



Policy Statement—Media Education

abstract

FREE

The American Academy of Pediatrics recognizes that exposure to mass media (eg, television, movies, video and computer games, the Internet, music lyrics and videos, newspapers, magazines, books, advertising) presents health risks for children and adolescents but can provide benefits as well. Media education has the potential to reduce the harmful effects of media and accentuate the positive effects. By understanding and supporting media education, pediatricians can play an important role in reducing harmful effects of media on children and adolescents. *Pediatrics* 2010;126:1012–1017

THE AMOUNT OF TIME SPENT WITH MEDIA

Children and teenagers spend more time engaged in various media than they do in any other activity except for sleeping. A 2010 Kaiser Family Foundation survey of more than 2000 8- to 18-year-olds revealed that children and teenagers in the United States spend an average of more than 7 hours/day with a variety of different media.¹ By the time today's young people reach 70 years of age, they will have spent the equivalent of 7 to 10 years of their lives watching television.² There are more homes in America that have a TV than those that have indoor plumbing, and today's child lives in an environment with an average of 4 TVs, nearly 3 DVD players or VCRs, 1 DVR, 2 CD players, 2 radios, 2 video game consoles, and 2 computers.¹ Preadolescents and adolescents can download racy videos, send sexual text messages or explicit photographs to their friends, buy cigarettes and beer on the Internet, and post enticing profiles on Facebook. Yet, across all ages, TV remains the predominant medium. TV-viewing is also beginning at increasingly younger ages. The latest national report revealed that on a typical day, nearly two-thirds of children and infants younger than 2 years are watching TV for an hour and a half.³ More than 70% of American teenagers have a TV in their own bedrooms, half have a VCR or DVD player, half have a video game console, and one-third have a computer and Internet access.¹ Time spent with media often displaces involvement in creative, active, or social activities.

THE EFFECTS OF MEDIA VIOLENCE ON AGGRESSIVE BEHAVIOR

Results of more than 2000 scientific studies and reviews have shown that significant exposure to media violence increases the risk of aggressive behavior in certain children and adolescents, desensitizes them to violence, and makes them believe that the world is a “meaner and scarier” place than it is.^{4–9} Violence appears in various forms of media entertainment such as movies, video games, and TV news. For example, nearly 90% of the top-grossing PG-13–rated films of 1999–2000 contained violence.¹⁰ Research has shown that

COUNCIL ON COMMUNICATIONS AND MEDIA

KEY WORD

media

ABBREVIATION

AAP—American Academy of Pediatrics

This document is copyrighted and is property of the American Academy of Pediatrics and its Board of Directors. All authors have filed conflict of interest statements with the American Academy of Pediatrics. Any conflicts have been resolved through a process approved by the Board of Directors. The American Academy of Pediatrics has neither solicited nor accepted any commercial involvement in the development of the content of this publication.

www.pediatrics.org/cgi/doi/10.1542/peds.2010-1636

doi:10.1542/peds.2010-1636

All policy statements from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2010 by the American Academy of Pediatrics

news reports of bombings, natural disasters, murders, and other violent crimes have the potential to traumatize young children.^{5,11}

SEXUAL CONTENT IN THE MEDIA

American media—both programming and advertising—are highly sexualized in their content. On prime-time TV, more than 75% of shows contain sexual content, yet for only 14% of sexual incidents is any mention made of risks or responsibilities of sexual activity.^{12,13} In the first 10 months of 2004, the makers of erectile-dysfunction drugs spent nearly \$350 million on advertising, which makes sex seem like a harmless recreational activity.¹⁴ Major networks remain extremely reluctant to advertise birth control pills, condoms, or emergency contraceptives, which could avert thousands of unwanted adolescent pregnancies and elective abortions by adolescents each year.^{15–17} Research is beginning to show that all of this sexual content may contribute to early sexual intercourse among teenagers.^{18–20}

TOBACCO, ALCOHOL, AND ILLICIT DRUGS

Increasingly, media messages and images normalize and glamorize the use of tobacco, alcohol, and illicit drugs. Tobacco manufacturers spend more than \$12 billion per year and alcohol manufacturers spend nearly \$6 billion per year to entice youngsters into “just saying yes.”^{21,22} Smoking and drinking are frequently glamorized and are portrayed as normative behavior on TV and in movies. A new study of top-grossing movies from 1991 to 2009 showed that smoking scenes in movies peaked in 2005 but have decreased significantly since then. However, in 2009, more than half of PG-13 movies still contained smoking scenes.²³ A meta-analysis of 4 studies estimated that 44% of all smoking initiation among children and young teenagers could be

attributed to viewing smoking in movies.²⁴ Alcohol remains the number 1 drug portrayed on American TV, with 1 drinking scene every 22 minutes.²⁵ More than one-third of drinking scenes are humorous, and negative consequences are shown in only 23% of them.²⁶ Through popular music, the average teenager is exposed to nearly 85 explicit drug references each day.²⁷ Again, the behavioral effects are increasingly clear in the research: children and teenagers exposed to more movie images of smoking are at greater risk of smoking,^{24,28} and alcohol advertising, in particular, is adept at convincing teenagers to begin drinking.^{29–34}

EFFECTS OF MEDIA ON OBESITY AND SCHOOL PERFORMANCE

Increased TV use is documented to be a significant factor leading to obesity^{35–39} and may lead to decreased school achievement as well.^{40–42} New research is also investigating whether there might be a relationship between overstimulation from high levels of media use and attention-deficit/hyperactivity disorder,^{43,44} sleep disorders,⁴⁵ and eating disorders.³⁷

NEW TECHNOLOGY

The Internet and cellular phones have become important new sources of sexual information, pornography, “sexting” (sending sexual text messages and/or explicit images), and social networking. In a recent study, nearly one-quarter of MySpace profiles referenced sexual behaviors.⁴⁶ In another study, 20% of teenagers reported having sent or posted nude pictures or videos of themselves (sexting).⁴⁷ Parents, schools, and law enforcement officials are sometimes in a quandary about how to deal with the new social networking sites and with sexting.^{48,49} Web sites that promote anorexia nervosa are also putting teenagers at risk of eating disorders.⁵⁰

VALUE OF MEDIA EDUCATION

Media education has the potential to reduce harmful media effects.^{51,52} In the past 2 centuries, to be “literate” meant that a person could read and write. In the new millennium, to be “literate” means that a person can successfully understand and decode a variety of different media.⁵³ Given the volume of information transmitted through mass media as opposed to the written word, it is now as important to teach media literacy as it is to teach print literacy. The prime tenets of media education are as follows⁵²:

- All media messages are constructed.
- Media messages shape our understanding of the world.
- Individuals interpret media messages uniquely.
- Mass media have powerful implications.

A media-educated person will be able to limit his or her use of media; make positive media choices; select creative alternatives to media consumption; develop critical thinking and viewing skills; and understand the political, social, economic, and emotional implications of all forms of media.⁵² Results of recent research suggest that media education may make young people less vulnerable to negative aspects of media exposure.⁵² Media education programs have resulted in less aggressive attitudes⁵⁴ and behaviors,^{54–58} increased sophistication about advertising,⁵⁹ fewer requests for commercial products,^{60,61} less alcohol and tobacco use or intentions to use,^{62–66} better nutritional habits^{67,68} and less obesity,^{69,70} better body self-image,^{71–73} fewer sexual disclosures on social networking sites,⁷⁴ and less overall TV-viewing.^{69,70,75} Many countries, including Canada, Great Britain, Australia, and some Latin American countries, mandate media education in their school curricula. However, media edu-

cation should not be used as a substitute for careful scrutiny of the media industry's responsibility for its programming. In addition, simply reducing children's and adolescents' screen media use has been shown conclusively to have beneficial health effects.^{69,70,75}

RECOMMENDATIONS

The American Academy of Pediatrics (AAP) recommends the following:

1. Pediatricians need to become educated about the public health risks of media. Given the impact that media have on the health of children and adolescents, AAP chapters and districts, as well as medical schools and residency training programs, should ensure that ongoing education in this area is a high priority.⁷⁶
2. Pediatricians should ask at least 2 media-related questions at each well-child visit:
 - How much entertainment media per day is the child or adolescent watching? The AAP recommends that children have less than 2 hours of screen time per day.
 - Is there a TV set or Internet access in the child's or adolescent's bedroom?⁷⁷Children or teenagers who are showing aggressive behavior, have academic difficulties, or are overweight or obese should have additional history taken. A recent study revealed that office-based counseling regarding media is effective and could result in the parents of nearly 1 million additional children learning about the AAP recommendation to limit media time to 2 hours/day.⁷⁸ Advice to parents should include the following:
 - Encourage a careful selection of programs to view.
 - Co-view and discuss content with children and adolescents.
 - Teach critical viewing skills.
 - Limit and focus time spent with media. In particular, parents of young children and preteens should avoid exposing them to PG-13- and R-rated movies.^{19,23,24,79-81}
 - Be good media role models; children often develop their media habits on the basis of their parents' media behavior.
 - Emphasize alternative activities.
 - Create an "electronic media-free" environment in children's rooms.
 - Avoid use of media as an electronic baby-sitter.
3. Pediatricians should continue to urge parents to avoid TV- and video-viewing for children younger than 2 years. Increasing amounts of research have shown that infants and toddlers have a critical need for direct interactions with parents and other regular caregivers for healthy brain growth.⁸²⁻⁸⁴ In addition, the results of 7 studies have shown that infants younger than 18 months who are exposed to TV may suffer from a delay in language development, and 1 study revealed that infant videos may delay language development.⁸⁵⁻⁹¹ No studies have documented a benefit of early viewing.⁹²
4. Pediatricians should serve as role models for appropriate media use by limiting TV and video use in waiting rooms and patients' rooms, using educational materials to promote reading, and having visits by volunteer readers in waiting rooms. Pediatricians should also offer in-office reading programs, such as Reach Out and Read, and promote active play.⁹³
5. Schools need to begin implementing media education in their curricula. The simplest way to do this would be to incorporate principles of media education into existing programs on drug prevention and sex education.
6. Congress should consider mandating and funding universal media education in American schools.
7. The federal government and private foundations should dramatically increase their funding of media research, particularly in the areas of media education, violence prevention, sex and sexuality, drugs, obesity, and early brain development.

LEAD AUTHOR

Victor C. Strasburger, MD

COUNCIL ON COMMUNICATIONS AND MEDIA EXECUTIVE COMMITTEE, 2009-2010

Gilbert L. Fuld, MD, Chairperson
Deborah Ann Mulligan, MD, Chair-elect
Tanya Remer Altmann, MD
Ari Brown, MD
Dimitri A. Christakis, MD
Kathleen Clarke-Pearson, MD
Benard P. Dreyer, MD
Holly Lee Falik, MD
Kathleen G. Nelson, MD
Gwenn S. O'Keeffe, MD
Victor C. Strasburger, MD

PAST EXECUTIVE COMMITTEE MEMBERS

Regina M. Milteer, MD
Donald L. Shiffrin, MD

LIAISONS

Michael Brody, MD – *American Academy of Child and Adolescent Psychiatry*
Brian Wilcox, PhD – *American Psychological Association*

CONTRIBUTOR

Marjorie J. Hogan, MD

STAFF

Gina Ley Steiner
Veronica Laude Noland
vnoland@aap.org

REFERENCES

- Rideout VJ, Foehr UG, Roberts DF. *Generation M²: Media in the Lives of 8- to 18-Year-Olds*. Menlo Park, CA: Kaiser Family Foundation; 2010
- Strasburger VC. Risky business: what primary care practitioners need to know about the influence of the media on adolescents. *Prim Care*. 2006;33(2):317–348
- Vandewater EA, Rideout VJ, Wartella EA, Huang X, Lee JH, Shim M. Digital childhood: electronic media and technology use among infants, toddlers, and preschoolers. *Pediatrics*. 2007;119(5). Available at: www.pediatrics.org/cgi/content/full/119/5/e1006
- Center on Media and Child Health. Home page. Available at: www.cmch.tv. Accessed August 3, 2009
- Cantor J. *Mommy, I'm Scared: How TV and Movies Frighten Children and What We Can Do to Protect Them*. New York, NY: Harcourt Brace; 1998
- Anderson CA, Berkowitz L, Donnerstein E, et al. The influence of media violence on youth. *Psychol Sci Public Int*. 2003;4(3):81–110
- Murray JP. Media violence: the effects are both real and strong. *Am Behav Sci*. 2008; 51(8):1212–1230
- Christakis DA, Zimmerman FJ. Violent television viewing during preschool is associated with antisocial behavior during school age. *Pediatrics*. 2007;120(5):993–999
- Strasburger VC, Wilson BJ, Jordan A, eds. *Children, Adolescents, and the Media*. Thousand Oaks, CA: Sage; 2009
- Webb T, Jenkins L, Browne N, Affi AA, Kraus J. Violent entertainment pitched to adolescents: an analysis of PG-13 films. *Pediatrics*. 2007; 119(6). Available at: www.pediatrics.org/cgi/content/full/119/6/e1219
- Walma van der Molen JH. Violence and suffering in television news: toward a broader conception of harmful television content for children. *Pediatrics*. 2004;113(6):1771–1775
- Kunkel D, Eyal K, Finnerty K, Biely E, Donnerstein E. *Sex on TV 4: A Biennial Report to the Kaiser Family Foundation*. Menlo Park, CA: Kaiser Family Foundation; 2005
- Kunkel D, Eyal K, Donnerstein E, Farrar KM, Biely E, Rideout V. Sexual socialization messages on entertainment television: comparing content trends 1997–2002. *Media Psychol*. 2007;9(3):595–622
- Snowbeck C. FDA tells Levitra to cool it with ad. *Pittsburgh Post-Gazette*. April 19, 2005. Available at: www.postgazette.com/pg/05109/490334.stm. Accessed July 20, 2005
- Brown JD, Strasburger VC. From Calvin Klein to Paris Hilton and MySpace: adolescents, sex, and the media. *Adolesc Med State Art Rev*. 2007;18(3):484–507, vi–vii
- Kristof ND. Beyond chastity belts. *New York Times*. May 2, 2006: A25. Available at: http://select.nytimes.com/2006/05/02/opinion/02kristof.html?_r=1&scp=1&sq=Beyond%20chastity%20belts&st=cse. Accessed August 11, 2010
- Newman AA. Pigs with cellphones, but no condoms. *New York Times*. June 18, 2007: B1. Available at: www.nytimes.com/2007/06/18/business/media/18adcol.html. Accessed August 11, 2010
- Collins RL, Elliott MN, Berry SH, et al. Watching sex on television predicts adolescent initiation of sexual behavior. *Pediatrics*. 2004;114(3). Available at: www.pediatrics.org/cgi/content/full/114/3/e280
- Brown JD, L'Engle K, Pardun CJ, Guo G, Kenneavy K, Jackson C. Sexy media matter: exposure to sexual content in music, movies, television, and magazines predicts black and white adolescents' sexual behavior. *Pediatrics*. 2006;117(4):1018–1027
- Chandra A, Martino SC, Collins RL, et al. Does watching sex on television predict teen pregnancy? Findings from a National Longitudinal Survey of Youth. *Pediatrics*. 2008; 122(5):1047–1054
- Tobacco Free Kids. Home page. Available at: www.tobaccofreekids.org/research. Accessed August 3, 2009
- Center on Alcohol Marketing and Youth. *Alcohol Advertising and Youth* [fact sheet]. Washington, DC: Center on Alcohol Marketing and Youth; 2007
- Glantz SA, Titus K, Mitchell S, Polansky J, Kaufmann RB. Smoking in top-grossing movies: United States, 1991–2009. *MMWR Morb Mortal Wkly Rep*. 2010;59(32): 1014–1017
- Millett C, Glantz S. Assigning an “18” rating to movies with tobacco imagery is essential to reduce youth smoking. *Thorax*. 2010; 65(5):377–378
- Gerbner G. Drugs in television, movies, and music videos. In: Kamalipour YR, Rampal KR, eds. *Media, Sex, Violence, and Drugs in the Global Village*. Lanham, MD: Rowman & Littlefield; 2001:69–75
- Christenson PG, Henriksen L, Roberts DF. *Substance Use in Popular Prime-Time Television*. Washington, DC: Office of National Drug Policy Control; 2000
- Primack BA, Dalton MA, Carroll MV, Agarwal AA, Fine MJ. Content analysis of tobacco, alcohol, and other drugs in popular music. *Arch Pediatr Adolesc Med*. 2008;162(2): 169–175
- Sargent JD, Beach ML, Adachi-Mejia AM, et al. Exposure to movie smoking: its relation to smoking initiation among US adolescents. *Pediatrics*. 2005;116(5):1183–1191
- Wellman RJ, Sugarman DB, DiFranza J, Winickoff JP. The extent to which tobacco marketing and tobacco use in films contribute to children's use of tobacco. *Arch Pediatr Adolesc Med*. 2006;160(12):1285–1296
- Stacy AW, Zogg JB, Unger JB, Dent CW. Exposure to televised alcohol ads and subsequent adolescent alcohol use. *Am J Health Behav*. 2004;28(6):498–509
- Ellickson PH, Collins RL, Hambarsoomians K, McCaffrey DF. Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment [published correction appears in *Addiction*. 2005;100(8): 1201]. *Addiction*. 2005;100(2):235–246
- Grube JW, Waiters E. Alcohol in the media: content and effects on drinking beliefs and behaviors among youth. *Adolesc Med Clin*. 2005;16(2):327–343
- Jernigan DH. Importance of reducing youth exposure to alcohol advertising. *Arch Pediatr Adolesc Med*. 2006;160(1):100–102
- Henriksen L, Feighery EC, Schleicher NC, Fortmann SP. Receptivity to alcohol marketing predicts initiation of alcohol use. *J Adolesc Health*. 2008;42(1):28–35
- Institute of Medicine. *Food Marketing to Children: Threat or Opportunity*. Washington, DC: National Academies Press; 2006
- Lumeng JC, Rahnema S, Appulgiase D, Kaciroti N, Bradley RH. Television exposure and overweight risk in preschoolers. *Arch Pediatr Adolesc Med*. 2006;160(4):417–422
- Jordan AB, Kramer-Golinkoff EK, Strasburger VC. Does adolescent media use cause obesity and eating disorders? *Adolesc Med State Art Rev*. 2008;19(3):431–449, viii–ix
- Laurson KR, Eisenmann JC, Welk GJ, Wickel EE, Gentile DA, Walsh DA. Combined influence of physical activity and screen time recommendations on childhood overweight. *J Pediatr*. 2008;153(2):209–214
- Harris JL, Pomeranz JL, Lobstein T, Brownell KD. A crisis in the marketplace: how food marketing contributes to childhood obesity and what can be done. *Annu Rev Public Health*. 2009;30:211–225
- Borzekowski DLG, Robinson TN. The remote, the mouse, and the No. 2 pencil: the household media environment and academic achievement among third grade students.

- Arch Pediatr Adolesc Med.* 2005;159(7):607–613
41. Zimmerman FJ, Christakis DA. Children's television viewing and cognitive outcomes: a longitudinal analysis of national data. *Arch Pediatr Adolesc Med.* 2005;159(7):619–625
 42. Sharif I, Willis TA, Sargent JA. Effect of visual media use on school performance: a prospective study. *J Adolesc Health.* 2010;46(1):52–61
 43. Christakis DA, Zimmerman FJ, DiGiuseppe DL, McCarty CA. Early television exposure and subsequent attentional problems in children. *Pediatrics.* 2004;113(4):708–713
 44. Swing EL, Gentile DA, Anderson CA, Walsh DA. Television and video game exposure and the development of attention problems. *Pediatrics.* 2010;126(2):214–221
 45. Zimmerman FJ. *Children's Media Use and Sleep Problems: Issues and Unanswered Questions.* Menlo Park, CA: Kaiser Family Foundation; 2008
 46. Moreno MA, Parks MR, Zimmerman FJ, Brito TE, Christakis DA. Display of health risk behaviors on MySpace by adolescents. *Arch Pediatr Adolesc Med.* 2009;163(1):27–34
 47. National Campaign to Prevent Teen and Unplanned Pregnancy. Sex and technology. Available at: www.thenationalcampaign.org/sextech. Accessed August 3, 2009
 48. Mitchell KJ, Ybarra M. Social networking sites: finding a balance between their risks and benefits. *Arch Pediatr Adolesc Med.* 2009;163(1):87–89
 49. Lithwick D. Textual misconduct: what to do about teens and their dumb naked photos of themselves. *Slate.* February 14, 2009. Available at: www.slate.com/id/2211169. Accessed August 3, 2009
 50. Borzekowski DLG, Schenk S, Wilson JL, Peebles R. e-Ana and e-Mia: a content analysis of pro-eating disorder Web sites. *Am J Public Health.* 2010;100(8):1526–1534
 51. Potter WJ. *Media Literacy.* 4th ed. Thousand Oaks, CA: Sage; 2008
 52. McCannon B. Media literacy/media education: solution to Big Media? A review of the literature. In: Strasburger VC, Wilson BJ, Jordan A, eds. *Children, Adolescents, and the Media.* 2nd ed. Thousand Oaks, CA: Sage; 2009:519–569
 53. Rich M, Bar-on M. Child health in the information age: media education of pediatricians. *Pediatrics.* 2001;107(1):156–162
 54. Nathanson AI, Cantor J. Reducing the aggression-promoting effect of violent cartoons by increasing children's fictional involvement with the victim. *J Broadcast Electronic Media.* 2000;44(1):125–142
 55. Huesmann LR, Eron LD, Klein R, Brice P, Fischer P. Mitigating the imitation of aggressive behaviors by changing children's attitudes about media violence. *J Pers Soc Psychol.* 1983;44(5):899–910
 56. Robinson TN, Wilde ML, Navracruz LC, Haydel KF, Varady A. Effects of reducing children's television and video game use on aggressive behavior. *Arch Pediatr Adolesc Med.* 2001;155(1):17–23
 57. Cantor J, Wilson BJ. Media and violence: intervention strategies for reducing aggression. *Media Psychol.* 2003;5(4):363–403
 58. Rosenkoetter LI, Rosenkoetter SE, Ozretich RA, Acock AC. Mitigating the harmful effects of violent television. *J Appl Dev Psychol.* 2004;25(1):25–47
 59. Hobbs R. Does media literacy work? An empirical study of learning how to analyze advertisements. *Advertis Soc Rev.* 2004;5(4):1–28
 60. Robinson TN, Saphir MN, Kraemer HC, Varady A, Haydel KF. Effects of reducing television viewing on children's requests for toys: a randomized controlled trial. *J Dev Behav Pediatr.* 2001;22(3):179–184
 61. Valkenburg PM. Parental mediation of undesired advertising effects. *J Broadcast Electr Media.* 2005;49(2):153–165
 62. Austin EW, Johnson KK. Effects of general and alcohol-specific media literacy training on children's decision making about alcohol. *J Health Commun.* 1997;2(1):17–42
 63. Gonzales R, Glik D, Davoudi M, Ang A. Media literacy and public health: integrating theory, research and practice for tobacco control. *Am Behav Sci.* 2004;48(2):189–201
 64. Austin EW, Chen M, Grube JW. How does alcohol advertising influence underage drinking? The role of desirability, identification and skepticism. *J Adolesc Health.* 2006;38(4):376–384
 65. Primack BA, Gold MA, Land SR, Fine MJ. Association of cigarette smoking and media literacy about smoking among adolescents. *J Adolesc Health.* 2006;39(4):465–472
 66. Primack BA, Hobbs R. Association of various components of media literacy and adolescent smoking. *Am J Health Behav.* 2009;33(2):192–201
 67. Hindin TJ, Contento IR, Gussow JD. A media literacy nutrition education curriculum for Head Start parents about the effects of television advertising on their children's food requests. *J Am Diet Assoc.* 2004;104(2):192–198
 68. Livingstone S, Helsper EJ. Does advertising literacy mediate the effects of advertising on children: a critical examination of two linked research literatures in relation to obesity and food choice. *J Commun.* 2006;56(3):560–584
 69. Robinson TN. Reducing children's television viewing to prevent obesity: a randomized controlled trial. *JAMA.* 1999;282(16):1561–1567
 70. Dennison BA, Russo TJ, Burdick PA, Jenkins P. An intervention to reduce television viewing by preschool children. *Arch Pediatr Adolesc Med.* 2004;158(2):170–176
 71. Neumark-Sztainer D, Sherwood NE, Collier T, Hannan PJ. Primary prevention of disordered eating among preadolescent girls: feasibility and short-term effect of a community-based intervention. *J Am Diet Assoc.* 2000;100(12):1466–1473
 72. Levine MP, Smolak L. Primary prevention of body image disturbances and disordered eating in childhood and early adolescence. In: Thompson JK, Smolak L, eds. *Body Image, Eating Disorders, and Obesity in Childhood and Adolescence.* Washington, DC: American Psychological Association; 2001:237–260
 73. Bruning Brown J, Winzelberg AJ, Abascal LB, Taylor CB. An evaluation of an Internet-delivered eating disorder prevention program for adolescents and their parents. *J Adolesc Health.* 2004;35(4):290–296
 74. Moreno MA, VanderStoep A, Parks MR, Zimmerman FJ, Kurth A, Christakis DA. Reducing at-risk adolescents' display of risk behavior on a social networking Web site. *Arch Pediatr Adolesc Med.* 2009;163(1):35–41
 75. Epstein LH, Roemmich JN, Robinson JL, et al. A randomized trial of the effects of reducing television viewing and computer use on body mass index in young children. *Arch Pediatr Adolesc Med.* 2008;162(3):239–245
 76. Strasburger VC. First do no harm: why have pediatricians and parents missed the boat on children and media? *J Pediatr.* 2007;151(4):334–336
 77. Strasburger VC. "Clueless": why do pediatricians underestimate the media's influence on children and adolescents? *Pediatrics.* 2006;117(4):1427–1431
 78. Barkin SL, Finch SA, Ip EH, et al. Is office-based counseling about media use, timeouts, and firearm storage effective? Results from a cluster-randomized, controlled trial. *Pediatrics.* 2008;122(1). Available at: www.pediatrics.org/cgi/content/full/122/1/e15
 79. Dalton MA, Adachi-Mejia AM, Longacre MR, et al. Parental rules and monitoring of children's movie viewing associated with children's risk for smoking and drinking. *Pediatrics.* 2006;118(5):1932–1942
 80. Jackson C, Brown JD, Pardun CJ. A TV in the bedroom: implications for viewing habits

- and risk behaviors during early adolescence. *J Broadcast Electronic Media*. 2008;32(3):349–367
81. Strasburger VC. Media and children: what needs to happen now? *JAMA*. 2009;301(21):2265–2266
 82. Anderson DR, Pempek TA. Television and very young children. *Am Behav Sci*. 2005;48(5):505–522
 83. Wartella E, Robb M. Young children, new media. *J Child Media*. 2007;1(1):35–44
 84. Anderson DR. A neuroscience of children and media? *J Child Media*. 2007;1(1):77–85
 85. Nelson K. Structure and strategy in learning to talk. *Monogr Soc Res Child Dev*. 1973;38(1–2):1–135. Serial 149
 86. Fisch SM, Truglio RT. “G” Is for Growing: *Thirty Years of Research on Children and Sesame Street*. Mahwah, NJ: Erlbaum; 2001
 87. Linebarger DL, Walker D. Infants’ and toddlers’ television viewing and language outcomes. *Am Behav Sci*. 2005;48(5):624–625
 88. Tanimura M, Okuma K, Kyoshima K. Television viewing, reduced parental utterance, and delayed speech development in infants and young children. *Arch Pediatr Adolesc Med*. 2007;161(6):618–619
 89. Zimmerman FJ, Christakis DA, Meltzoff AN. Associations between media viewing and language development in children under age 2 years. *J Pediatr*. 2007;151(4):364–368
 90. Chonchaiya W, Pruksananonda C. Television viewing associates with delayed language development. *Acta Paediatr*. 2008;97(7):977–982
 91. Christakis DA, Gilkerson J, Richards J, et al. Audible television and decreased adult words, infant vocalizations, and conversational turns. *Arch Pediatr Adolesc Med*. 2009;163(6):554–558
 92. Schmidt ME, Rich M, Rifas-Shiman SL, Oken E, Taveras EM. Television viewing in infancy and child cognition at 3 years of age in a US cohort. *Pediatrics*. 2009;123(3). Available at: www.pediatrics.org/cgi/content/full/123/3/e370
 93. Ginsburg KR; American Academy of Pediatrics, Committee on Communications and Committee on Psychosocial Aspects of Child and Family Health. The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics*. 2007;119(1):182–191

Media Education

Council on Communications and Media

Pediatrics 2010;126;1012

DOI: 10.1542/peds.2010-1636 originally published online September 27, 2010;

Updated Information & Services

including high resolution figures, can be found at:
<http://pediatrics.aappublications.org/content/126/5/1012>

References

This article cites 68 articles, 12 of which you can access for free at:
<http://pediatrics.aappublications.org/content/126/5/1012#BIBL>

Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):

Current Policy

http://www.aappublications.org/cgi/collection/current_policy

Council on Communications and Media

http://www.aappublications.org/cgi/collection/council_on_communications_and_media

Adolescent Health/Medicine

http://www.aappublications.org/cgi/collection/adolescent_health:medicine_sub

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:

<http://www.aappublications.org/site/misc/Permissions.xhtml>

Reprints

Information about ordering reprints can be found online:
<http://www.aappublications.org/site/misc/reprints.xhtml>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Media Education

Council on Communications and Media

Pediatrics 2010;126;1012

DOI: 10.1542/peds.2010-1636 originally published online September 27, 2010;

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/126/5/1012>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2010 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

