

AUDIO SCRIPT

[F1= Female Speaker]

F1: Good morning, everyone. Today, I'll be talking about improving the brain's cognitive function. *Cognition* refers to the ability to perform higher mental processes of reasoning, understanding, remembering, and problem solving. Our brains are *plastic*, which in this sense means easily shaped or molded. Here are three ways the brain can be positively changed.

First, learn to play a musical instrument. Neuroscientists confirm that learning to play a musical instrument causes fundamental changes in the brain, shaping both how it functions and how it is physically structured. It increases brain volume and strengthens communication between different areas of the brain. It changes how the brain manages information, especially in children under the age of 7.

MRI scans of musicians show the regions of the brain related to hearing and self-awareness are larger. Playing an instrument also helps to process sounds we wouldn't otherwise hear. Researchers found that children who played an instrument for two years were more able to tell the difference between certain sounds than children who didn't have any musical training. And the more hours you play, the greater the neurological benefit.

Second, learn to play a new sport. No one can deny the benefits of staying physically fit. We know that exercising pumps extra blood to the brain. It delivers the oxygen and nutrients needed for the brain to perform efficiently. Exercise also changes the brain in ways that protect memory and thinking skills. MRI scans show that aerobic exercise—that is, exercise that gets the heart and sweat glands pumping—boosts the size of the hippocampus, the area of the brain involved in memory and learning. Learning a new sport is great not only because it involves exercise, but also because it involves learning new skills, problem solving, and logical and strategic thinking. So you're exercising your mind as well as your body.

Third, learn a new language. Bilingualism refers to the ability to speak two languages. People who speak one language are monolingual, and people who speak more than two languages are multilingual. Besides the obvious benefit of being able to communicate with more people, bilingualism also has a positive effect on brain function. It not only benefits young brains, but older brains, too. Researchers at the University of Edinburgh used data from 262 individuals who had taken intelligence tests at age 11. They evaluated them again in their 70s. Now, 195 of these individuals had learned a second language before the age of 18, and 65 had learned a second language later on. The results showed that those who spoke two or more languages had significantly better cognitive abilities compared to monolingual people. The positive effects were also present in those who learned their second language later in life. Bilingual brains are quicker and better able to process information. They are also

Inside Listening and Speaking 1

Unit 8 Assessment

INSIDE LISTENING AND SPEAKING 1

better able to resist diseases such as Alzheimer's for more than four years longer than monolingual people. I'm sure you have some questions, but first let's take a five-minute break...