CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY

Name(s)

Andrew Bartsch

Project Number

J0701

Project Title

Playing Fortnite: A Distraction for Pain to the Brain

Abstract

Objectives

The objective of this study is to determine if playing the video game Fortnite has the ability to distract your brain from pain.

Methods

Digital stopwatch, digital probe thermometer, plastic bins of various sizes, plastic bowl, ice cubes, cold water, Xbox console with the video game Fortnite (by Epic Games) installed, Xbox controllers, TV, chairs, and bath towels.

Results

A baseline was established with the volunteers placing a heel in the cold ice bath without any distractions. Times and temperatures were recorded. During the trials, the volunteers played Fortnite with a heel placed in the ice bath. Fortnite provided a distraction to the brain since volunteers had the ability to tolerate the ice bath longer while they played the video game. By Trial 3, all of the volunteers tolerated the ice bath to the 3 minute (to prevent tissue injury) maximum.

Conclusions

Repeated trials with the volunteers revealed playing the video game Fortnite had the ability to distract the brain from the pain of a chilly ice bath. Volunteers were able to tolerate the ice bath longer even with colder temperatures while playing Fortnite when compared to their baseline times. Video games like Fortnite could serve as an alternative for pain management in hospitals and clinics. WIth the opioid epidemic in the United States, playing video games like Fortnite could help decrease the dangerous risks of opioid addiction and overdoses.

Summary Statement

The video game Fortnite can provide a mental distraction and reduce the sensation of pain from a chilly ice bath since players will experience an adrenaline rush.

Help Received

Several of my soccer teammates volunteered to play Fortnite for my experiment and my science teacher explained the "fight or flight" mechanism to me.