



The Benefits of Gaming - MindJam

The positive effects of video games are numerous, from better memory and problem-solving to improved mood and social skills. While those who don't play video games may argue that they make you lazy, harm your brain or ruin your social life, video games actually have many physical, cognitive and social benefits.

Memory

Many video games require some serious strategy and concentration. If you have ever built your own civilization in Minecraft or fought for your life in Fortnite, you know how important it is to remember where you found specific resources or where you need to go next. With 3D graphics and immersive audio, video game environments are extremely rich in stimuli.

Navigating the virtual world of video games is now very similar to navigating the real world. In fact, exploring video game universes can have a positive impact on memory in your everyday life. When you must juggle multiple tasks and goals while navigating a virtual space, you are exercising your hippocampus. This is the part of the brain responsible for converting short-term memory to long-term memory, as well as controlling spatial memory. When you keep your hippocampus in shape, you will see improved long-term memory and be better at navigating physical space. If you are prone to getting lost on your way to the store, video games may be able to help improve your memory for directions.

A study supported by the National Institutes of Health found that out of 2,000 kids, those who played video games for three hours a day or more did better on tests [measuring cognitive skills](#)¹ than kids who didn't play. Brain scans showed those who played video games had more brain activity associated with demanding tasks than those who didn't. These patterns may relate to impulse control and memory associated with playing video games. Cognitive skills are the functions your brain uses to think, pay attention, process information, and remember things.



1 <https://www.nih.gov/news-events/news-releases/video-gaming-may-be-associated-better-cognitive-performance-children>



Gaming improves grey matter!

Adding to a 2015 study by Australian and Chinese researchers, not only does regularly playing video games increase the amount of grey matter in a person's brain - the part responsible for muscle control and sensory perception skills such as seeing and hearing; memory function; and emotion, speech, decision formation - it also promotes better connectivity in certain subregions of the brain associated with these functions. The team, led by researchers from the University of Electronic Science and Technology of China and Macquarie University in Sydney, used functional [MRI²](https://www.frontiersin.org/articles/10.3389/fpsyg.2019.01226/full) (fMRI) scans to analyse the brains of gamers who have achieved professional, or 'expert', levels of playing action video games (AVG), having won regional and national championships in League of Legends or DOTA2.

The team compared the scans of these expert gamers' brains with the brain activity of people who don't usually play these types of games. The research suggests that making a habit out of playing video games can actively increase a person's grey matter volume and connectivity between networks in certain regions of the brain.

Spatial Visualisation

On top of improving your spatial memory, playing video games also helps you visualise space better. Studies show that gamers who play video games with 2D graphics see an [improvement in mental rotation³](#), while gamers who play games with 3D graphics see an improvement in spatial visualisation.

This enhanced spatial visualisation has practical benefits, like knowing whether you will be able to parallel park in a tight spot or organising your room, so everything fits. Good spatial visualisation is also essential for success in many STEM careers. (science, technology, engineering and maths).



² <https://www.sciencealert.com/magnetic-resonance-imaging>

³ <https://www.frontiersin.org/articles/10.3389/fpsyg.2019.01226/full>



Perception and Vision

When faced with a complex environment with competing stimuli, your brain creates a perceptual template that helps you determine what is important and what is not. This perceptual template enables you to assess and respond to a situation. According to a [2014 study⁴](https://www.pnas.org/content/111/47/16961?sid=f87a0d27-c1a1-4908-b521-4701b5a1d3c6) published in Proceedings of the National Academy of Sciences of the United States of America, playing action video games can improve a person's ability to create perceptual templates. This type of improvement in perception is especially beneficial, as it is not task-specific but can apply to any situation.

High-action video games can also improve your ability to distinguish patterns and different shades of grey. Scientists used to believe your ability to distinguish contrast was not something that could improve, however, [research from the University of Rochester⁵](https://www.rochester.edu/news/show.php?id=3342) showed gamers who played about 5.5 hours of action games each week for nine weeks showed a 43% improvement in their contrast sensitivity.

The gamer's brains were able to process visual stimuli more efficiently, and this improvement in perception lasted for months after the experiment ended. This improved perception has valuable real-life benefits, such as being able to keep track of your friends better in a crowd or find something you have dropped in the grass.

Decision Making and Leadership skills

Fast-paced video games like Fortnite, Forza Horizon or Call of Duty require you to stay on your toes and make decisions quickly. These energising action games can also improve your ability to make game-time decisions in real life. Research shows that one of the many benefits of playing video games is [an increase in plasticity⁶](https://pubmed.ncbi.nlm.nih.gov/32164847/), or your brain's ability to change in response to learning.

Playing video games lets you direct your attention toward a specific task and receive stimulation as you complete these challenges. Since your brain knows how to handle these smaller decisions, it can quickly move on to more complicated ones. The more you learn, the better your brain adapts, and you can make smarter decisions faster.

Faster decision-making is beneficial in everyday life, as you can accomplish more when you make trivial decisions quickly. Instead of wasting time debating what shirt to wear, you can get real work done. Making decisions quickly can also have more serious implications. Just like being faced with an ambush in a shooter game, quick decisions are important when facing a dangerous situation in real life.

⁴ <https://www.pnas.org/content/111/47/16961?sid=f87a0d27-c1a1-4908-b521-4701b5a1d3c6>

⁵ <https://www.rochester.edu/news/show.php?id=3342>

⁶ <https://pubmed.ncbi.nlm.nih.gov/32164847/>



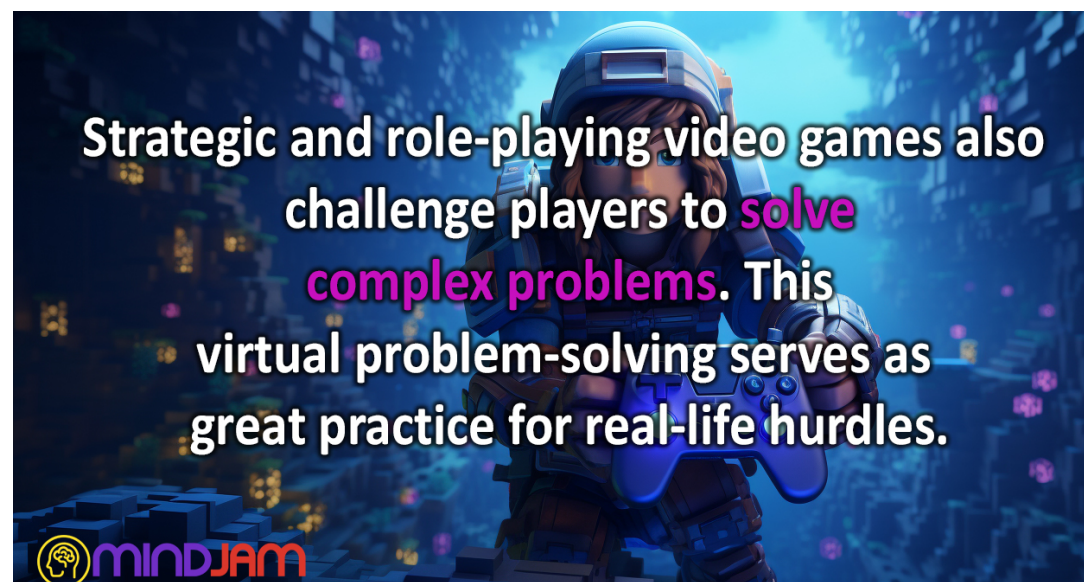


Video games can also improve decision-making as it relates to long-term planning. When playing strategy games like Civilization or Cities: Skylines, you have to plan ahead and make decisions now that will benefit you down the road. These games train your brain to recognize potential outcomes and implications of your choices to make the best choices for your desired result. When a person practises these skills in a virtual world, they will be able to better apply them in the real world.

Problem Solving

Strategic and role-playing video games also challenge players to solve complex problems. This virtual problem-solving serves as great practice for real-life hurdles. Researchers at the University of South Carolina found that video games simulate how players process the world⁷. Players solve problems in engaging virtual environments and become more likely to apply the lessons they learn and the experience they gain to situations outside the game.

Almost every genre of video game involves problem-solving, whether it's figuring out a puzzle or finding the fastest escape route. These problems can involve both memorization and analysis to solve them, as well as a little creativity. Obstacles in video games are often very open-ended without a lot of instruction, meaning players must experiment with trial and error. When your attempt to solve a problem in a video game fails the first time — or the first 10 times — you are also learning how to be resilient and persistent when facing challenges in real life.



⁷ https://sc.edu/about/offices_and_divisions/research/news_and_pubs/caravel/archive/2014/2014-caravel-video-games.php



Relaxation and Mindfulness

Video games can also be a great way to relax and unwind. Oxford University found that players who experience genuine enjoyment from their video games also have a more positive sense of well-being⁸. Video games that are complex and deeply immersive can also be therapeutic. When the player is fully absorbed in a digital world, they do not have time to worry about other things.

Video games can be a perfect way to give your brain a break from the anxiety and stress of everyday life. There are many games that promote Mindfulness - Minecraft, Tetris effect, Powerwash Simulator, Journey, Animal Crossing. Gaming can often promote a flow state, which is an ultimate relaxation and being 'in the moment':

- Flow state during video gaming is an optimal mental state characterised by deep absorption during challenging tasks.
- Flow states induce a loss of sense of self and time and can reduce symptoms of depression and anxiety.
- In healthy individuals flow states induced during a video game increase subjective well-being and the felt passage of time.

* Psychology Today

Social Skills

The social benefits of video games have been widely debated, as some people argue video games lead to poor social skills or isolation. However, moderate video game play can improve social skills and reduce anxiety.

When players are able to take on fictional personas in a virtual world, they are free to experiment with social interactions, which then teaches them what good social behaviour is. Those who experience anxiety in social situations may feel more comfortable practising social interactions in video games, without the real-life consequences. They can then be more confident when interacting with others in the real world.

Video games also provide a thriving social setting for gamers. More than 70% of people⁹ who play video games play with a friend. Plus, the video game community is massive, and with

⁸ <https://www.ox.ac.uk/news/2020-11-16-groundbreaking-new-study-says-time-spent-playing-video-games-can-be-good-your-well>

⁹ <https://www.igi-global.com/chapter/videogames-therapy-review-medical-psychological/78017>



modern technology, gamers can play with millions of other people worldwide at any time. Participating in virtual worlds with other players encourages communication and cooperation that carries over to real-life interactions.

Gaming also helps with empathy and understanding emotions. Storylines and characters have matured in the last 15 years and games can promote an understanding of feelings and emotions - whether in the main character or in the NPCs you meet along your adventure.

Games such as It Takes Two, Unpacking, Celeste, Psychonauts 2 and Undertale encourage understanding and helping people with their emotions and mental health.

Health and Fitness

With the emergence of VR and active games, it is easy to get a workout while playing an exciting video game. Games like Beat Saber, The Climb or Switch Sports require the player to get active. These video games are good for your health and can be a great way to break a sweat without having to head to the gym.

Video games are becoming a popular alternative for increasing physical activity among children and teens. Multiple studies show that playing active video games over short periods offers [a similar exercise experience¹⁰](#) to light or moderate activities, like walking, jogging or skipping.

Also, to encourage your young person to exercise - top esports players and YouTube stars advocate that eating healthy, exercising, getting enough sleep and taking regular breaks make you a better gamer!

Acceptance, Understanding and Accessibility

Gaming is at the forefront of acceptance of all types of people and many games encourage and educate with this. Also, game developers are very aware of accessibility and many modern games have numerous options and settings to make sure everyone can get the best playing experience.

Screen Time

Despite the fears instilled by the media, screen time doesn't appear to have overwhelmingly negative impacts on young people's development, new research suggests.

"There's been a lot of societal concern about the supposed harmful effects of screen time for young children, and it has really scared parents," said [Rebecca Dore¹¹](#), lead author of the study and director of research at The Ohio State University.

10. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7013707/>

11 <https://crane.osu.edu/staff-members/rebecca-dore/>



"These results suggest that we should stop demonising screen media use and find better ways to support families and the education and development of children."

Education and Careers

On a basic level, when you are playing video games, your brain is working and growing. As you figure out how a game works and complete puzzles to master a level, you are creating new connections in your mind. The more motivated you are to beat the game, the more your brain is working and the more you are learning. Continued learning and stimulating your brain are essential to keeping it healthy.

Gaming incorporates many subjects such as English, History, Maths, Geography, Art, Music and Science. Many video games are also set in different eras or historical settings, such as Assassin's Creed. When playing these games, you are not only having fun, but you're also learning about history. When a player enjoys the story or setting of these games, they may be motivated to continue learning more about it on their own.

A good interest in gaming can lead to all sorts of careers using digital skills - game design, music, animation, video editing, story writing, marketing and promotion, data analysis and many more. Many employers actively look for gamers - construction companies now control heavy machinery with their phones; police, sports industry, tech industries, fashion and home design - most future jobs will be digital, being a gamer instils a great understanding of technology and using different programs which will benefit their future career decisions.

Gaming also encourages an entrepreneurial spirit - many games involve creating a business, stock exchange mechanics and exploring different strategies to earn money. Many young people are inspired to create their own content - from styles and experiences in Roblox, to Minecraft servers and builds, to streaming, 3D models, fan content and many more amazing things.

Youthfulness

As your brain ages, your memory, focus and ability to multitask all begin to decline. While young people are often able to juggle several different mental demands at once, older people may find it difficult to stay focused even on a single task. However, there are many ways to [keep your brain young¹²](#), such as by doing puzzles, eating healthy, exercising and even playing video games.

12 <https://www.health.harvard.edu/mind-and-mood/12-ways-to-keep-your-brain-young>





In a study by the University of California, San Francisco, researchers created a simple driving game where players had to identify road signs while driving around obstacles. When required to multi-task, players of all ages performed worse than when only completing one task. However, those between 60 and 80 years old showed a drop in performance of 64, while younger participants between 20 and 30 years old showed only a 26% performance drop.

As the older players continued to train with the game, however, they experienced improved multi-tasking abilities, short-term memory and long-term focus. The benefits of playing the video game were so extreme that the older trained players performed better than untrained players in their 20s. Playing video games that require multitasking and focus may be a great way to keep your brain young.

Summary

As with all things, a healthy balance is needed, and at MindJam we promote healthy gaming encouraging regular breaks and changes of activity, exercise, eating healthily and getting enough all important sleep. All these factors will actually improve your gaming!

Now, the next time someone tells you to stop playing video games, you have an arsenal of evidence to support your love of gaming. You can confidently answer the question “How are video games good for you?” with examples of the many mental, physical and social benefits of video games.

Original source text from <https://recordhead.biz/10-reasons-video-games-is-good-for-you/>

For more information on MindJam please visit: <https://mindjam.org.uk/>

