SCHOOL-AGE CHILDREN & YOUTH:

Trends, Effects, Solutions

Tame the Tube

SCHOOL-AGE CHILDREN & YOUTH: **Trends, Effects, Solutions**

Eating smart and moving more are the cornerstone of a healthy lifestyle and provide a solid foundation for children and youth to succeed in school and in life.

There are many health benefits associated with good nutrition and physical activity. Eating smart and moving more help children and youth maintain a healthy weight, feel better and have more energy. These positive health benefits have the potential to translate into academic benefits at school. Good nutrition and physical activity nourish the brain and body, resulting in students who are present, on-time, attentive in class, on-task and possibly earning better grades.

As students work hard to achieve high academic standards, it is more important than ever that we provide opportunities for them to be active and eat healthy throughout the day. Families, schools and communities must share the responsibility of promoting and supporting children and youth to eat smart and move more.

Research points to seven key behaviors that can help children, youth and adults eat healthier and be more active:

1. Prepare and eat more meals at home
2. Tame the tube
3. Choose to move more every day
4. Right-size your portions
5. Re-think your drink
6. Enjoy more fruits and veggies
7. Breastfeed your baby

This paper will examine trends in and effects of screen time. It will also offer solutions for schools, government, communities and families to support taming the tube for children and youth.

Trends in Screen Time

No one could have predicted the impact that television would have on our society. Today, virtually all US households have at least one TV, with many households having multiple sets.[1] Additionally, the viewing options for TV have increased from three network channels to endless options of cable, pay-per-view, video and DVD. The 1980s marked a time in history when, for the first time, people of all segments of society used television as their number-one leisure time activity. In many homes the TV is a constant presence. It is on as the family moves from the living room to the dining room and the bedroom. Forty-three percent of children ages four to six have a TV in their bedroom.[2]

The television is not the only screen in the house that has changed. In recent years, electronic games, home computers and the Internet have assumed an important place in our lives. Almost eight out of every ten (78 percent) early school-age children live in homes with a computer, and about 69 percent have Internet access.[3] Children and youth spend hours in front of the computer surfing the Web, instant messaging their friends or playing computer games.

The video game industry has grown from the introduction of Pong® in the 1970s to a $6.3 billion industry with more than two-thirds of households with children owning video and computer games.[3] Almost all (92 percent) of children and adolescents ages 2-17 play video games.[3] On any given day, 30 percent of all children ages 2-18 will play a video game; those who do play spend an average of more than an hour playing.[4]

Children spend more time sitting in front of electronic screens (screen time) than any other activity besides sleeping. This means they spend more time in front of screens than they do in school. The average time spent with various media (television, computer, video games) is more than five hours per day.[5] Even the very youngest children, preschoolers ages 6 and younger, spend as much time with screen media (TVs, video games and computers) as they do playing outside.[6] That means several hours of inactivity and, in the case of television viewing, hours of exposure to advertising of high-fat, high-calorie foods. Many of these ads are aimed directly at children.

Children spend more time sitting in front of electronic screens than any other activity besides sleeping.

Effects of Too Much Screen Time

Too much screen time affects children's family interaction, brains and bodies.

Screen time cuts into quality family time. If you watch television together as a family, there is limited family interaction and conversation. Having two TVs in the house, one for the adults and one for the children, divides the family and allows children to watch TV unsupervised.

Children who spend a great deal of time in front of a screen have less time for playing and talking with other children and adults. Language skills are best fostered through reading and active two-way participation in conversation. Excessive screen time can interfere with growth in this area. Children who watch more television do less homework and less reading. Children who watch less television do better in school and perform better on standardized tests.

Perhaps the most alarming effect of too much screen time is the effect it has on children's bodies. Most children do not get the recommended amount of physical activity each day, and one reason for this is the number of hours spent inactive in front of a screen. There is a link between overweight in children and television viewing. Children who watch more TV tend to be heavier than children who watch less TV. Furthermore, children who live in families in which television viewing is a normal part of the meal routine, eat fewer fruits and vegetables and more pizzas, snack foods and sodas.[7]

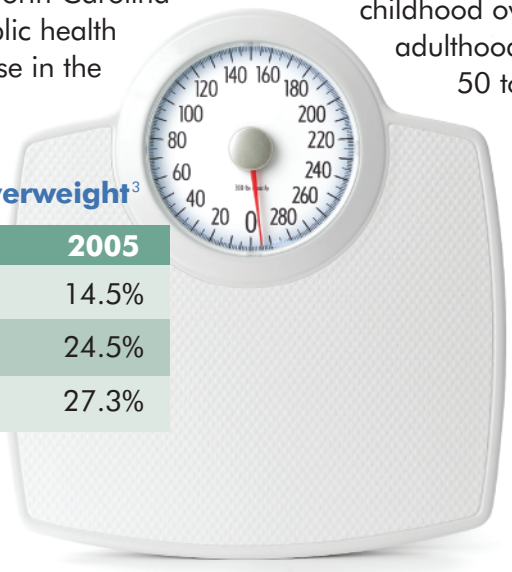
Overweight in Children and Youth

According to the 2001 Surgeon General's *Call to Action to Prevent and Decrease Obesity*, today there are nearly twice as many overweight children and almost three times as many overweight adolescents as there were in 1980.[8] Results from the 2003-04 National Health and Nutrition Examination Survey (NHANES), using Body Mass Index (BMI), indicate that an estimated 13.9 percent of children ages 2-5 years, 18.8 percent of children ages 6-11 years, and 17.4 percent of adolescents ages 12-19 years are overweight.[9] North Carolina 2005 data from children seen in public health settings show an even greater increase in the number of overweight children.[10]

Percent of North Carolina Children and Youth Who Are Overweight[3]

	1995	2000	2005
Ages 2-4	9.0%	12.2%	14.5%
Ages 5-11	14.7%	20.6%	24.5%
Ages 12-18	22.7%	26.0%	27.3%

BMI, an index of a person's weight in relation to height, is commonly used to classify overweight and obesity among adults and is also recommended to identify children who are overweight or at risk of becoming overweight. Children with a BMI ≥ 85th percentile but <95th percentile are overweight (formerly considered at risk for being overweight) and children with a BMI ≥ 95th percentile are obese (formerly considered overweight).[11]



Studies have indicated that overweight children (especially adolescents) are at higher risk of becoming obese adults.[12] The likelihood that childhood overweight will persist into adulthood ranges from approximately 50 to 70 percent, increasing to 80 percent if one parent is overweight.[13,14] Obesity is no longer a concern for adults only. Signs of chronic disease associated with obesity are showing up in overweight children. These include atherosclerotic plaques,[15] hypertension,[16,17,18] increased triglycerides,[16,8] increased insulin resistance and type 2 diabetes.[15,19]

Marketing and Advertising

As important as how much time children are in front of a screen is what they are watching. In fact, much of the media targeted to children includes elaborate advertising messages, many of which promote foods such as candy, soda and snacks. Children 8-12 years old see an average of 21 food ads a day on TV—older children see even more. Over the course of a year, this translates into an average of more than 7,600 food ads—over 50 hours of food advertising. Most of the food products targeted to children are for candy (34 percent), cereal (28 percent) and fast food (10 percent), while only 4 percent are for dairy products, 1 percent for fruit juices and none for fruits and vegetables.[20]

The food industry now links food with entertainment, especially with movie and cartoon characters. The billions of dollars spent on television advertising to children indicates that advertisers believe that TV ads can influence family purchases. Fast food restaurants alone

spend over $3 billion a year in television ads targeted to children.[21] Studies have found that from a very young age, children influence their parent's purchases at the supermarket.[22,23] There is strong evidence that television advertising influences the foods and beverage preferences of children ages 2-11. Television advertising influences children to prefer and request high-calorie foods and beverages.[24]

Solutions for Taming the Tube for Children and Youth

In order to encourage more children and youth to tame the tube, school officials, policy makers, families and community members must recognize the value that less screen time and increased physical activity will have on the health of children and youth.

Schools

- Participate in TV Turnoff Week and other campaigns to promote activities in place of screen time.
- Include strategies to decrease TV viewing as part of the health education curriculum.
- Include media literacy as part of the health education curriculum.

Government

- Pass laws that regulate marketing directly to children through television and Internet advertising.
- Provide support for increased education on media literacy.

Communities

- Provide families with safe alternatives to screen time such as parks, greenways, bike lanes and sidewalks.
- Participate in TV Turnoff Week and other campaigns to promote activities in place of screen time.

Families

- Plan how much TV you and your family are going to watch. Limit screen time to one to two hours a day. Planning the amount of television you watch and selecting certain shows helps you to get the best out of what television has to offer.
- Set clear limits and be a good TV role model. Setting limits for the whole family is important—children need to be taught how to have a good media diet.
- Choose not to keep the TV on all the time, and instead tune into specific shows. With cable channels numbering well into the hundreds, you could surf for hours and never watch a show. If the TV is on, this is likely to happen. However, if you have a TV plan and you know what shows you are going to watch, the set goes on when that show is on and off when it is over.
- Get the TV out of the bedroom. Having a television in the bedroom allows children to watch more television unsupervised. The same goes for video games and computers—put these in a common area of the home.
- Eat together as a family without the TV. Have media-free meals as a family. Turn off the TV, cell phone, pager and MP3 player, and talk about your day.
- Make a list of activities you want to do instead of watching TV. Get help from the children to create fun activities to do instead of sitting in front of the television, computer or video games.
- Watch with your children. Discuss the shows and the advertising. Help your children learn about the tactics advertisers are using to sell unhealthy foods.

References

1. U.S. Census Bureau. March 11, 2004 special edition 50th anniversary of wonderful world of color TV. Available at www.census.gov.

2. Rideout V, Hamel E. The media family: electronic media in the lives of infants, toddlers, preschoolers and their parents. The Henry J. Kaiser Family Foundation. 2006. Available at www.kff.org.

3. National Institute on Media and the Family. Sixth Annual Video and Computer Report Card. 2001. Available at www.mediaandthefamily.org.

4. Kaiser Family Foundation. Key Facts: Children and Video Games. 2002. Available at www.kff.org.

5. Roerts D, Foehr U. Kids and Media in America. Cambridge, MA. University Press. 2004.

6. Rideout V, Vandewater E, Wartella E. Zero to Six; Electronic Media in the Lives of Infants, Toddlers and Preschoolers. Herry J Kaiser Foundation, 2003. Available at www.kff.org

7. Coon KA, Goldberg J, Rogers BL, Tucker KL. Relationships between use of television during meals and children's food consumption patterns. Pediatrics. 2001; 107(1):e7.

8. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity. U.S. Government Printing Office, Washington, DC; 2001. Available at www.surgeongeneral.gov/topics/obesity/.

9. Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of Overweight and Obesity in the United States, 1999-2004. JAMA. 2006; 295(13):1549-1555.

10. North Carolina-Nutrition and Physical Activity Surveillance System (NC-NPASS) 2005 includes data on children seen in North Carolina Public Health Sponsored WIC and Child Health Clinics and some School Based Health Centers. Percentiles were based on the CDC/NCHS Year 2000 Body Mass Index (BMI) Reference.

11. Expert Committee Recommendations on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity. JAMA. 2007. Available at www.ama-assn.org/ama1/pub/upload/mm/433/ped_obesity_recs.pdf.

12. Guo SS, Wu W, Chumlea WC, Roche AF. Predicting overweight and obesity in adulthood from body mass index values in childhood and adolescence. American Journal of Clinical Nutrition. 2002; 76:653-8.

13. Dietz WH. Childhood weight affects adult morbidity and mortality. Journal of Nutrition. 1998; 128:411S-414S.

14. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity. Washington, DC; 2001. Fact sheet: overweight in children and adolescents. Available at www.surgeongeneral.gov/topics/obesity/calltoaction/factsheet06.pdf.

15. Goran MI. Metabolic precursors and effects of obesity in children: a decade of progress, 1990-1999. American Journal of Clinical Nutrition. 2001; 73:158-71.

16. Dietz WH. Health consequences of obesity in youth: childhood predictors of adult disease. Pediatrics. 1998; 101:518-25.

17. Sorof J, Daniels S. Obesity hypertension in children: a problem of epidemic proportions. Hypertension. 2002; 40:441-7.

18. Bradley CB, Harrell JS, McMurray RG, Bangdiwala SI, Frauman AC, Webb JP. Prevalence of high cholesterol, high blood pressure, and smoking among elementary school children in North Carolina. North Carolina Medical Journal. 1997; 58:362-7.

19. Foods Sold in Competition with USDA School Meal Programs. A Report to Congress. U.S. Department of Agriculture. July 16, 2002. Available at www.fns.usda.gov/cnd/Lunch/Competitive Foods/report_congress.htm.

20. Gantz W, Schwartz N, Angelini JR, Rideout V. Food for though, television food advertising to children in the United States. A Kaiser Family Foundation Report. 2007. Available at www.kff.org.

21. Schosser E. Fast Food Nation. NY, NY. Perennial. 2002.

22. Taras H, Sallis J, Patterson T, Nader P, Nelson J. Television's influence on children's diet and physical activity. J Dev Beh Ped. 1989; 10:176-180.

23. Gorn G, Goldberg M. Behavioral Evidence of the Effects of televised food messages on children. J Consumer Res. 1982; 9:200-205.

24. Kaiser Family Foundation. The Role of Media in Childhood Obesity. 2004. Available at www.kff.org.

Developed by the North Carolina School Nutrition Action Committee (SNAC), a partnership of the N.C. Department of Public Instruction, the N.C. Division of Public Health and the N.C. Cooperative Extension Service. The goal of SNAC is to coordinate school nutrition activities that link the cafeteria, classroom and community to eating smart and moving more.

These institutions are equal opportunity providers.

Suggested citation: Dunn C, Albright J, Andersen K, Bates T, Beth D, Ezzell J, Schneider L, Sullivan C and Vodicka S. Tame the Tube. February 2008. Available at www.eatsmartmovemorenc.com.

NCPH
North Carolina Public Health

Public Schools of North Carolina
State Board of Education
Department of Public Instruction

NC STATE UNIVERSITY
A&T STATE UNIVERSITY
COOPERATIVE EXTENSION
Helping People Put Knowledge to Work