

Working Memory Strategies for Parents to Support Success

Does your child have a weakness with verbal (auditory) or visual-spatial [working memory](#)? If so, you may find that it is greatly interfering with academic achievement. Fortunately, there are many ways to help—from teaching ways to compensate to lifestyle changes to brain-training techniques.

Here are a few places to start to help a child with poor working memory.

Know your child's strengths and weaknesses

As a parent, you want to support your children any way you can. Knowing their strengths and weaknesses can make a big difference, says Tracy Packiam Alloway, PhD, assistant professor of psychology at the University of North Florida in Jacksonville, Florida.

She says that sometimes teachers tell their students with dyslexia to just keep repeating the information over and over to themselves. “But this will be hard to do for students with dyslexia who have a verbal working memory problem,” says Alloway. “It’s really better to target their strengths—to try to use visual aids to support their learning, for example.”

H. Lee Swanson, PhD, distinguished professor of education with the Graduate School of Education at the University of California, Riverside, agrees. Use your child's preferred way of processing information. For a child whose visual-spatial skills are strong, he suggests taking information from a math word problem and inserting it into a visual diagram. This uses a strength to help solve a problem.

Help compensate for weaknesses

One way to compensate for poor working memory is to break up or chunk information. This way, it takes up fewer “slots” in working memory. Give one or two, not a long string of, instructions, says Swanson.

Encourage children to ask for this kind of “information management.” Then they are less overwhelmed and have learned yet another skill—self-advocacy, says Matthew Cruger, PhD, neuropsychologist with the Learning and Diagnostics Center at the Child Mind Institute in New York City.

Other ways to compensate? Use audiotapes or write things down, says Cruger. “If auditory working memory is weak, don’t depend on it for important things.” It’s far easier to write down homework in a planner and access it later. After the tenth time you’ve reminded your child to check his book bag, it may finally dawn on you that there is an easier way: Create a checklist with pictographs and put it on the outside of the bag for easy reference, he says. Rituals and routines are also helpful, says Cruger, who puts his cell phone in the same place each day to be sure he won’t misplace it.

Reinforce what works

Of course, learning how to compensate doesn’t mean simply letting working memory atrophy, says Cruger. Just as with building a muscle, using the skill will strengthen it, making it easier to use in the future.

Likewise, you and your child's teacher can help your child develop knowledge of his or her own working memory, says Alloway. You can congratulate a child on any success right away. Then ask probing questions to help a child identify what worked well in a certain situation: “Did you think of a song or an image? Did you repeat it to yourself? Or, did you use a rhyme to help you with your multiplication tables?” If something works, suggest that your child try it again.

“This really encourages students to become aware of the strategies they’re using,” says Alloway. “Otherwise, they don’t know what they’ve done, so they can’t apply it again.”

Working Memory Strategies for Parents to Support Success

Use working memory as a floodlight to plan action

Parents should teach children to use available working memory to be more efficient, instead of focusing on multitasking, Alloway advises. With our busy lifestyles, many of us put a premium on multitasking. But it's not all it's cracked up to be, she says. "The great, great majority of us can't do it well."

"Instead, use working memory like a spotlight to focus on one thing at a time and shift between activities," says Alloway. "Do one activity and stop and shift to the next and maybe come back to the first, and so on. Do this instead of trying to do many things at once."

Alloway says that mindfulness training has been shown to help adults create a space in working memory to allow them to focus on a single thought, rather than being overwhelmed by a number of different things at once. See if you can find ways to help your child learn how to reduce distractions and compartmentalize in a similar way.

Train working memory

For a long time, psychologists thought that working memory was fixed, says Alloway. But evidence is beginning to show that you can train your working memory. One example is a home-based method of strengthening skills, called CogMed. It can improve your ability to remember numbers in forward and backward order, for example, a signature skill of working memory. But does this transfer to learning and better grades? "If all you do is biceps curls, you would expect that your arms would be stronger, but not that you could run faster," suggests Alloway.

Swanson agrees. "You can certainly make changes in working memory, but it doesn't necessarily translate to getting a whole lot better in math and reading comprehension," he says.

Even so, some working memory training programs are beginning to show promise. The bottom line is buyer beware, says Swanson. He is researching a program that is showing promise, one that uses working memory tasks to improve math. "But," he says, "there is no magic bullet." If you try a program, watch how your child progresses with tasks in the classroom to see if it is making a difference.

Other Steps that May Help Working Memory

In many cases, more research is needed to confirm the benefits of specific strategies or lifestyle changes, such as adequate rest, good nutrition, and exercise, but many of these things may help.

Make technology an aid

In an age of programmable cell phones and electronic calendars, you may wonder whether technology has become more of a crutch than compensation. But it can actually help students more efficiently manage the massive amounts of information they're expected to handle these days, suggests Alloway.

Now that information is so accessible, in fact, working memory is more important than ever. "That's because now we need to know what to do with all that knowledge," she says. "It's less important to memorize facts than to actually know how to apply them efficiently. As long as students know the principles behind scholarly instruction, agrees Cruger, there is nothing wrong with [using efficient tools that help them remember better](#)."

Working Memory Strategies for Parents to Support Success

Reconsider video games

By the same token, you might want to take a second look at the value of video games your child is playing. Of course, playing several hours a day isn't healthy. But games with lots of navigation through different scenes have been shown to improve visual-spatial working memory scores, says Alloway. "And, espionage video games that involve strategy or planning can also improve working memory," she says. That's because you have to execute an action without guidance and remember the consequences of the action, she says.

Play other games, too

Here's a low-tech way to work that working memory. Grab a newspaper or magazine and give your child 30 seconds to circle all the letter As or all the instances of a particular word. "This kind of quick visual scanning is linked to working memory," she says.

Or, when on a road trip, have your kids say aloud the kinds of cars they see. Then have them recall the names in reverse order. "Remembering something in backward sequence is a key feature of working memory," she adds.

Encourage exercise

High-intensity exercise like running or biking may also improve working memory. In a study of female young adults, working memory increased following recovery from intensive treadmill running. By increasing blood flow, this type of exercise may allow you to use working memory better.

Provide better "fuel" for better work

Certain nutrients can help your child's brain work better, too. Omega-3 fatty acids can make a big difference to working memory, says Alloway. It keeps pathway between nerves more flexible, which allows information to pass more quickly. DHEA-enriched eggs or fish with Omega-3 are two excellent choices. Studies have also shown that a cup of blueberries every day for five weeks can improve working memory.

If your child has poor working memory, don't give up. There's so much you can do to help. No one needs to struggle without making progress.