

Video Game Information

Disclaimer 85% of media is owned by five companies (so there is biases everywhere, even here)

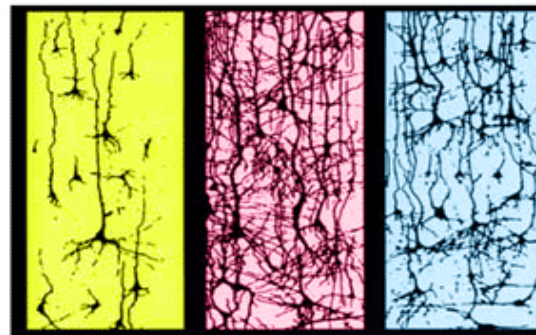


Statistics

211 million Americans are playing video games.
43.8 billion dollar industry 2018 up 18% from 2017, in comparison movie was 41.7 billion
84% of boys aged 13-17 play.
65% (1960) down to 45% (2015) with college/jobs (Failure to Launch)
Less men applying to college (40%)
30 minutes or less 3.55 GPA, more than four hours 2.40 GPA
On average 2.13 hours a day on video games

Neural Network

Center on the Developing Child HARVARD UNIVERSITY



birth

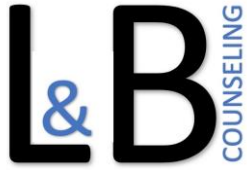
6 years

14 years

Source: Shonkoff, J. P. (2008) **

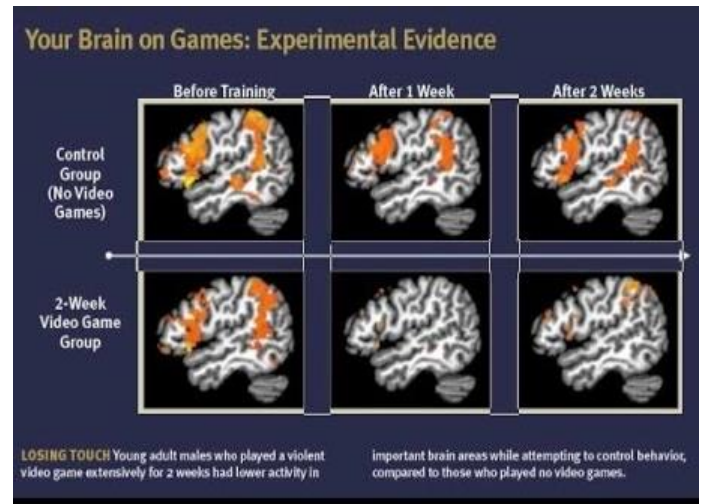
Positives

Hand eye coordination; Vision – detail resolution; Spatial; Visual Tracking; Task Switching; Working Memory



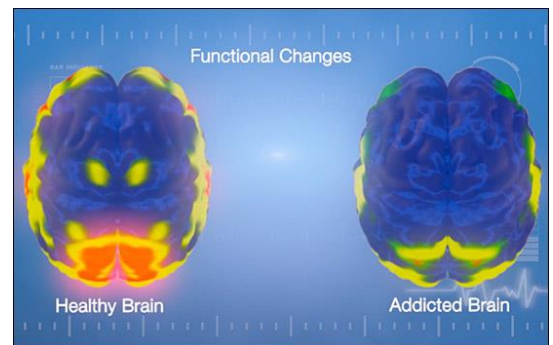
Potential Impacts

Almost all video game disorders have depression.
40% of teens have poor sleep.
2.5 times longer to fall asleep with video games.
Loneliness is up 13% to 33% (2015)
Dating, driving and social interaction have all dropped
Increase in apathy.
Ripple effect: BMI, Grades, Prosocial behavior and sleep
Non violent personality is 4% rate of aggressive incidence
versus 38% if exposed to video games.



Video Game Addiction Signs

1. Unsuccessful attempts to reduce or stop
2. Loss of interest in previous hobbies
3. Continuation despite problems
4. Jeopardized or lost a relationship, job or opportunity
5. Preoccupation (being absorbed by gaming)
6. Withdrawal (irritability, restlessness and sadness)
7. Tolerance (increase playing to feel satisfied)
8. Escape
9. Deceiving others (lying, sneaking)



What can you do

Harm reduction model (not abstinence) – not all games are the same. May be addicted to one game but not others.

- Use personal inventory (on the website under tools)
- Track screen time (healthytime.org)
- Increase protective factors (more friends, active, sleep)
- Outpatient Therapy
- Online gamers anonymous (Projectknow.com)
- Last resort residential therapy (Camp Unplugged, restart)

HIJACKING THE BRAIN

New research suggests that the brain's reward system has different mechanisms for craving and pleasure. Craving is driven by the neurotransmitter dopamine. Pleasure is stimulated by other neurotransmitters in "hedonic hot spots." When the craving circuitry overwhelms the pleasure hot spots, addiction occurs, leading people to pursue a behavior or drug despite the consequences.

PATHWAYS TO CRAVING

Desire is triggered when dopamine, which originates near the top of the brain stem, travels through neural pathways to act on the brain. Drugs increase the flow of dopamine.

Ventral tegmental area (VTA)

Dopamine is produced here and flows outward along neurons distributed throughout the brain's reward system.

Brain stem

Basic visceral sensations and reactions to pleasure, such as smiling, originate from this hot spot.

Ventral pallidum

Animal experiments show that damaging this hot spot can turn something that once gave pleasure into a source of disgust.

Nucleus accumbens

A hot spot within this key part of the craving circuitry amplifies the response to pleasure.

PLEASURE HOT SPOTS

A system of small hedonic hot spots, unrelated to dopamine, provides temporary sensations of pleasure and forms a feedback loop with the reward system that controls desire.

Dorsal striatum

Neurons here help form habits by identifying enjoyable patterns, such as the anticipation of buying drugs.

Prefrontal cortex

The amino acid glutamate, produced here, interacts with dopamine to spark visualizations that cue cravings.

Amygdala

Neurons here are stimulated by learned emotional responses, such as memories of cravings and pleasure.

Orbitofrontal cortex

This hot spot gives a sense of gratification but is also the first to shut down if a person has indulged too much.

