

stimuli—usually digits—presented at a rapid pace (one per second, for example). Then you are asked to repeat the digits.

Research with the memory-span task suggests that short-term memory increases during early childhood. For example, in one investigation memory span increased from about 2 digits in 2- to 3-year-old children to about 5 digits in 7-year-old children, yet between ages 7 and 13 memory span increased by only 1½ digits (Dempster, 1981) (see Figure 8). Keep in mind, though, that memory span varies from one individual to another.

Why does memory span change with age? Rehearsal of information is important; older children rehearse the digits more than younger children do. Also important are efficiency of processing and speed, especially the speed with which memory items can be identified (Schneider, 2011).

The speed-of-processing explanation highlights a key point in the information-processing perspective: The speed with which a child processes information is an important aspect of the child's cognitive abilities, and there is abundant evidence that the speed with which many cognitive tasks are completed improves dramatically during the childhood years (Rose, Feldman, & Jankowski, 2015). One study found that myelination (the process by which the sheath that encases axons helps electrical signals travel faster down the axon) in a number of brain areas was linked to young children's processing speed (Chevalier & others, 2015).

How Accurate Are Young Children's Long-Term Memories? Just as toddlers' short-term memory span increases during the early childhood years, their memory also becomes more accurate. Young children can remember a great deal of information if they are given appropriate cues and prompts (Bruck & Ceci, 2012). Increasingly, young children are even being allowed to testify in court, especially if they are the only witnesses to abuse or a crime (Andrews, Ahern, & Lamb, 2017; Pantell & others, 2018). Several factors can influence the accuracy of a young child's memory, however (Bruck & Ceci, 1999):

- *There are age differences in children's susceptibility to suggestion.* Preschoolers are the most suggestible age group (Lehman & others, 2010). For example, preschool children are more susceptible to believing misleading or incorrect information given after an event (Ghetti & Alexander, 2004). Despite these age differences, there is still concern about the reaction of older children when they are subjected to suggestive interviews (Ahern, Kowalski, & Lamb, 2018; Peixoto & others, 2017).
- *There are individual differences in susceptibility.* Some preschoolers are highly resistant to interviewers' suggestions, whereas others immediately succumb to the slightest suggestion (Ceci, Hritz, & Royer, 2016).
- *Interviewing techniques can produce substantial distortions in children's reports about highly salient events.* Children are suggestible not just about peripheral details but also about the central aspects of an event. In some cases, children's false reports can be tinged with sexual connotations. In laboratory studies, young children have made false claims about "silly events" that involved body contact (such as "Did the nurse lick your knee?" or "Did she blow in your ear?"). A significant number of preschool children have falsely reported that someone touched their private parts, kissed them, or hugged them, when these events clearly did not happen. Nevertheless, young children are capable of recalling much that is relevant about an event (Ahern, Kowalski, & Lamb, 2017). When young children do recall information accurately, the interviewer often has a neutral tone and avoids asking misleading questions, and there is no reason for the child to make a false report.

In sum, the accuracy of a young child's eyewitness testimony may depend on a number of factors, such as the type, number, and intensity of the suggestive techniques

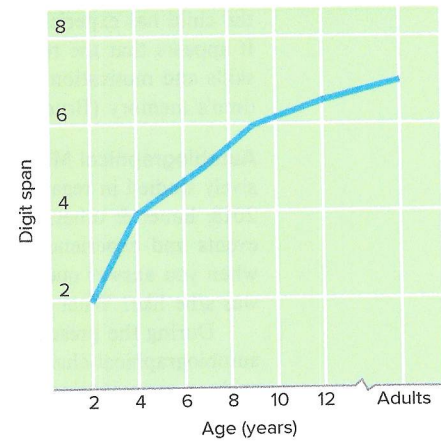


Figure 8 Developmental Changes in Memory Span

In one study, from 2 to 7 years of age children's memory span increased from 2 digits to about 5 digits (Dempster, 1981).

Between 7 and 13 years of age, memory span had increased on average only another 1½ digits, to about 7 digits. *What factors might contribute to the increase in memory span during childhood?*