

# TELEVISION AND SCREEN ACTIVITIES: BENEFITS AND HARMFUL EFFECTS ON CHILDREN

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## AIM

- SCREEN ACTIVITIES – WHAT ARE THEY
- WHAT DOES THE EVIDENCE TELL US?
  - EFFECTS OF TELEVISION ON INFANTS AND CHILDREN
  - EFFECTS OF OTHER SCREEN ACTIVITIES
- HOW CAN WE USE TELEVISION AND SCREEN 'TOYS' TO HELP US

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## SCREEN ACTIVITIES



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*Do you love gaming, but want to do it for less? Here are a few suggestions on how you can enjoy the best video games while keeping an eye on your budget.*

When I was younger, my parents brought home an Intellivision gaming console, thereby turning me into a gamer for life. Fast forward a few decades, and imagine my surprise when they gave me a Sony Playstation 3. Although I'm fortunate to have such generous parents, I'm interested in finding out how to get a new gaming console for less than full price, and whether it's possible to be a "gamer" on a budget. Electronic toys have fairly short lifespans, so it's always good to pick up money saving tricks before you shop for that next big toy or gadget.

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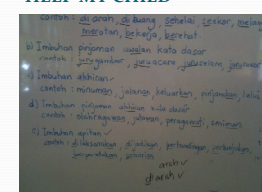
## DISCLAIMER




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## WHAT I USE IT FOR

### HELP MY CHILD



### RESCUE TOOL!



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# AAP POLICY STATEMENT 2001

## Children, Adolescents and Television

- Discourage TV viewing for children 2 years of age and should encourage more interactive activities that promote proper brain development, such as talking, playing, singing, and reading together.
- Limit children's media time (with entertainment media) to no more than 1 to 2 hours of quality programming per day for older children.
- Monitor programming, view with their children and adolescents, and encourage alternative forms of entertainment, such as reading, athletics, hobbies, and creative play.

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7

## A Systematic Review for the Effects of Television Viewing by Infants and

### Preschoolers

Rupin R. Thakkar, Michelle M. Garrison and Dimitri A. Christakis  
*Pediatrics* 2006;118:2025

TABLE 1 Test Characteristics						
Study	N	Ages	Intervention Programs	Control Activity	Follow-up	Outcomes (Domains)
Das Garmes and Holzman <sup>1</sup> (1978)	173	3-5 y	Peace Scenario [Seume Street]	Cartoons	7 wk and 6 mo	Learning
Gest and Gibson <sup>2</sup> (2000)	62	4 y, 1 mo to 5 y, 6 mo	Milder Rogers, Power Rangers	No TV	Immediate	Self-regulation
Holt et al. <sup>3</sup> (1986)	73	3 y, 1 mo to 6 y, 3 mo	Mary <sup>a</sup>	N/A	Immediate	Aggression
Posten and Stein <sup>4</sup> (1981)	66	3 y, 6 mo to 5 y, 6 mo	Saturday morning programs	No TV	1-5 d	Prosocial behavior, Aggression, Imagination
Stein et al. <sup>5</sup> (1971)	10	3-5 y	Saturday morning programs	Playstation	Immediate	Aggression
Gest et al. <sup>6</sup> (2003)	205	3-5 y	Seume Street Milder Rogers	Neutral TV	Immediate	Racial attitude
Friedrich Coie et al. <sup>7</sup> (1979)	14	2 y, 1 mo to 2 y, 5 mo	Seume Street Milder Rogers	Neutral TV	1 wk	Prosocial behavior, Self-regulation, Aggression
Das et al. <sup>8</sup> (1979)	18	Medians, 4 y, 3 mo	Seume Street Milder Rogers	Neutral TV	1 wk	Prosocial behavior, Self-regulation, Aggression
Friedrich and Heaton <sup>9</sup> (1973)	92	3-8.5 y	Milder Rogers	Neutral TV	2 wk	Prosocial behavior, Self-regulation, Aggression
			Bulman Superman			
Singer and Singer <sup>10</sup> (1978)	60	3-4.5 y	Milder Rogers	No TV	Immediate	Imagination
Anderson et al. <sup>11</sup> (1977)	72	4 y	Seume Street	No TV	Immediate	Self-regulation

<sup>a</sup> The *Wizard of Oz*, *Silverstein and Twenty Once Upon a Classic*, *Left O' Lempiis*, *Sharon*, *Gracie Ann*, and *Space Academy*. TV indicates televi-

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8

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JALLI2: Results of Included Trials			
	Outcome	Study	RCRST
Learning	Prosocial behavior	Dau-Guennoen and Hollmann* (1996)	Positive effect on specific knowledge, general knowledge, and cognition
		Conzelmann et al. (1997)	Positive effect on preference to play with nonracists
Imaginative play	Prosocial behavior	Frederich Cahn et al. (1972)	No significant effect
		Holzer Stein et al. (1981)	No significant effect
		Tower et al. (1979)	No significant effect
		Frederich and Hutcheon-Sperry (1973)	No significant effect
		Frederich Cahn et al. (1972)	No significant effect
		Holzer Stein et al. (1981)	Positive effect from viewing low action/violence programs
Appreciation	Prosocial behavior	Stricker and Stricker* (1962)	Negative effect from viewing high action/violence programs
		Tower et al. (1979)	Positive effect from viewing Muppet Shows
		Conzelmann et al. (1997)	Positive effect for children with low baseline imagination
		Pattiss et al. (1988)	Negative effect for children with low baseline imagination
		Gelst and Gibson* (2000)	No significant effect
		Holzer Stein et al. (1981)	No significant effect
Self-regulation	Prosocial behavior	Frederich Cahn et al. (1972)	No significant effect
		Frederich and Hutcheon-Sperry (1973)	No significant effect
		Holzer Stein et al. (1981)	No significant effect
		Frederich Cahn et al. (1972)	No significant effect
		Tower et al. (1979)	No significant effect
		Frederich and Hutcheon-Sperry (1973)	Negative effect from viewing critics
	Self-regulation	Gelst and Gibson* (2000)	Positive effect from viewing Muppet Shows
		Frederich and Hutcheon-Sperry (1973)	Negative effect from viewing Parent Reports
		Anderson et al. (1997)	No significant effect from viewing Muppet Reports

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9

## IMMEDIATE EFFECTS : CHOICE OF PROGRAMMES IMPORTANT

**PEDIATRICS**  
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

The Immediate Impact of Different Types of Television on Young Children's Executive Function  
Angeline S. Lilford and Jennifer Peterson  
*Pediatrics* 2011;128:e44; originally published online September 12, 2011;  
DOI: 10.1542/peds.2010-1610



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10

## IMMEDIATE EFFECTS ON EXECUTIVE FUNCTIONING

- Watching a 9-minute episode of a fast-paced television cartoon immediately impaired young children's executive functioning relative to watching an educational television show or drawing.
  - Executive functioning important for developing positive social and cognitive functioning.
  - Fast paced TV recruits only sensory pathways, not the prefrontal cortices
  - "It should be noted that *Sesame Street* is even faster paced today than it was 30 years ago"

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11

## LONGER TERM EFFECTS OF TELEVISION: BEHAVIOUR AND SOCIAL SKILLS

- Prospective study, > 2hours at 30-33 months and at 5.5 years. Using questionnaires to identify behaviour and social skills problems
- More than 40% of children aged 5.5yrs had a TV in the bedroom
  - More sleep problems
  - Less emotional reactivity
- Sustained exposure associated with behaviour problems while concurrent exposure associated with more social skills problems

Mistry et al Pediatrics 2007

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12

## LONGER TERM EFFECTS OF TELEVISION : ATTENTION

- Early exposure (1-3 years) to tv associated with attention problems in childhood (7 years)
- Viewing television and playing video games each are associated with increased subsequent attention problems in childhood.
- Similar association among television, video games, and attention problems exists in late adolescence and early adulthood.

Christakis et al Pediatrics 2004  
Swing et al Pediatrics 2010

- Greater number of hours of childhood television viewing was associated with attention problems in adolescence
  - Independent of gender, early attention problems, cognitive ability, and childhood socioeconomic status

Landhuis et al Pediatrics 2007  
Levine et al J Appl Dev Psychol 2000

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13

## EFFECT OF TV ON FOOD PREFERENCES

- Exposure to television food commercials enhanced high television viewers' preferences for branded foods and increased reported preferences for all food items (branded and nonbranded) relative to the low television viewers

- Preference for energy dense food poor in nutrients
- Recognition of more food adverts cf toy adverts

• Boyland et al Pediatrics 2011

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14

## EFFECT OF TV ON FOOD CONSUMPTION PATTERNS

- Children from families in which television viewing is part of meal routines consume fewer fruits and vegetables and more pizzas, snack foods, and sodas (caffeinated drinks) compared to children from families in which television viewing and eating are separate activities.

• Coon et al Pediatrics 2001

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15

## EFFECTS OF TV ON SLEEP

- Increased daily television viewing amounts and increased television viewing at bedtime, especially in the context of having a television set in the child's bedroom, associated with more sleep disturbance
- Bedtime resistance, sleep onset delay, and anxiety around sleep, followed by shortened sleep duration

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16

## PERCEIVED BENEFITS AND BARRIERS TO REDUCING TV TIME

- Benefits
  - More quality time
  - Improved parent child communication
  - Improved educational performance
  - Improved behaviour
- Barriers
  - Children enjoy it and reduces boredom
  - Parents enjoy watching with children
  - Parents reluctant to change their own tv watching behaviour
  - Perceived lack of non-media activities as alternatives
  - Loss of a cheap and 'effective' baby-sitter

Jordan et al. Pediatrics 2006

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17

## BENEFICIAL EFFECTS OF SCREEN ACTIVITIES

- Educational
  - eg learning to read, numeracy
  - Broadening knowledge base
- Parent child interaction
- Use it as rewards for behaviour modification
- Communication tool (IPAD, IPOD) for children with communication difficulties eg autism

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18

## SUMMARY

- TV and Video game exposure affects attention, behaviour, social skills and sleep.
- Timing of exposure and duration of exposure results in different difficulties
- The choice of programmes is important as is the presence of TV in a bedroom
- Beneficial effects of newer screen gadgets to aid children with communication and learning differences.

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19

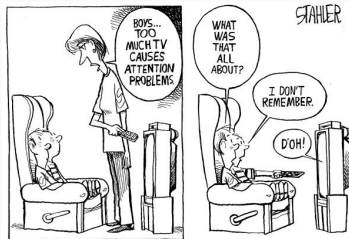
## LESS OF THIS



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20

## THANK YOU



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21