

# State Action to Address Obesity

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- Established in 1999, the CDC Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases was designed to help states prevent obesity and other chronic diseases by addressing two closely related factors —
    - poor nutrition
    - inadequate physical activity.

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- In the United States, much of the authority for public health policy lies at the state level through legislative and regulatory actions.
  - Successful health policy depends on three criteria:
    - 1) existence of a sufficient evidence base,
    - 2) development of effective coalitions, and
    - 3) commitment of policy makers
  - Within the past few years, many states have introduced legislation focusing on obesity prevention in youth, addressing
    - increasing physical activity
    - improving nutrition within the school and community environments.

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- Overweight and obese individuals are at increased risk for many diseases and health conditions, including the following:
  - Hypertension (high blood pressure)
  - Osteoarthritis (a degeneration of cartilage and its underlying bone within a joint)
  - Dyslipidemia (for example, high total cholesterol or high levels of triglycerides)
  - Type 2 diabetes
  - Coronary heart disease
  - Stroke
  - Gallbladder disease
  - Sleep apnea and respiratory problems
  - Some cancers (endometrial, breast, and colon)
    - Centers for Disease Control and Prevention

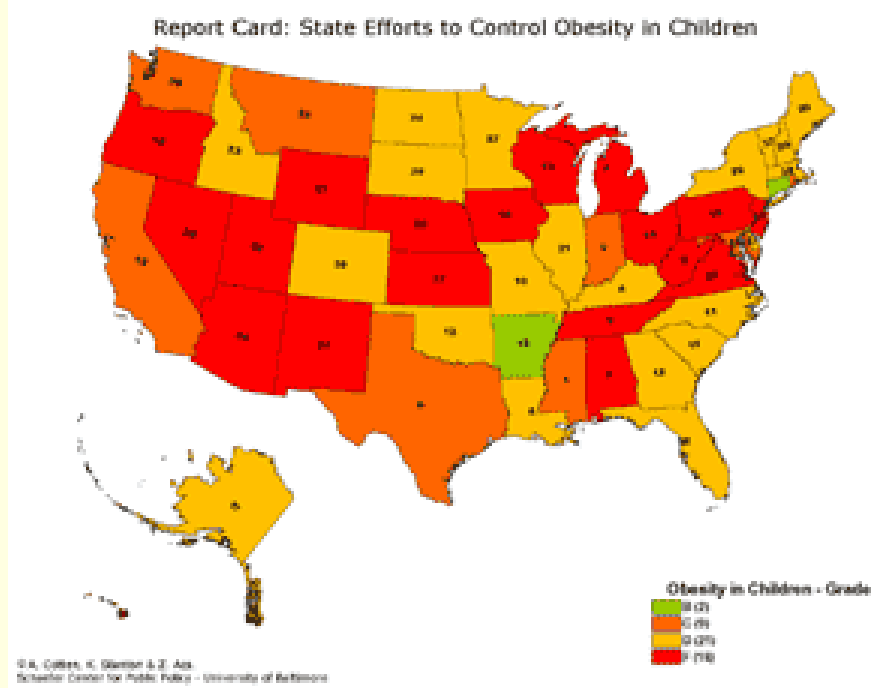
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- Nearly 28 percent of Tennessee's adults and 20 percent of Tennessee's children ages 10 to 17 are obese, according to an August report by Trust for America's Health. That's the nation's fifth-highest rate for adults and fourth-highest rate for kids.

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- Center for Child Health Research further indicate that nearly 1 million obese U.S. children suffer from a condition called metabolic syndrome. This syndrome, which makes children unusually prone to type 2 diabetes and premature heart disease, is characterized by the presence of at least five criteria:
    - Excessive abdominal fat
    - High blood pressure
    - High triglycerides
    - Low levels of HDL cholesterol
    - High blood sugar

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- Nine out of 10 parents think their children are fit, when only one out of three actually is.
  - Because children make lifestyle decisions that can last a lifetime, overweight children have a 70 percent chance of becoming overweight adults.
  - Hospital costs related to childhood obesity have tripled in the last 20 years.
  - Sources: Tennessee Coordinated School Health Program; Centers for Disease Control and Prevention, Trust for America's Health; Centers for Disease Control and Prevention; American Obesity Association Survey; Fitness for Youth, University of Michigan.

# University of Baltimore Obesity Initiative

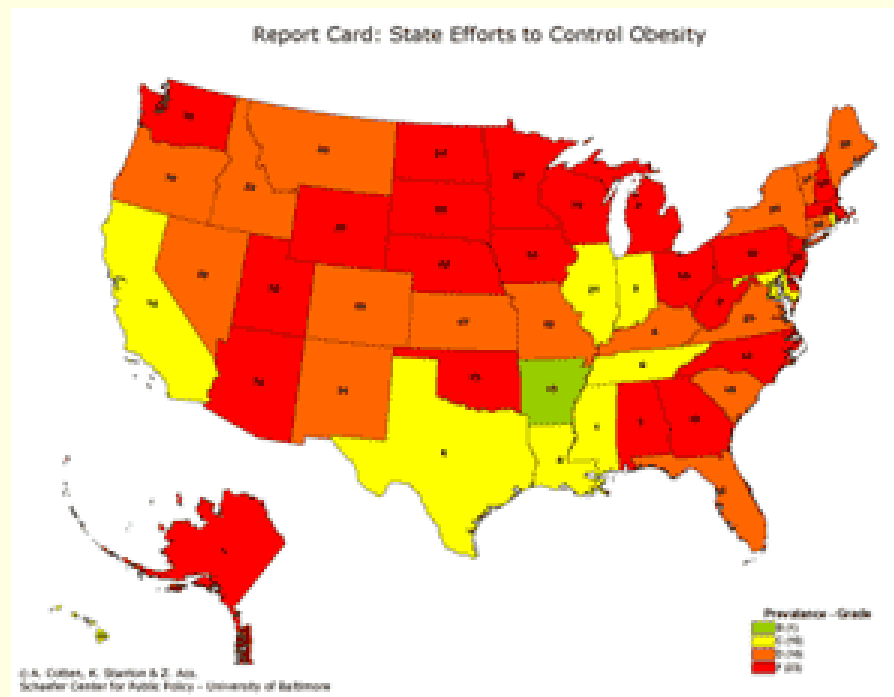
- 2004 B= green; C=orange; D=gold; F=red





# University of Baltimore Obesity Initiative

- 2004 B=green; C=yellow; D=orange; F=red



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- The 2004 School Health Profiles indicates that among Tennessee middle/junior and senior high schools:
    - • 15% are overweight.
    - • 18% are at risk for becoming overweight. 66% did not meet currently recommended levels of physical activity.
    - • 11% had not participated in any vigorous or moderate physical activity during the past 7 days.
    - • 63% did not attend physical education classes.
    - • 70% did not attend physical education classes daily.

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- 30,000 Tennessee students were measured by Coordinated School Health and Tennessee Department of Health staff in 2006
    - 43% of the students were found to be either at risk for overweight or overweight.

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- Measuring Obesity

- The Centers for Disease Control and Prevention use the term “overweight” instead of “obesity” to reduce social stigma.

- “Overweight” and “at risk for overweight” are measured using the Body Mass Index

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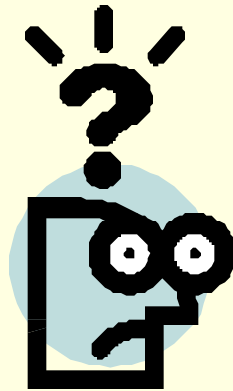
## ■ Body Mass Index (BMI)

- A measure of weight in relationship to height used to determine weight status.
- For children and adolescents (aged 2 – 19 years) the result is plotted on the CDC growth chart to determine the corresponding BMI for age percentile
- BMI is age and gender specific
  - Body fat changes with age
  - Body fat differs between girls and boys
    - Centers for Disease Control

# CDC – Body Mass Index

Weight Status Category	Percentile Range
Underweight	Less than the 5 <sup>th</sup> percentile
Healthy weight	5 <sup>th</sup> percentile to less than the 85 <sup>th</sup> percentile
At risk of overweight	85 <sup>th</sup> to less than 95 <sup>th</sup> percentile
Overweight	Equal to or greater than the 95 <sup>th</sup> percentile

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- Why are so many young people “at risk for overweight” or “overweight”?



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- The mechanism of obesity development is not fully understood and appears to be
  - Environmental factors
  - Lifestyle preferences
  - Cultural environment play pivotal roles in the rising prevalence of obesity worldwide.



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- In general, overweight and obesity are assumed to be the results of an increase in caloric and fat intake
  - There are supporting evidence that excessive sugar intake by soft drink, increased portion size, and steady decline in physical activity have been playing major roles in the rising rates of obesity all around the world.

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- Energy Balance Equation



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- Increased calorie consumption
    - Food selection
    - Proportion distortion (Super-size me)
  
  - Limited physical activity
    - Environmental barriers (access to safe areas)
    - Reduced physical education time
    - Reduced recess time
    - Technology (computers, video games, cell phones)

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- Experts blame the worldwide epidemic on the growing availability of energy-dense processed foods and declining physical activity

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- "Our ancestors had to expend a lot of energy just to get through the day. So, our genes say, 'Eat when food is available, and rest when you don't have to be active.' But now, [in many places] food is always available, and technology has made it easy to be sedentary. So it's really the environment that's causing the problem."
  - James Hill, director of the Center for Human Nutrition at the University of Colorado Health Sciences Center in Denver.

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- The influence of the physical or "built" environment on human activity and obesity is a new area of study.
  - Americans landscape
    - Sea of strip malls, fast food restaurants
    - Hostile to cyclists and pedestrians
  - What examples of this are you seeing in your communities?



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- "Three elements of the built environment that really seem to influence activity levels are
    - perceptions of safety
    - good lighting
    - availability of sidewalks
      - Barbara Ainsworth, Chair Dept. of Exercise and Nutritional Sciences at San Diego State University

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- Research programs focused specifically on the built environment and its role in childhood obesity have only recently begun to emerge, and their specific goals and objectives are still being developed.
  - The NIEHS is investigating the built environment as part of a broader NIH task force on obesity being coordinated by the National Institute of Diabetes and Digestive and Kidney Diseases



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- The problem is not limited to the United States.
  - The World Health Organization (WHO) calls childhood obesity a **global epidemic** that is spreading into the developing world.
  - An estimated 22 million children under five are estimated to be overweight worldwide

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- *What is Tennessee doing to address childhood "overweight" and "at risk for overweight"?*

## Tennessee Coordinated School Health Historical Perspective

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- Mid 1980's Tennessee School Health Coalition (TSHC) was formed as an advocacy group working to promote Comprehensive School Health in Tennessee
- 1988 HIV/AIDS Prevention funding in TN
  - Funding for TSHC for Executive Director and staff position to promote CSH

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- 1988 Public School Nurse Program enacted by legislature
    - Funded 32 positions
  - 1991 Youth Risk Behavior Survey (YRBS) began in TN (biennial)

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- 1994 TennCare went into effect
  - 1995 1<sup>st</sup> CDC State Infrastructure application (not approved)
  - 1997 TSHC in partnership with DOE and DOH, hold first YRBS Conference
  - 1997 2<sup>nd</sup> CDC State Infrastructure application (not approved)

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- 1998 Congress encourages adoption of CDC model based on CDC report that health education in schools can reduce prevalence of health risk behaviors
  - 1998 TSHC, DOE, DOH sponsored Coordinated School Health Conference
    - Awareness increases of Kolbe/Allensworth model of CHS.

# Coordinated School Health

- The Coordinated School Health model, developed by the Centers for Disease Control and Prevention (CDC)



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- 1999 TSHC develops first position paper and website devoted to CSH.
  - 1999 Coordinated School Health Legislation introduced
    - TSHC employed lobbyist
  - 1999 School Health was added to the State Master Plan for schools
  - 1999 3<sup>rd</sup> CDC Infrastructure Application (approved and started in 2000)



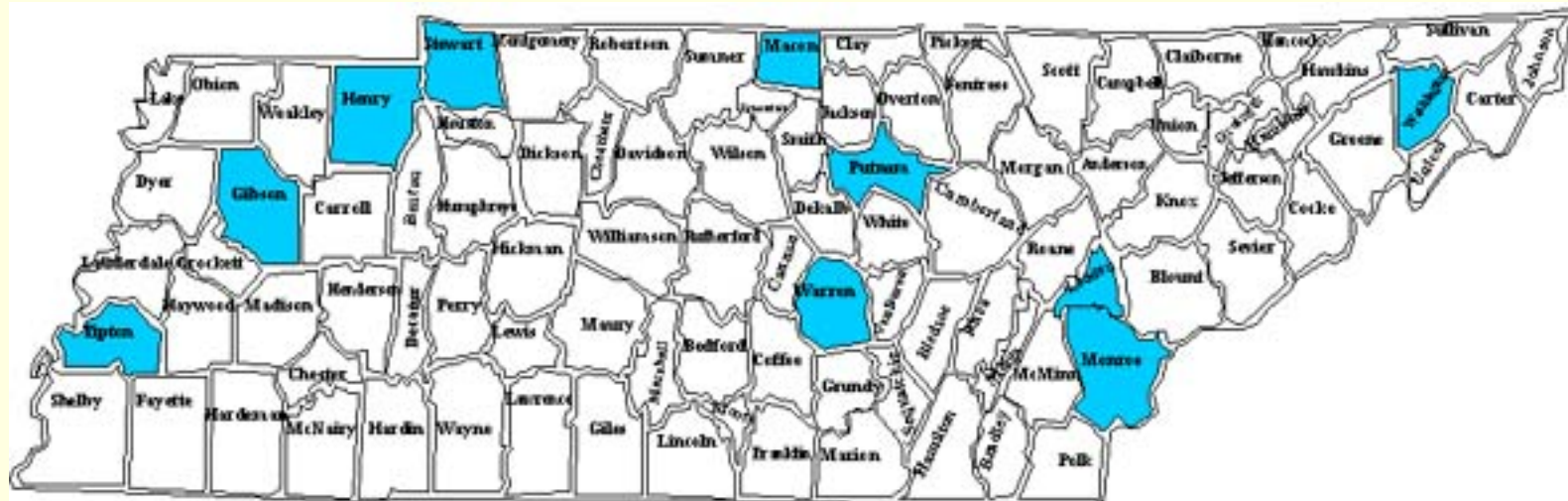
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- 2000 The Coordinated School Health Improvement Act of 2000
    - Tennessee Code Annotated 49-1-1002
    - Appropriations for implementing CSH in TN
    - \$ 1 million to fund ten CSH pilot sites
  - 2000 CSH Standards and Guidelines created by the State Board of Education.
  - 2000 School Health Index connected to school improvement planning.

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- 2001 10 CSH pilot sites selected
    - Funding provided
  - Started CSH Coordinators Leadership Institute
    - State funded
  - 2001 School Health Data Conference
  - 2002 Fit for the Future Conference
  - 2002 CSH Evaluation Plan implemented

# Pilot Sites in Tennessee

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- Funding was authorized (\$1million) to establish ten pilot sites.
  - Gibson County/Trenton Special Schools
  - Henry County Schools
  - Loudon County Schools
  - Macon County Schools
  - Monroe County Schools
  - Putnam County Schools
- Stewart County Schools
- Tipton County Schools
- Warren County Schools
- Washington County Schools
- The funding provides for:
  - Full time coordinator
  - Extensive training for the coordinator through the CSH Coordinator's Leadership Institute.



# Action for Health Kids (AFHK)

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- The nation wide, non-profit organization Action for Health Kids (AFHK) was formed in 2002.
- AFHK addresses the epidemic of overweight, undernourishment, and sedentary lifestyles among our youth.
- AFHK focuses on changes a school
- Healthy kids are better able to learn!



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- 2003 Milk vending machines introduced in Monroe County
  - 2003 First Evaluation Report for CSHP Baseline Data
  - 2004 CDC Infrastructure funds reinstated in TN
  - 2004 Public Chapter 708 passed by General Assembly to set nutritional requirements for competitive foods sold in schools

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## ■ Competitive Foods Rule

- 2004 the TN Legislature passed a law (TC 49-6-2307)
  - Called for a task force to develop guidelines regulating food and beverages sold in preK-8.
  - Was originally referred to as School Vending Bill which caused alarm thinking vending machines would be banned

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- 2004 Federal Child Nutrition and WIC Reauthorization Act of 2004
    - Mandated each school district to develop a Wellness Policy by the first day of the 2006-2007 school year
  - 2005 TN Nutritional Guidelines adopted by the State Board of Education
  - 2005 Tennessee Physical Activity Policy adopted by the State Board of Education



# Federal Help....

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- Child Nutrition and WIC Reauthorization Act of 2004
  - U.S. Congress required
    - All school districts with federally funded meals program develop and implement wellness policies addressing nutrition and physical activity by the start of the 2006-2007 school

# What is included in the Local Wellness Policy?

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- Goals for nutrition education, physical activity, and other school based activities to promote student wellness.
- Nutritional guidelines selected by the local school district for all foods available on the school campus.
- Assurance that reimbursement guidelines for school meals not be less restricted than regulations and guidance issued by the Secretary of Agriculture.

# Cont.

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- A plan for measuring policy implementation including the designation of someone within the LEA to ensure the policy is followed.
- Involvement of parents, students, representatives of the school food authority, the school board, school administrators, and the public in policy development.

# Policy Creation Assistance

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- Actions for Health Kids (AFHK), Tennessee's Office of School Nutrition Programs and Tennessee School Health Coalition (TSHC) developed a resource guide entitled "Local Wellness Policies: Are You Covering All the Bases?"
- The guide was distributed to all Tennessee school systems during the spring of 2006.

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- 2003 – 2006 P.A.N.T.S
    - Physical Activity Nutrition for Tennessee School Institutes
    - Conducted at institutions of higher education across TN
    - Provided information to administrators, teachers, and staff in the following areas
      - CSH
      - Nutrition Guidelines
      - Federal Wellness Policy
      - Physical Activity Policy

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## ■ 2005

- Schools were allowed to collect BMI on students
- Minimal Nutritional Standards set by Tennessee Board of Education for all foods sold or offered for sale to PreK-8 students
- Physical Activity Policy adopted by Tennessee Board of Education
- School Health Advisory council
- Modules 1, 3, and 4 of the School Health Index

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- 2005 Physical Activity Policy

- Each LEA shall establish a School Health Advisory Council

- Develop, implement, monitor, review and revised if necessary physical activity and nutrition policies.
    - Ensure all schools within the LEA create and implement an action plan related to modules from the School Health Index
    - Ensure that school level results include measures of progress on each indicator of the School Health Index

# Physical Activity Policy continued

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- Beginning July 2006 each school will begin implementation of the School Health Index.
- The initial action plan will address module 1, 2 and 4 of the School Health Index (SHI).
- In subsequent years LEA's will complete other modules of the SHI.



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- The School Health Index, developed by the Centers for Disease Control and Prevention, Division of School and Adolescent Health is a research-based instrument designed to provide a self-assessment and planning tool to assess the healthy learning environment.

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- School Health Index Modules
  - 1. School Health and Safety Policies and Environment
  - 2. Health Education
  - 3. Physical Education and Other Physical Activity Programs
  - 4. Nutrition Services
  - 5. School Health Services
  - 6. School Counseling, Psychological, and Social Services
  - 7. Health Promotion for Staff
  - 8. Family and Community Involvement

# Additional Recommendations of the Physical Activity Taskforce

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- Physical activity should be integrated into all curriculum areas of the school program.
- Supervised recess should be offered daily to all elementary school children.
- A physical education consultant position should be created in the Department of Education.
- A health education consultant position should be created in the Department of Education.

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- 2006 Public Chapter 1001 passed
    - Coordinated School Health Expansion Law
    - Funding provided to all LEA (\$15 million)
    - Created 2 positions in the Dept. of Education
      - Physical Education Specialist
      - School Health Coordinator
      - Mandated 90 minutes of physical activity k-12
  - 2006 Request for Applications for Expanded CSH program issued

## Tennessee's Coordinated School Health Expansion and Physical Activity Law

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- July 2006, Governor Bredesen signed SB3991/HB3750 into law.
- Each LEA is authorized to implement a coordinated school health program under the guidelines developed by the commissioner of education.
- \$15 million was appropriated to fund CSH
- Specific standards and guidelines were made available.

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- The CSH Expansion and Physical Activity Law makes it the “duty of each local education agency to integrate a minimum of ninety minutes of physical activity” each week.
  - Less than the 150 minutes recommended by CDC and other national organizations.
  - Physical education is not the same as physical activity.

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- 2006 Fit for the Future Conference
    - Focused on helping people understand and prepare to implement new CSH initiatives statewide.
  - 2006 9 regional training workshops were held across the state
    - Provided by the Office of Coordinated School Health staff (TDOE)
    - Designed to help school personnel prepare for the CSH application process

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- 2007 Revised Lifetime Wellness curriculum standards adopted by the State Board of Education
  - 2007 Revision of the k-12 Physical Education curriculum standards planned
  - 2007 Ken-Ten Coordinated School Health Institute planned
  - 2007 9 Sub-regional CSH one-day drive-in workshops planned



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- The office of CSH in Tennessee reports “Schools that offer quality physical education programs even when time is taken away from the academic day see
    - Increased concentration
    - Improved mathematics, reading, and writing scores
    - Less disruptive behaviors

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- As of October 10, 2007 132 of the 138 schools systems in TN were funded for Coordinated School Health.
    - A coordinator is funded
    - An assistant is funded if requested
    - Travel
    - Basic start up funds
  - 13.5 million to 132 systems

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- “We are the only state in the entire nation that has this coordinated, comprehensive school-health law”.
    - Connie Givens, Director, Office of Coordinated School Health

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- Tennessee's program mirrors a model developed by the federal Centers for Disease Control and Prevention. The model partners schools with families and community members such as healthcare providers and businesses, and the goal is a focus on health awareness, physical activity and counseling for nutrition and health, both physical and behavioral.

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- The amount of grant funds available to each district is not based on number of pupils but is instead based on that district's Basic Education Plan funding.
  - Tennessee's Basic Education Plan is designed to ensure fair and adequate funding no matter the size of a district.
  - The grants make possible, at the minimum, one CSH coordinator for each school district, and perhaps an assistant as well, plus professional development opportunities

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- According to Givens, the Director, Office of Coordinated School Health in Tennessee, the major barrier confronted with the effort of implementing CSH is
    - “Lack of time and adequate personnel to provide a targeted awareness campaign to Directors of Schools and other Education staff before state wide implementation”.

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# Additional Efforts

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- Tennessee has been awarded a \$100,000 grant from the National Governors Association Center for Best Practices to improve overall health and nutrition in Tennessee's toddlers and preschoolers.
- Tennessee is one of 10 states to win such a grant.
- Gold Sneaker Initiative



# Gold Sneaker Initiative

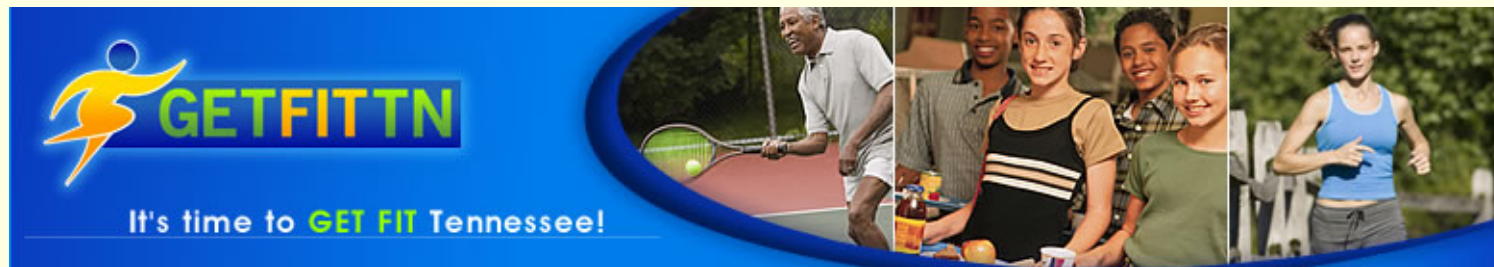
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- The Gold Sneaker Initiative was developed to enhance policy related to physical activity and nutrition within licensed child care facilities across Tennessee.



# GetFitTN

- A statewide awareness program
  - Developed by Governor Bredesen to address the rising epidemic of Type 2 diabetes
  - Aimed at educating adults and children about the role that physical activity and a healthier diet can play at delaying or preventing Type 2 diabetes.



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- The GetFitTN initiative is being driven by Governor Bredesen, Commissioner of Health Susan Cooper and Eddie George



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- Bredens has a two-tiered diabetes prevention strategy.
    - Project Diabetes
    - Coordinated School Health
  - \$22 million in grants to be used to increase public awareness and expand existing initiatives.
  - Portions of these grants were earmarked to launch GetFitTN

# Tennessee Healthy Weight Network

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# Tennessee Healthy Weight Network

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- Founded in 2002
- Addresses childhood weight issues
- Network of public/private partnerships composed of 27 organizations and agencies.
  - <http://tnhealthyweight.org>

# UT Creates Research Center 2007

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- UT Creates Research Center to Study Obesity Prevention and Treatment
- The co-directors of the center are:
  - Naima Moustaid-Moussa, professor of nutrition
  - David Bassett, professor of exercise, sport and leisure studies.
    - Funding comes from
      - the UT Office of Research
      - UT Agricultural Experiment Station
      - UT Extension and the College of Education
      - Health and Human Sciences

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- CoverKids - Provides health insurance to uninsured children in homes with incomes up to \$50,000 a year for a family of four.
    - Families with higher incomes will be allowed to buy into the plan.
  - CoverKids will put Tennessee among the top 10 states in the nation in terms of the percentage of children covered by health insurance.



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- Are we moving in the right direction?



# 2006 Report Card

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- According to the University of Baltimore's Obesity Initiative, Tennessee was given an A on its report card because lawmakers had passed seven of the eight types of legislation considered to be effective ways to combat obesity.

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- When reporting state efforts to control childhood obesity the University of Baltimore looks at:
    - nutrition standards
    - vending machine usage
    - body mass index measured in schools
    - recess and physical education
    - obesity programs and education
    - obesity research
    - obesity treatment and health insurance
    - obesity commissions

# University of Baltimore Obesity Initiative 2006

State's number represents **Obesity Prevalence Ranking** (Mississippi ranks first with the highest obesity prevalence. Colorado ranks 50th with the lowest prevalence).

## STATE EFFORTS TO CONTROL OBESITY

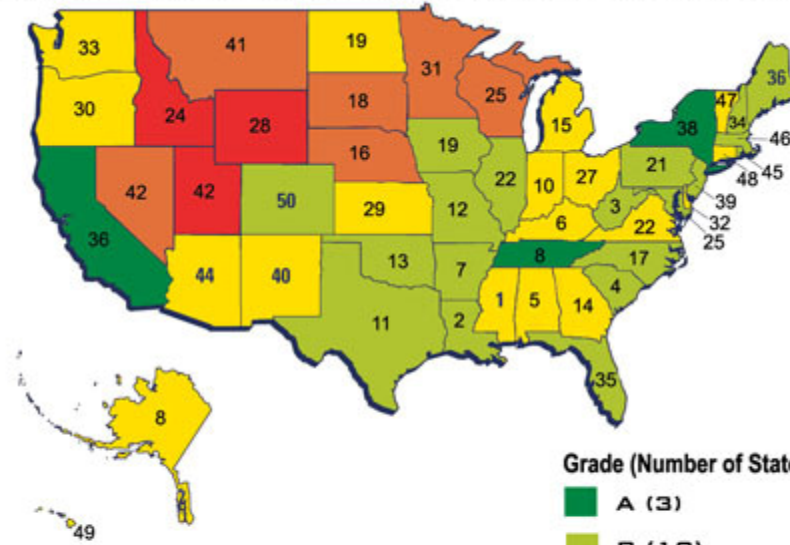
**A** CA, NY, TN

**B** AR, CO, FL, IL, IA, LA, ME, MD, MA, MO, NH, NJ, NC, OK, PA, RI, SC, TX, WV

**C** AL, AK, AZ, CT, DE, GA, HI, IN, KS, KY, MI, MS, NM, ND, OH, OR, VT, VA, WA

**D** MN, MT, NE, NV, SD, WI

**F** ID, UT, WY



Grade (Number of States)

**A** (3)

**B** (19)

**C** (19)

**D** (6)

**F** (3)

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Obesity prevalence rankings derived from Centers for Disease Control (CDC) Behavioral Risk Factor Surveillance System (BRFSS)

# University of Baltimore Obesity Initiative 2006

State's number represents **Overweight Prevalence Ranking** (West Virginia ranks first with the highest overweight prevalence. Utah ranks 50th with the lowest prevalence).

## STATE EFFORTS TO CONTROL CHILDHOOD OVERWEIGHT PREVALENCE

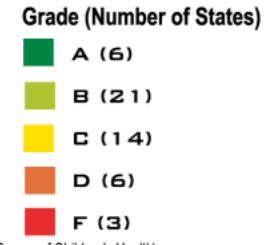
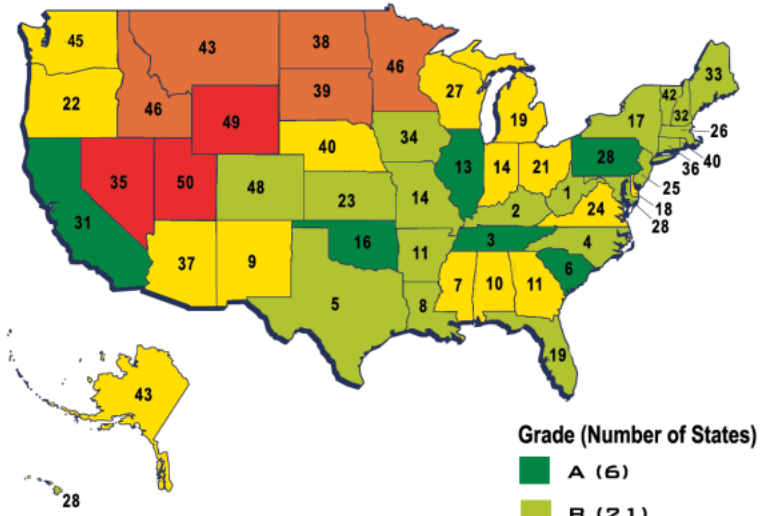
**A** CA, IL, OK, PA, SC, TN

**B** AR, CO, CT, FL, HI, IA, KS, KY, LA, ME, MD, MA, MO, NC, NH, NJ, NY, RI, TX, VT, WV

**C** AL, AK, AZ, DE, GA, IN, MI, MS, NE, NM, OH, OR, VA, WA

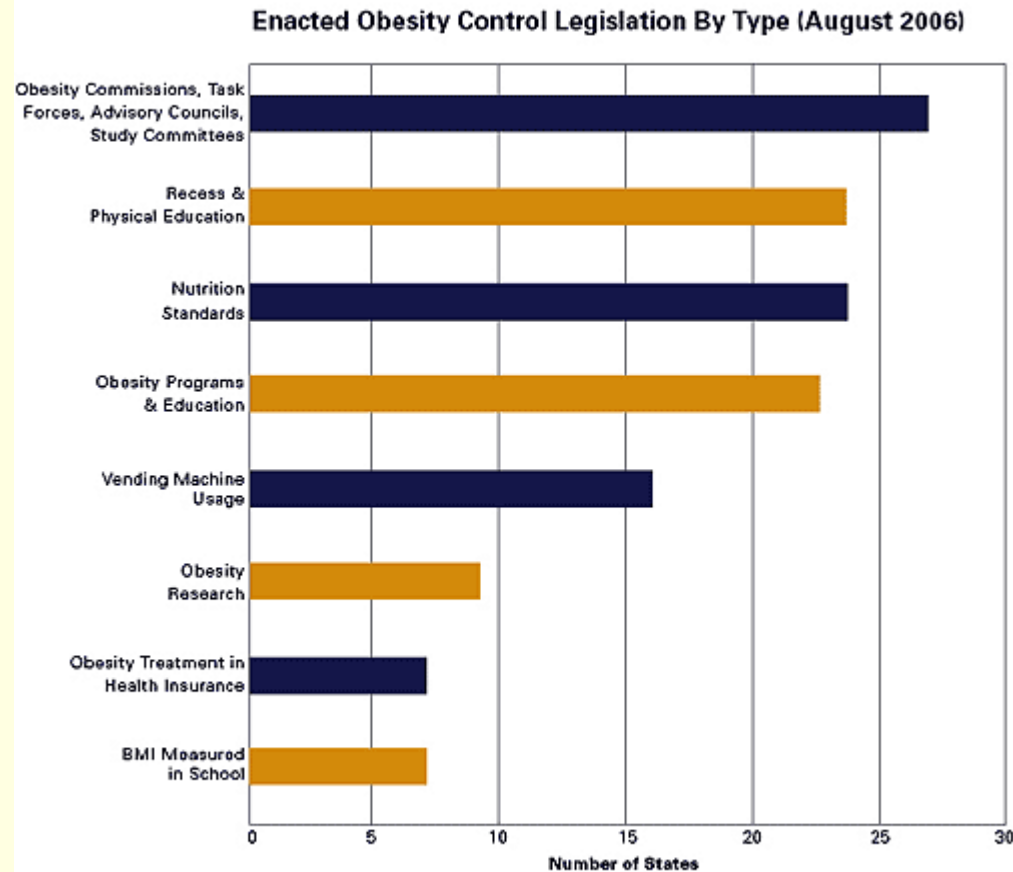
**D** ID, MN, MT, ND, SD, WI

**F** NV, UT, WY



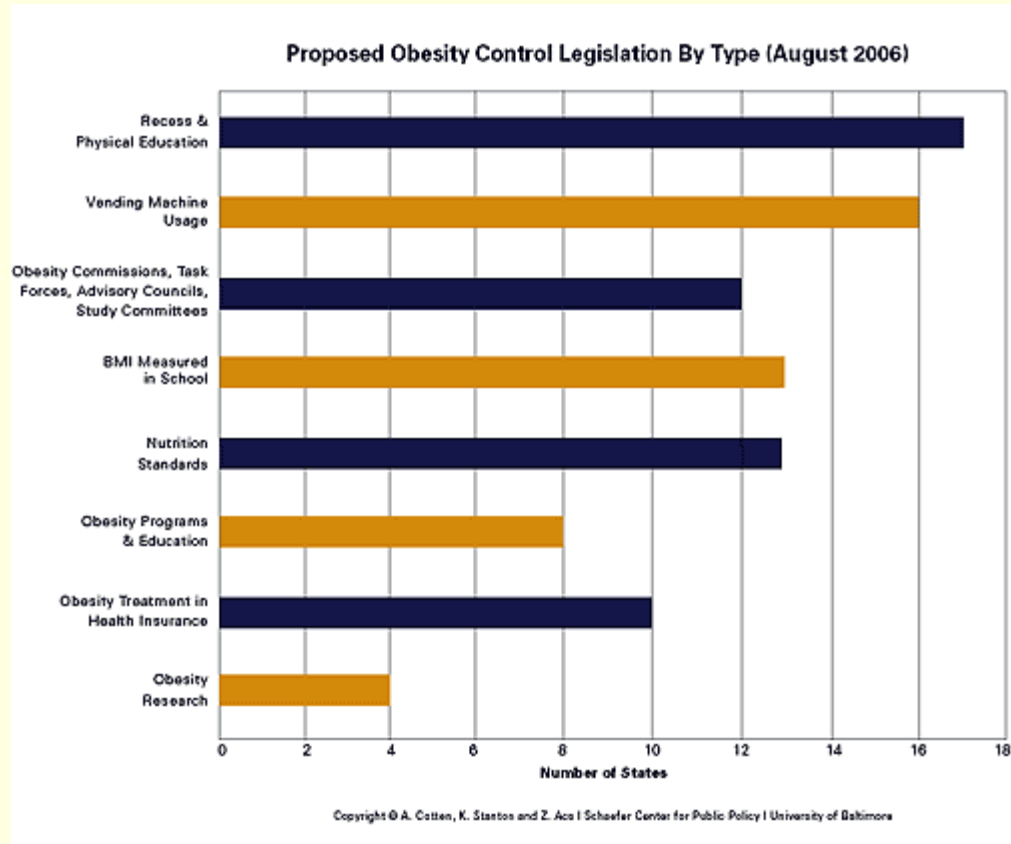
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 (The rankings of childhood overweight prevalence are derived from Child and Adolescent Health Measurement Initiative (2005), *National Survey of Children's Health*)

# University of Baltimore Obesity Initiative



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# University of Baltimore Obesity Initiative



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- The following states have passed BMI legislation.
    - Arkansas – passed/repealed (from mandated to allowed)
    - California
    - Illinois
    - Missouri
    - New York
    - Pennsylvania
    - West Virginia
    - Tennessee (grades 2, 4, 6, 8 and lifetime wellness)
      - Source: 2007 National Conference of State Legislation



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- BMI Controversy

- Consistency
- Accuracy – does not address body composition
- Confidentiality
- Consent
- Expense
- Centralization – HIPPA compliance; Research Protocols
- Reporting
- Response
- Misinformation
  - Source: The Arkansas Experience

# Pennsylvania Dept of Health

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- You may have heard that this year, your school will be determining your BMI, which stands for Body Mass Index, in addition to measuring your height and weight. Below is some information that will help you to understand what the buzz is all about.



All The Buzz  
About BMI

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- Your thoughts on BMI screening in schools?



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- **What is being done in your school systems?**
  - **What is being done in your communities?**
  - **What is being done at the State level?**