

Does Playing Video Games Cause Asthma?

More than half the population over age ten plays video games at an average rate of 1 hour per week. To video games lovers, the games are an exciting way to relax with friends. Last week, Penbrook University researchers announced that they had found an association between playing video games and asthma, an association that had been found only once before. (Consistency) Asthma develops in 22,000 people a year and is the most common chronic illness among inner city children.

The researchers interviewed more than 1,000 children who had come to a large inner city hospital's emergency room (ER) about their personal habits. After questioning the children in detail about their physical activity, diets, drug use, seat belt use, and recreational activities, they found that children who visited the ER because of an asthma attack were four times more likely (Strength of Association) to play video games than the control group of hospitalized children who visited the ER because of broken bones.

As the frequency of ER visits increased the amount of time playing video games increased up to a point. (Dose-Response) Children, who had visited the ER because of asthma attacks three times in the past year, played video games for an average of twelve hours per week and children, who had visited the ER because of asthma attacks two times in the past year, also played video games for an average of twelve hours per week. While children, who had visited the ER because of an asthma attack once in the past year, played video games for an average of eight hours per week. And children, who had visited the ER because of broken bones, played video games for an average of two hours per week.

The finding gains credence from its publication in the prestigious *Old South Journal of Medicine* and from the reputation of the study team. Its leader, Dr. Brian Johnson, is a highly respected epidemiologist who, in the past, has defended video game industry positions on issues of public health. He is not an alarmist.

Further studies are needed to confirm the association and, even if the association holds up, playing video games may not be causing the asthma but only associated with it. It is a mystery why, biologically, playing video games would increase the risk of asthma. (Biological Sense) Much more research is needed.

However, there have been several hints (Coherence) of an association between playing video games and asthma before. The Penbrook team points to a study five years ago that indicated asthma occurred more frequently in countries where playing video games was common. Mormons and Seventh-Day Adventists, who generally do not play video games, have low rates of asthma. There has also been a case of simultaneous asthma attacks in twin brothers who had stayed up all night to play video games on a jumbo TV screen.

The news alarmed video game players, triggered news stories on television and in the papers, inspired a number of bad jokes. ("Video games are breath taking.") Some children switched to watching TV or ping-pong. Others felt guilty and went on enjoying playing video games as usual.

Critics of the study, including the National Video Games Association, representing a \$7 billion-a-year industry, point out several drawbacks in the study. The children were simply

asked for how many hours a week they were accustomed to playing video games before they were hospitalized. No attempt was made to find out how many years they had been playing video games. (Dose-response).

No attempt was made to find out whether or not they favored particular games, if they played in a dark or well lit room, or how far they sat from the screen. These other variables might also have had an effect on the asthma. Other health habits such as eating snacks and a sedentary lifestyle are closely related to playing video games. (Confounding)

Because the control group was made up of children who had visited the ER because of broken bones, they may not represent a satisfactory comparison group. Patients who visit an ER because of broken bones might be more active than children with respiratory system problems and have less time to play video games. Many patients with asthma stop playing sports and engage in activities that are less strenuous because they believe it prevents asthma attacks. (Bias)

It was also pointed out that the researchers, who questioned patients on their pre-hospitalization playing of video games, knew in advance which ones had asthma. (Bias)

In addition the research design did not determine the time-order to the playing of the video games and the asthma. It is possible that the association was found because people who develop asthma find the less-strenuous playing of video games a more attractive recreational activity than more strenuous athletic games. (Time-Order)

In their original report, Dr. Johnson and his colleagues treated their evidence cautiously, asserting that further studies were needed to determine whether playing video games was actually a factor in causing the asthma.

The researchers acknowledge that more research needs to be done before a firm conclusion can be drawn. Dr. Johnson, who used to play video games occasionally with his children on weekends, stated that his family has stopped playing video games. But another prominent epidemiologist who studies asthma said he will keep playing video games with his children until the data are more conclusive. After that he may change his mind.