Video Games and Your Body and Brain: What the Evidence Shows

Name Date Class

Reading

1 Video games are one of the world's most popular pastimes, and they worry many people. Research gives no single answer. Results depend on the kind of game, how long and when people play, and how researchers measure an effect. Many studies can only show an **association**, a link between gaming and an outcome, without proving that one causes the other.

2 The clearest physical risks are **strain** and poor sleep. In a 2019 survey of 65 college esports players in the United States and Canada, 56 percent reported eye fatigue, 42 percent neck or back pain, 36 percent wrist pain, and 32 percent hand pain. However, the **sample** was small and the answers were self-reported. A 2024 review of 26 studies of adults found that **excessive** gaming was linked with poorer sleep and later bedtimes, while casual play was not. In sleep experiments, playing an exciting game shortly before bed delayed sleep, whereas a calm but mentally demanding game was followed by more continuous sleep.

3 Some research reports **cognitive** benefits, meaning gains in thinking skills. A 2018 analysis led by Benoit Bediou at the University of Geneva combined studies of one **genre**, action games. Regular players **outperformed** non-players by a medium amount, and in training studies, where non-players were given action games, the gain was smaller. The clearest effects were on attention and spatial skills. The authors warned of publication **bias**: published results were about 30 percent larger than those across all the research. A 2023 update found a similar pattern. In a 2014 Berlin study, 23 adults played Super Mario 64 for at least 30 minutes a day for two months. Compared with non-players, they gained grey matter in areas linked to memory, planning, and movement. Brain change, however, does not prove better everyday thinking.

4 These claims are **contested**. In the same journal in 2018, Giovanni Sala and colleagues combined hundreds of results from all kinds of video games. They found small or no effects and no evidence that playing games improves general cognitive ability. In their view, the problem is **transfer**: getting better at a game does not carry over to unrelated tasks. The two teams also asked different questions: Bediou's group studied one genre and specific skills, Sala's group all games and general ability. Their findings may therefore disagree less than they first seem to.

5 Large studies of children add data but not proof. A European team used the US ABCD study of child development to follow more than 5,000 children for two years. Those who spent more time than average on games gained about 2.5 IQ points more than the average, while TV and social media showed no such link. Another ABCD analysis of about 2,000 children found that those who played three hours or more a day did better on tests of **impulse** control and working memory than children who never played. Both studies are observational: they compare children instead of assigning them to play.

6 On addiction, the World Health Organization's ICD-11 classification lists gaming disorder. Its **criteria** include loss of control over gaming, giving it priority over other activities, and continuing despite harm. The pattern must cause **significant** problems in daily life and usually last at least 12 months. A 2021 Australian review of 53 studies in 17 countries put the worldwide **prevalence** of the disorder at about 3 percent, or about 2 percent in studies with stricter sampling. Screening questionnaires explained 77 percent of the differences between studies. On violence, an American Psychological Association task force concluded in 2020 that violent games have a small link with acts such as yelling and pushing, but not enough evidence connects them with violent crime.

7 Instead of relying on players' memories, a 2022 Oxford study used six weeks of play records for 38,935 adults from seven game companies. It found little or no evidence that time spent playing affected wellbeing, although players' reasons for playing seemed to matter. The evidence supports limited claims. Playing heavily late at night is linked with worse sleep, and a small share of players meet the criteria for a disorder. Claims that games raise general intelligence are not established, and attention gains from action games are debated. The studies reviewed here give little sign that **moderate** play causes harm, but most of them show associations, not causes. The Geneva team has called for more training studies with over 30 hours of play.

Vocabulary Matching

Match each word from the reading with its meaning. Write the letter on the line.

1	**association**	_____	**A**	physical pressure or stress on the body
2	**strain**	_____	**B**	large or important enough to matter
3	**sample**	_____	**C**	how common something is in a group
4	**excessive**	_____	**D**	argued about and not agreed on
5	**cognitive**	_____	**E**	an unfair leaning that affects results
6	**genre**	_____	**F**	not extreme; of a middle level
7	**outperformed**	_____	**G**	connected with thinking and understanding
8	**bias**	_____	**H**	a small group used to represent a larger one
9	**contested**	_____	**I**	did better than others in a test
10	**transfer**	_____	**J**	a sudden urge to act without thinking
11	**impulse**	_____	**K**	standards used to judge something
12	**criteria**	_____	**L**	more than is reasonable or healthy
13	**significant**	_____	**M**	a type of art or entertainment
14	**prevalence**	_____	**N**	a connection between two things
15	**moderate**	_____	**O**	the spread of a skill to new tasks

Fill in the Blank

Choose a word from the box to complete each sentence. Use each word once. The words are already in the correct form.

association	**bias**	**cognitive**	**contested**	**criteria**	**excessive**	**genre**	**impulse**	**moderate**	**prevalence**
			sample	**significant**	**strain**	**transfer**			

1 There is a clear _____ between smoking and lung disease.

2 Long hours at a screen can cause eye _____ .

3 A _____ of 2,000 voters was asked about the election.

4 The company was criticized for _____ spending on advertising.

5 Memory and attention are _____ skills.

6 Science fiction is my favorite film _____ .

7 The survey was criticized for _____ against small companies.

8 The result of the election was _____ in court.

9 Learning chess does not guarantee a _____ of skill to math.

10 She bought the jacket on _____ .

11 Applicants must meet all three _____ .

12 Doctors are worried about the rising _____ of diabetes among young adults.

13 There was a _____ increase in sales.

14 Doctors recommend _____ exercise several times a week.

Comprehension Questions

Answer in your notebook or discuss with a partner. Questions 10 to 12 are IELTS-style.

1 Why does the reading say that research on video games gives no single answer?

2 What physical problems did the esports players report, and why should the survey be read with caution?

3 What did the 2024 review and the sleep experiments find about gaming and sleep?

4 What did the Geneva team find about action games, and what warning did the authors give?

5 What did the Berlin study show, and what does it not prove?

6 How do the conclusions of Sala and colleagues differ from those of Bediou and colleagues, and how does the reading explain the difference?

7 What do the two ABCD analyses report, and why are they described as observational?

8 How does ICD-11 describe gaming disorder, and why do prevalence estimates vary?

9 Evaluate the final paragraph. Which claims does the reading treat as reasonably supported, and which as not established or still debated?

IELTS-Style Questions

10 **True, False, or Not Given:** *"Most of the esports players in the 2019 survey saw a doctor about their pain."* Explain your answer using evidence from the reading.

11 **Yes, No, or Not Given:** *"The writer believes that the two 2018 reviews may disagree less than they first seem to."* Explain your answer using evidence from the reading.

12 **Author's purpose:** Why does the writer point out that the 2022 Oxford study used play records from game companies instead of players' memories?

True or False

Circle T (true) or F (false) according to the reading. Write a correction for each false statement on the dotted line.

1 **T / F** The reading says that many studies can show a link between gaming and an outcome without proving a cause.

2 **T / F** The 2019 survey included esports players from Europe and Asia.

3 **T / F** The 2024 review found that casual play was linked with poorer sleep.

4 **T / F** The Geneva analysis looked only at action games.

5 **T / F** In training studies, the gain from action games was larger than the difference between regular players and non-players.

6 **T / F** In the Berlin study, players gained grey matter compared with non-players.

7 **T / F** The first ABCD study found that TV and social media were also linked with higher IQ gains.

8 **T / F** Under ICD-11, the pattern of gaming usually has to last at least 12 months.

9 **T / F** The APA task force concluded that violent games cause violent crime.

10 **T / F** The Oxford study found little or no evidence that time spent playing affected wellbeing.

Discussion Questions

Talk with a partner or in a small group. The questions move from personal to more abstract.

1. Which kinds of video games are popular with people you know? Why do you think people choose them?
2. The reading says results depend on the type of game and when people play. Which types of game do you think are most and least likely to affect sleep? Why?
3. The esports survey had a small sample and self-reported answers. How could researchers make a study of physical problems more reliable?
4. Many gamers sit for long periods. What simple habits could reduce physical strain for people who spend hours at a screen for any reason?
5. Two reviews in the same journal reached different conclusions. How should a non-expert decide which study to believe?
6. The Berlin study found brain changes in players. Why is it risky to assume that a change in the brain means better everyday thinking?
7. Have you ever learned a skill in one area that helped you in a completely different area? What does this suggest about transfer?
8. Studies of children can show associations but not causes. What kind of study would give stronger evidence, and would it be ethical to run?
9. The choice of questionnaire explained most of the differences in prevalence estimates. What does this suggest about statistics on addiction in general?
10. Should gaming disorder be treated like other addictions, such as gambling? What are the benefits and risks of giving it a medical name?
11. The Oxford study depended on game companies sharing data. When is cooperation with industry useful for research, and when could it be a problem?
12. Should governments limit children's gaming time? Which evidence from the reading supports or weakens the case for limits?
13. Do game designers have a responsibility for players' sleep and wellbeing? What, if anything, should they change?
14. The reading ends with a call for longer training studies. If you could fund one study about video games, what question would it answer, and why?

Language Focus: Gerunds as Subjects and After Prepositions

A gerund is the -ing form of a verb used as a noun. It can be the subject of a sentence ("Playing late delays sleep") or the object of a preposition such as "without", "instead of", "by", or "despite" ("without proving a cause"). A gerund phrase can include objects and other details, and the verb after a gerund subject is singular.

In the reading:

- "…**playing an exciting game shortly before bed** delayed sleep…" (subject)
- "…a link between gaming and an outcome, without **proving that one causes the other**." (after a preposition)
- "…**getting better at a game** does not carry over to unrelated tasks." (subject)

Practice: Rewrite each sentence with a gerund. (1) Begin with *Sitting…*: *"It is tiring to sit at a screen for hours."* (2) Use *by*: *"She practiced every day, and this improved her reaction time."*

Activities and speed challenge
englishbridges.com/lessons/video-games-body-and-brain

Notes