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Physical Fitness and Obesity Among Missouri Children

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Nearly 4 out of 10 Missouri children and teens are overweight or at risk of becoming overweight. Overweight children and teens are more likely to become obese adults.

What are their chances?

4 out of 10	for overweight preschool children
7 out of 10	for overweight adolescents
8 out of 10	for overweight adolescents if both parents are overweight or obese

With the epidemic of obesity in our nation and the growing problem of overweight children it is important that schools and communities work together to provide programs as well as opportunities for children and their families to become more physically fit as one way to help prevent the increase of overweight children in Missouri. The increased risk for chronic diseases and the economic costs of adult obesity in this country as well as the social and psychological factors and, the effect on academic performance is a good reason to begin now to address this fast growing problem of overweight children.

Interventions must concentrate on modifying those behaviors that contribute most significantly to excess

weight. These behaviors are unhealthy eating and inactivity. Both of these factors carry serious chronic disease risk factors. However, research by Dr. Stephen Blair of the Cooper Institute for Aerobic Research shows that overweight adults that are physically fit have fewer chronic health risk factors than unfit normal weight individuals. So improving the fitness levels of our youth is a worthwhile goal if we want to improve the health of children who will become the adults of the future.

To get a feel for the physical fitness levels of our youth Missouri schools are required to submit each year, by school building, the number of fifth and ninth grade students that meet the minimum criteria for the Missouri Physical Fitness Assessment. (You can access the Missouri Physical Fitness Manual on the Department of Elementary and Secondary Education (DESE) website at: <http://www.dese.state.mo.us/divimprove/curriculum/newwebpages/hpe.html>. This manual will explain how the fitness assessment is administered and give the criteria needed for attaining the Healthy Fitness Range for ages 10-17). The areas assessed are health related fitness components that include: aerobic capacity (walk/run test); abdominal strength (curl-ups); upper-body strength

(push-ups or pull-ups); and flexibility (sit and reach).

The chart below shows a sample of the qualifying criteria needed to reach the Healthy Fitness Range (HFR) for an 11 year-old student (end-of-year 5th grader) and a 14 year- old student (end-of-year 9th grader).

Health Fitness Range Qualifying Criteria

<u>11 years old</u>	Mile Run/Walk	Curl-Ups (cadence)	Push-Ups	Sit and Reach (back-saver)
Boys	11:00 minutes	15	8 (complete)	8 inches
Girls	12:00 minutes	15	7 (complete)	10 inches

<u>14 years old</u>	Mile Run/Walk	Curl-Ups (cadence)	Push-Ups	Sit and Reach (back-saver)
Boys	9:30 minutes	24	14 (complete)	8 inches
Girls	11:00 minutes	18	7 (complete)	10 inches

This physical fitness assessment is unlike the fitness tests that many of us over the age of 40 took as children. This test looks at health related fitness categories and not the skill related areas like power (softball throw), speed (50 yard dash), or agility (shuttle run). When a child cannot qualify for the Healthy Fitness Range (HFR) on this assessment it should register a concern like when your doctor says your cholesterol or blood pressure is high. With increased physical activity, fitness levels can be improved, just like with proper diet and exercise, cholesterol and high blood pressure can be improved. Children should not be graded on their physical fitness assessment, but they should be taught to self-assess and set

goals for improvement. If children meet the HFR criteria then they must be encouraged to continue to stay active so that their fitness levels will keep pace with their growth and development. Physical fitness is not a static condition it changes with age and activity.

The following chart shows the state average in each of the four assessed areas of physical fitness for years 2000-2004.

State Summary: Physical Fitness Assessment Results years 2004-2000*

(*2000 was a volunteer and not all schools participated)

5th Grade	2004	2003	2002	2001	2000*
Boys/Girls	% in HFR	% in HFR	% in HFR	% in HFR	% in HFR
Aerobic. Capacity	63% / 65%	61% / 63%	64% / 63%	63% / 63%	61% / 61%
Abdominal	70% / 73%	70% / 73%	70% / 71%	68% / 68%	67% / 71%
Flexibility	65% / 70%	64% / 69%	66% / 70%	65% / 68%	64% / 61%
Upper Body	64% / 60%	65% / 60%	65% / 59%	63% / 70%	61% / 56%
<i>State average</i>	66% / 67%	65% / 51%	66% / 66%	51% / 67%	63% / 62%
9th Grade					
Boys/Girls					
Aerobic. Capacity	65% / 59%	64% / 63%	65% / 58%	63% / 59%	66% / 52%
Abdominal	71% / 68%	72% / 73%	79% / 69%	73% / 70%	69% / 67%
Flexibility	63% / 72%	65% / 69%	64% / 65%	67% / 72%	69% / 73%
Upper Body	70% / 64%	69% / 60%	69% / 63%	72% / 72%	72% / 60%
<i>State average</i>	67% / 66%	68% / 66%	69% / 64%	69% / 68%	69% / 63%

¹ Data collected from Screen 17 Core Data , Missouri Department of Elementary and Secondary Education. Bihr/March 2005

The chart shows that **the fitness scores of neither 5th nor 9th grade students are getting significantly better or worse.** This implies that we are not moving forward in our efforts to improve the fitness levels of Missouri's

children. With more than one-fourth of the fifth and ninth grade students unable to reach minimal levels of fitness it is not surprising that we are following the national trend of overweight children. Physical activity and nutrition as-well-as genetic factors are the major determinants of body weight. If one-fourth of all 5th and 9th grade students in Missouri are not physically active enough to achieve minimal levels of physical fitness then we should not be surprised at the number of overweight Missouri children. Today there are nearly twice as many overweight children and, almost three times as many overweight adolescents as there were in 1980. Missouri's prevalence of overweight children ranks even higher than the national average. Nationally, 13 percent of children and 14 percent of adolescents are overweight. (The Surgeon General's Call To Action to Prevent and Decrease Overweight and Obesity 2001, U.S. Department of health and Human Services, Public Health Service, Office of the Surgeon General, p.11, www.surgeongeneral.gov/library (December 13, 2002). In Missouri, 21.5 percent of 5-11 year olds measured in school year 2000-2001 and 22.7 percent of 12-19 years olds measured were overweight. In contrast, 2.5 percent of children aged 5-11 years and 1.9 percent of children aged 12-19 years were underweight in Missouri in the 2000-2001. (Dietary Intake Summary Report: the Missouri School-Age Children's Health Services Program School Year 2000-2001, Missouri Department of Health and Senior Services, Division of Nutritional Health and Services, http://www.dhss.state.mo.us/dnhs_pdfs/

[R_OSEP_diet_intake_school-age_01-02.pdf](#) December 13, 2002).

Improving the level of physical fitness in children is central to focusing on the problem of overweight children. We want to remember that in children while excess weight is a cause for concern, weight loss should not be the main focus for addressing this problem.

Improving the levels of physical fitness in our youth is not just a school problem. It will require the help of the entire community. The guiding principle of the "Coordinated School Health (CSH) Program" is that schools and communities can combine their resources to provide an integrated and systematic approach to meeting children's health needs. The Missouri Coordinated School Health Coalition (CHS) encourages schools to adopt the eight-component CSH model to address issues surrounding healthy weight (physical fitness and healthy eating) for Missouri school-age children. The coalition acknowledges that schools cannot completely solve all weight related problems faced by Missouri students. The primary role of schools in promoting healthy weight is prevention, using the Eight Component Model for A *Coordinated School Health Program*.

The eight components consist of:

1. Healthy School Environment
2. Health Education
3. Physical Education
4. School Nutrition
5. Health Services
6. Staff Wellness
7. Counseling Services
8. Family and Community Involvement.

To find out what each of the components of the Coordinated School Health Model can do to contribute to promoting fitness and healthy weight in Missouri's children check out the document,

Promoting Healthy Weight in Missouri Children: A Guide for Schools, Families and Communities. It is located on the Coordinated School Health Coalition website under resources at: www.healthykidsmo.org.