

Acknowledgements

