

Air Pollution May Cause Chess Players to Make Mistakes

VOCABULARY WORDS

1. Performance (Noun) /pər'fɔːrməns/ how well a person, machine, company, etc. does something
Example: They are practicing for their performance next week.
2. Tournament (Noun) /'tʊrnəmənt/ a series of contests between a number of people or teams that continue until there is an overall winner
Example: The renowned tennis player is competing in another international tournament.
3. Move (Noun) /muːv/ a player's turn to change the position of a piece in a board game
Example: The clock is ticking, make your next move.
4. Monitor (Verb) /'mɒnɪtər/ to watch and check someone or something for a period of time
Example: The doctor advised him to monitor his blood pressure everyday.
5. Run out /Phrasal Verb/ rʌn aʊt/ (of a supply of something) to be used up; to use up a supply of something
Example: We are already running out of milk. Please buy some when you drop by the grocery store.
6. Level (Noun) /'lɛvəl/ a position on a scale of amount, quality, etc.
Example: The water pressure coming from our faucets is weaker than usual because they said that water level in the dam is decreasing.



High levels of air pollution may cause top chess players to make more mistakes, according to a recent study. A team of researchers from the Netherlands and the US looked at the performance of chess players in more than 600 games between 2017 and 2019. All of the games took place during official tournaments in Germany, where the researchers were able to study more than 30,000 moves by 121 players. Each tournament lasted eight weeks and the levels of pollution in the air were monitored during this time.

The researchers looked at particulate matter smaller than 2.5 micrometers in size — a type of air pollution known as PM2.5, which comes from things like cars and forest fires. The World Health Organization recommends that, over a year, there be an average of fewer than 5 micrograms of PM2.5 per cubic meter of air. However, the world's most polluted cities can have over 20 times that amount.

The researchers used a computer program to compare the chess players' moves to the best possible moves they could have made, so they could see when mistakes had been made. It was found that for every 10 microgram rise in levels of PM2.5, players were 26.3% more likely to make a mistake.

And when time was running out in a game, for every 10 microgram rise in PM2.5, players were 27.6% more likely to make a mistake — particularly weaker players. These results are bad news not just for chess players, say the researchers: they're bad for anyone making important decisions in places where levels of air pollution are high.

DISCUSSION

1. Do you find it surprising that air pollution may have a major impact on decision-making?
2. Do you play any strategy board games? Are you good at them?
3. Are you generally good at making difficult decisions?
4. How often do you have to make quick decisions at work?
5. What environmental issues are you most concerned about?