

**A** new epidemic has arisen that could well shorten our students' lives. "The current generation of children [could] become the first in American history to live shorter lives than their parents," states former President Bill Clinton, who has formed an alliance with the American Heart Association to tackle the problem. He points out that "if childhood obesity continues to increase, it could cut two to five years from the average lifespan."<sup>1</sup>

Tracy Orleans, senior scientist with the Robert Wood Johnson Foundation Obesity Project, says that "the obesity epidemic snuck up on us; it was happening, but we were not paying it enough heed."<sup>2</sup> The concern a decade ago was eating disorders (anorexia and bulimia). While these problems still exist and may even be expanding to include more teenage boys, the obesity epidemic is ringing alarm bells. Public health officials, legislators, and governors are acting to address the problem, with a primary emphasis on schools. Why schools? Because 17 percent of all children and teens in the United States are either overweight or obese—the rates have tripled since the 1960s—and are still rising.<sup>3</sup>

### A Worldwide Problem

Public health officials are calling pediatric obesity "an uncontrolled worldwide epidemic."<sup>4</sup> Dr. Tim Lobstein of the International Obesity Taskforce, in an analysis of worldwide trends in childhood obesity, says that "nearly half of children in both North and South America could be overweight in just four years' time."<sup>5</sup> He further points out that childhood obesity is increasing in al-

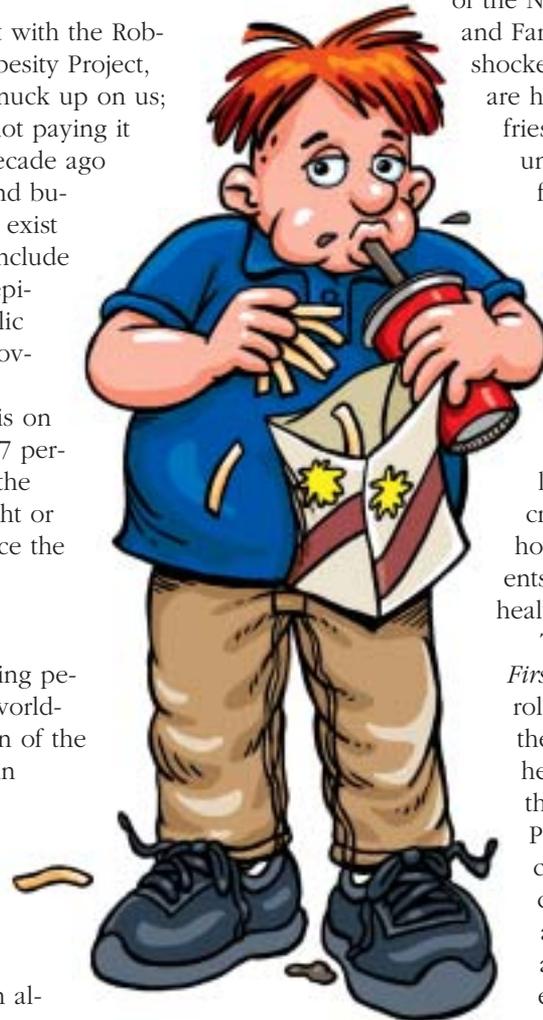
## The obesity epidemic is ringing alarm bells.

most all industrialized countries for which data are available, as well as in several lower-income countries. North America, Europe, and part of the Western Pacific have the highest prevalence of overweight children (about 20-30 percent). He estimates that one in five children in China will be

overweight by 2010. Eating habits begin in childhood. Children do not automatically make wise choices of food. "When lunch is sold *a la carte*, kids buy what they like," points out Diana Zuckerman, president of the National Research Center for Women and Families. "None of us should really be shocked that when kids can choose, they are having lunches consisting of French fries and dessert. Kids will make really unhealthy choices if you let them."<sup>6</sup> The food industry has recognized this for years, with direct marketing aimed at children and teens. Half of the more than 50 commercial television messages kids receive per day are for food.<sup>7</sup> Convenience/fast foods and sweets comprise 83 percent of advertised foods; snacktime eating is depicted more often than breakfast, lunch, and dinner combined.<sup>8</sup> Increased regulation of the industry, however, will not take the place of parents and teachers in educating kids about healthy choices.

The current advertising campaign for *First Five* in California emphasizes the role modeling of adults by reminding them, "If you want your kids to make healthy choices, it's not what you tell them to do, it's what they see you do." Preventing obesity is a balancing act: controlling the kind and amount of calories taken in the form of food and beverages while increasing the amount of calories expended through exercise. How many parents sneak

### Before



# CHILDHOOD

BY JOYCE W. HOPP

“empty calories” when they think their child is not looking? How many teachers or administrators watch from the window rather than participate in an exercise activity?

### Long-Term Effects of Obesity

“Unless current trends reverse, it seems likely that one third of all children born today [in the U.S.]—and even higher proportions of Hispanic and Black children—will develop type 2 diabetes during their lifetimes and can expect a shortened life expectancy because of it,” states Marion Nestle, a leading public health nutritionist.<sup>9</sup> Type 2 diabetes, the kind of insulin-resistant diabetes previously seen only in middle-aged and older adults, is a disease highly related to obesity.

Long-term health consequences of obesity include hyperlipidemia, hypertension, respiratory illnesses, and higher rates of cardiovascular disease. Obesity also affects quality of life. Overweight adolescents, independent of baseline socioeconomic status and performance on aptitude tests, are less likely to marry, complete fewer years of school and are more likely to be poor as adults.<sup>10</sup> Children who are teased about their weight often develop social stigmas, including low self-esteem and self-worth.

### Factors Contributing to Obesity

While many would like to blame their overweight condition on genetics, that doesn’t explain why families who are overweight often have overweight pets as well! Lifestyle does make a difference. Society, however,

has also changed, and those changes contribute in no small measure to the obesity epidemic. Dr. Nestle lists those changes as follows:<sup>11</sup>

enough to make a person obese.<sup>12</sup> A change in food production in the 1970s, for example, illustrates the sugar problem: The development of

Change	Consequence
More families with working parents	Parents unable to supervise children’s meals and active play
Neighborhoods and parks perceived as increasingly unsafe	Children unable to play outside without supervision
Limits on school physical education	Less play during and after school
Increased agricultural production	Increased competition for market share, promotion of more junk food directly to children
Increased demand for convenience foods	More eating occasions; more calories consumed
Greater consumption of food prepared outside the home	Larger portions; more calories consumed
Business deregulation	Unrestricted marketing to children
Television deregulation	More commercials for junk foods during children’s programming
Increased use of computers	Food marketing on the Internet; more sedentary behavior
Increased media consolidation	Alliances with food companies to market to children
Increased Wall Street expectations for corporate growth	Expansion of fast food chains, food products, and marketing to children

Schools are focusing on elimination of sugar-laden sodas and sugary drinks for good reason: They have become the biggest source of calories in the teenage diet. At 140 calories or more per drink, the excess energy in one such drink a day is

high-fructose syrup, cheap to use, has led the food industry to sweeten foods as never before. Brownell points out that it is inexpensive to thus sweeten foods, and people like things that are sweet.<sup>13</sup>

The living environment is impor-

# OBEESITY: AN EMERGING EPIDEMIC

*“If you want your kids to make healthy choices, it’s not what you tell them to do, it’s what they see you do.”*

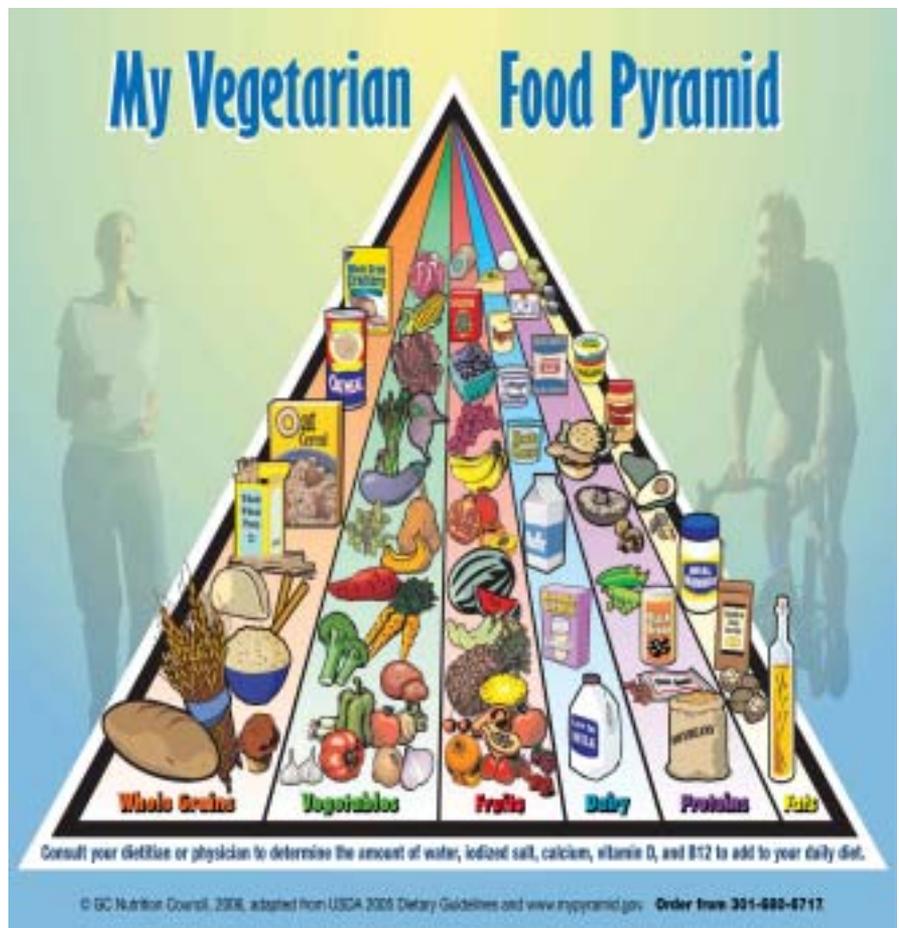
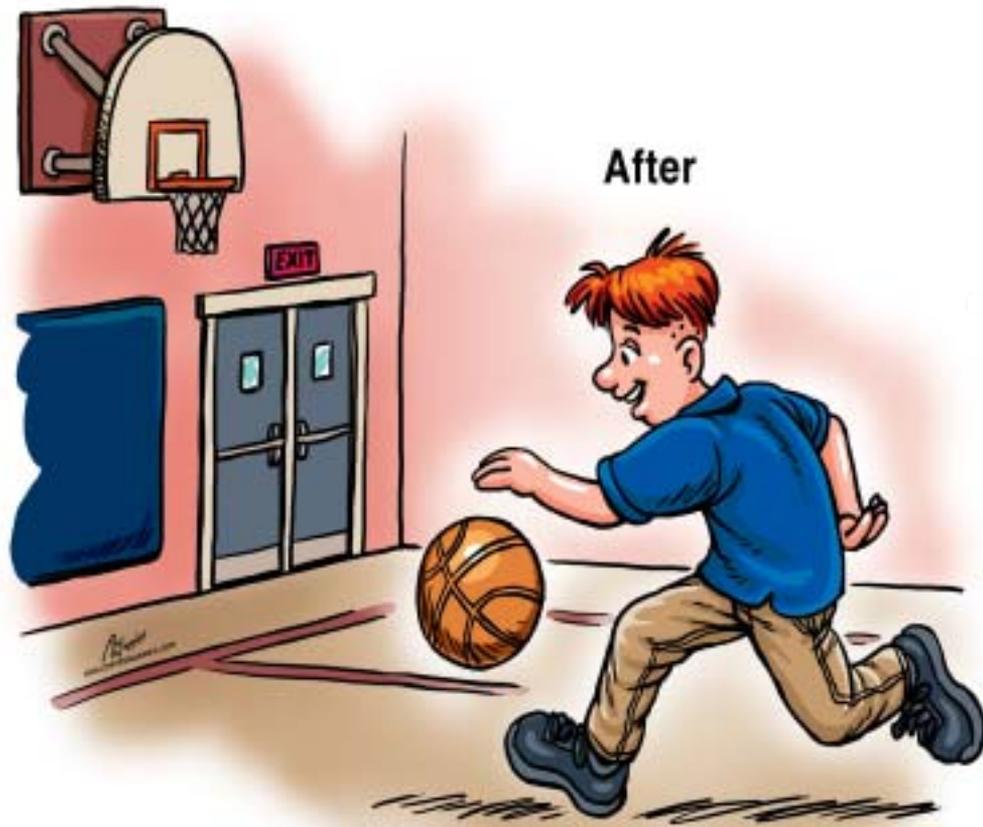
tant, too. A community that provides walking and bike trails, well lit and free from shrubbery, creates a safe place for children and adults to exercise together (good role modeling!). On the other hand, research shows that fast-food restaurants cluster around schools, offering food choices that the school may have eliminated in the interest of better health.<sup>14</sup>

### Choices Adventist Schools Can Make

While information alone rarely changes behavior, up-to-date and accurate information does form the basis for a good educational program. Adventist schools have had the advantage of well-designed science-health textbooks for the past 30 years. *Science-Health Series B, Unit III* (pages 299-379) includes both information and activities that address the problem of disease risk factors, including obesity.

Because the epidemic of obesity became evident in the past five years, however, this created a problem in keeping textbooks current. Thus the current series of texts, produced during the first half of the 1990s, needs updating.

Some have wondered why Adventist schools need their own science and health texts when there are “good” textbooks available in the marketplace, and textbook development is expensive and time-consuming. As a member of the North American Division Science-Health Textbook Committee both in the 1970s and again in the 1990s, I learned that the theory of evolution is pervasive, not only in science but also in health. It is difficult, for example, to encourage students and their families to return as close as possible to God’s original diet [see



## List of Suggested Websites

<http://www.americanheart.org/healthierkids>  
<http://www.clintonfoundation.org>  
<http://www.iom.edu> (Institute of Medicine Report on Childhood Obesity; Food Marketing Report)  
<http://www.cdc.gov/healthyplaces/healthtopics/children.htm>  
<http://www.mypyramid.gov/kids/index.html> (Food Pyramid for Kids)  
<http://www.rwjf.org/portfolios/interestarea> (Robert Wood Johnson Foundation Website)  
<http://www.cspinet.org/new/sugar.html> (Center for Science in the Public Interest. Americans: Drowning in Sugar)  
[http://www.surgeongeneral.gov/topics/obesity/calltoaction/fait\\_adolescents.htm](http://www.surgeongeneral.gov/topics/obesity/calltoaction/fait_adolescents.htm) (US Surgeon General, Fact Sheet: Overweight in Children and Adolescents)  
<http://www.obesityresearch.nih.gov> (Obesity research page. National Institutes of Health Website)  
<http://www.cdc.gov/nccdphp/dnpa/obesity> (Overweight and Obesity Page, Centers for Disease Control and Prevention Website)

*The Ministry of Healing*, page 296] if there is no God, nor an original diet! Yet that diet, complete with fresh fruits, nuts, grains, and vegetables, is one that promotes longevity and prevents obesity.

Adventist teachers and parents need to practice more and preach less. It takes planning, time, and effort to create healthy meals on a daily basis. The same goes for arranging a time and place for regular exercise. We don't need more memberships in fitness clubs; we need more time and places for exercise with our children, walking or playing. (Try *power walking* to get your overweight students involved.) The school can be the safest place many children will have to exercise, so the school schedule needs to include time for supervised activity both within and outside of school hours. Plan physical activity so that it includes every student, not just those who are good at sports; all too often in sports, the good get better while the poor drop out.

Encourage and reward students for progress. Notice and appreciate even small steps. Behavior change is a slow process, so don't expect overnight miracles. Challenging students to do things together, with a "buddy" system, can often make changing behavior easier. Evaluating food advertisements for their in-

## Long-term health consequences of obesity include hyperlipidemia, hypertension, respiratory illnesses, and higher rates of cardiovascular disease.

tended effect, reading and interpreting food labels, recording the daily/weekly distance walked (and equating it to calories expended), planning an educational program for one's family, can be done together. Students can evaluate the foods served at the school cafeteria and at school events, and educate their parents to make healthy food choices. Junk food and high-calorie sweets can be banned from lunchrooms and classroom parties.

While individually we may not be able to change the marketing and availability of high-calorie fast foods and beverages, we can do something about the epidemic of obesity and inactivity in our families and classrooms. There is no immunization that will prevent this epidemic; only a change in behavior will do it. You can help ensure that your students are healthy and fit for life. ☞



**Joyce W. Hopp, Ph.D., M.P.H., C.H.E.S.,** is Emeritus Distinguished Professor at Loma Linda University in Loma Linda, California. Dr.

Hopp served as an Associate in Health Ministries in the General Conference of Seventh-day Adventists from 1954-1963, and again from 1997-2005, as well as a member of the Science-Health Textbook Committee of the North American Division from 1972-1980, and from 1985-1995.

## REFERENCES

1. William Jefferson Clinton, "We Must Act Now," *Parade* (September 4, 2005), p. 5.
2. Tracy Orleans, quoted in "Beginning to Begin: Reports From the Battle on Obesity," *American Journal of Public Health* (hereafter abbreviated as *AJPH*) 96:12 (December 2006), pp. 2109, 2110.
3. Kathryn Foxhall, "Beginning to Begin: Reports From the Battle on Obesity," *AJPH* 96:12 (December 2006), p. 2108.
4. C-E Flodmark, I. Lissau, L. A. Moreno, A. Pietrobelli, and K. Widhalm, "New Insights Into the Field of Children and Adolescents' Obesity: the European Perspective," *International Journal of Obesity* 28 (2004), p. 1189.
5. Patricia Reaney, "Childhood Obesity Increasing Worldwide" (March 6, 2006): <http://Azstarnet.com>. Accessed July 16, 2007.
6. Quoted from "Institute of Medicine Plan Takes on Childhood Obesity," *The Nation's Health* (November 2004), p. 10.
7. "Food Marketing Toward Youth Contributing to Unhealthy Choices," *The Nation's Health* (January/February 2006), p. 19.
8. Kristen Harrison and Amy L. Marske, "Nutritional Content of Foods Advertised During the Television Programs Children Watch Most," *AJPH* 95:9 (September 2005), p. 1568.
9. Marion Nestle, "Preventing Childhood Diabetes: The Need for Public Health Intervention," *AJPH* 95:9 (September 2005), p. 1497.
10. Jrihee Kim, Aviva Must, Garrett M. Fitzmaurice, Matthew W. Gillman, Virginia Chomitz, Ellen Kramer, Robert McGowan, and Karen E. Peterson, "Incidence and Remission Rates of Overweight Among Children Aged 5 to 13 Years in a District-Wide School Surveillance System," *AJPH* 95:9 (September 2005), p. 1588.
11. Nestle, p. 1498.
12. Foxhall, p. 2108.
13. Quoted in Foxhall, page 2110.
14. S. Bryn Austin, Steven J. Melly, Brisa N. Sanchez, Aarti Patel, Stephen Buka, and Steven L. Gortmaker, "Clustering of Fast-Food Restaurants Around Schools: A Novel Application of Spatial Statistics to the Study of Food Environments," *AJPH* 95:9 (September 2005), p. 1575.