FITNESSGRAM®
Healthy Fitness Zone®
Standards for Aerobic Capacity & Body Composition

Implemented Fall 2010

The Cooper Institute

FG

NFL Play60

Need for FG2010 Standards

- Aerobic Capacity
  - Excessively high passing rates for young girls
  - Classification disagreement between PACER and One Mile Run
- Body Composition
  - Standards for very young children not discriminatory
  - Much more data for children is now available upon which to base standards

Basis for FG2010 Standards

- Nationally representative data on children from National Health and Nutrition Examination Survey (NHANES)
- Age and Gender specific taking into account normal changes during growth and maturation
- Analyses were conducted to find levels of body fatness and aerobic capacity that are associated with increased risk of metabolic syndrome

What is Metabolic Syndrome?

Considered to have Metabolic Syndrome if you have three of the five conditions.

- High blood pressure
- High fasting glucose
- High waist circumference
- High tryglycerides
- Low HDL cholesterol

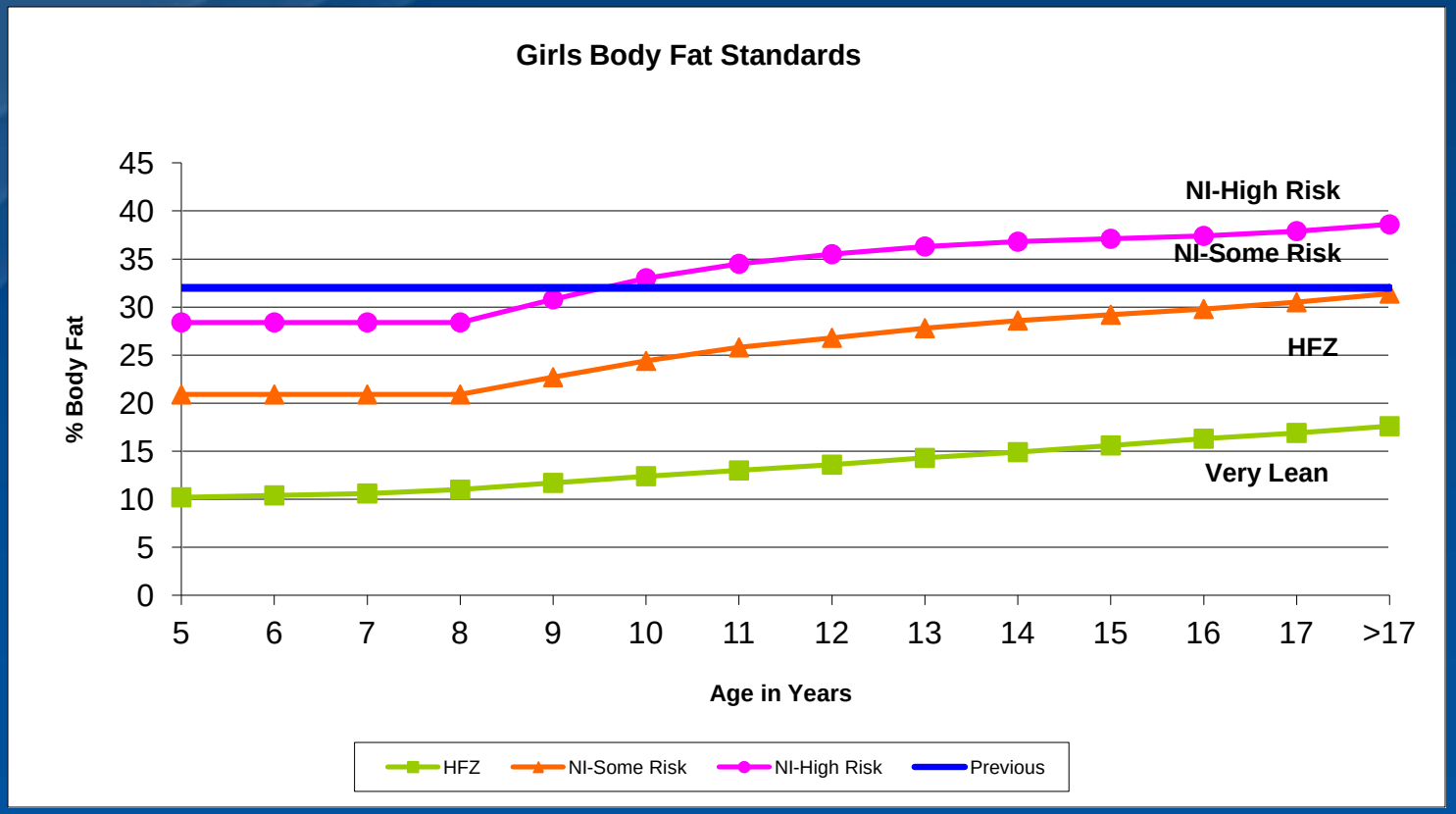
Characteristics of FG2010 Standards

- Young boys and girls do not differ substantially but follow different patterns as age increases
- The FG2010 standards classify children into three zones:
  - Healthy Fitness Zone
  - Needs Improvement – Some Risk
  - Needs Improvement – High Risk

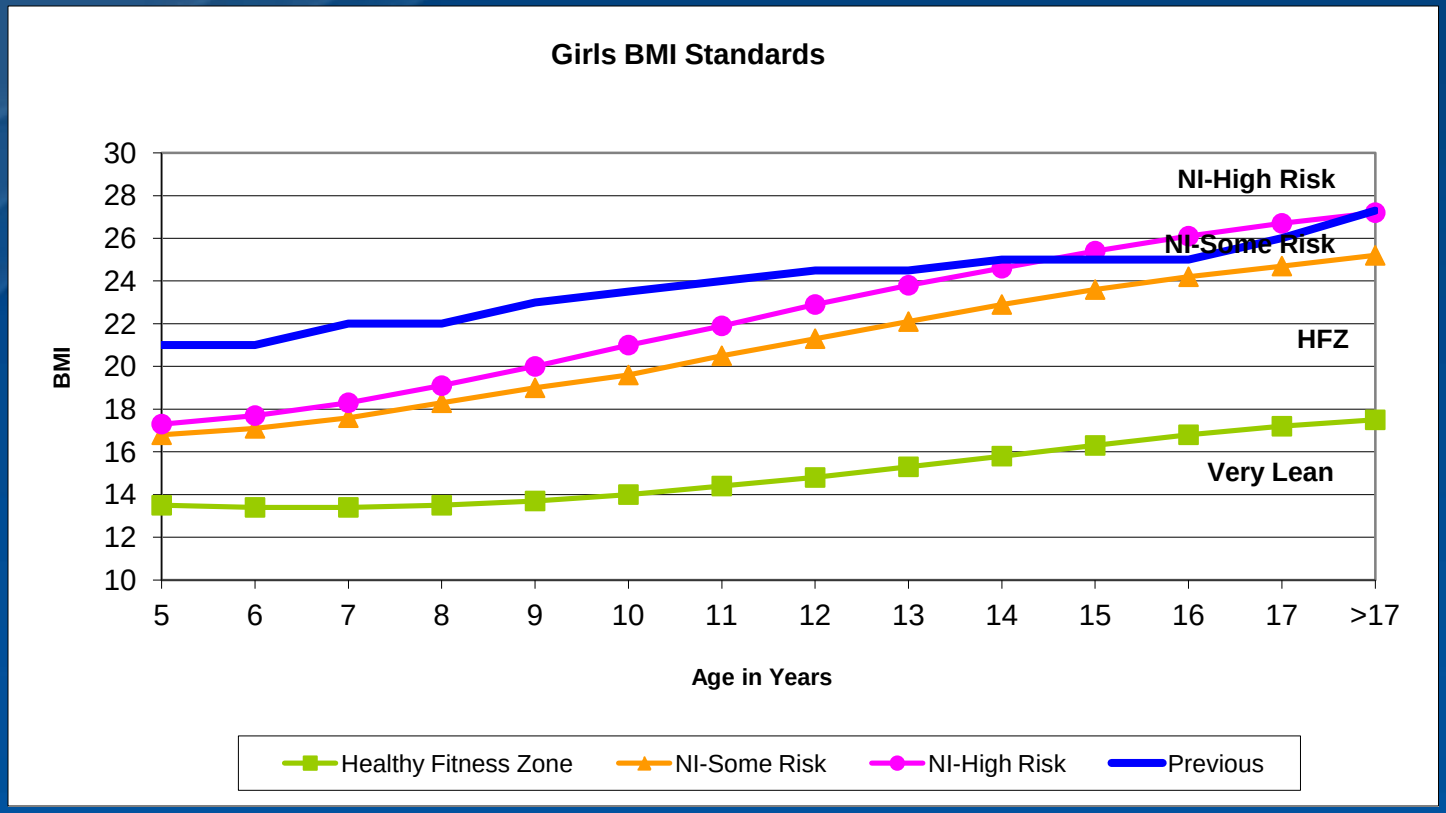
Unique to FG2010 Body Composition Standards

- These are not the CDC percentile standards, they are criterion standards
- There is a Very Lean zone
- Body Composition standards are established based on levels of body fatness associated with increased risk of health problems
- Levels of Body Mass Index are equated with these levels of body fatness

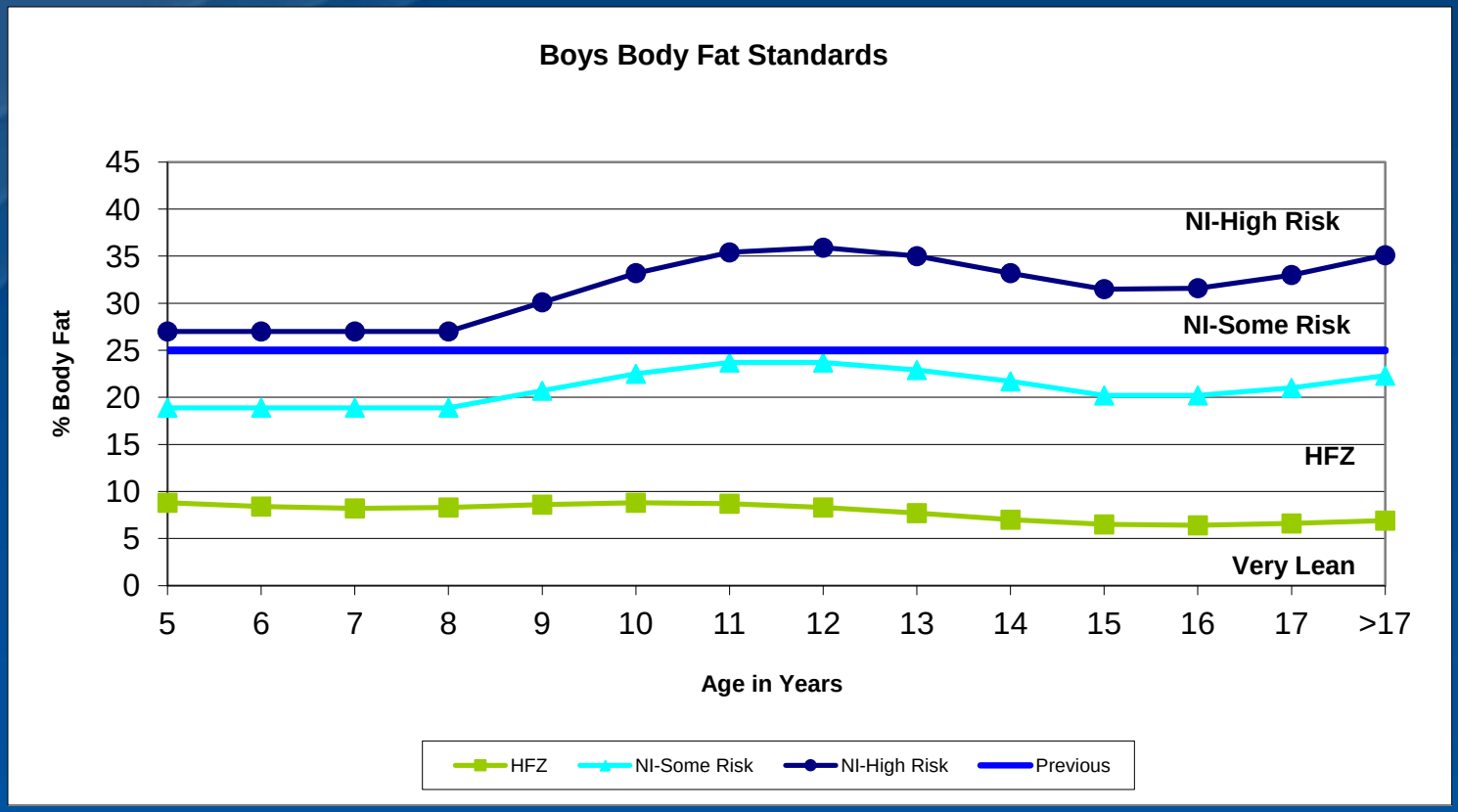
Body Composition for Females



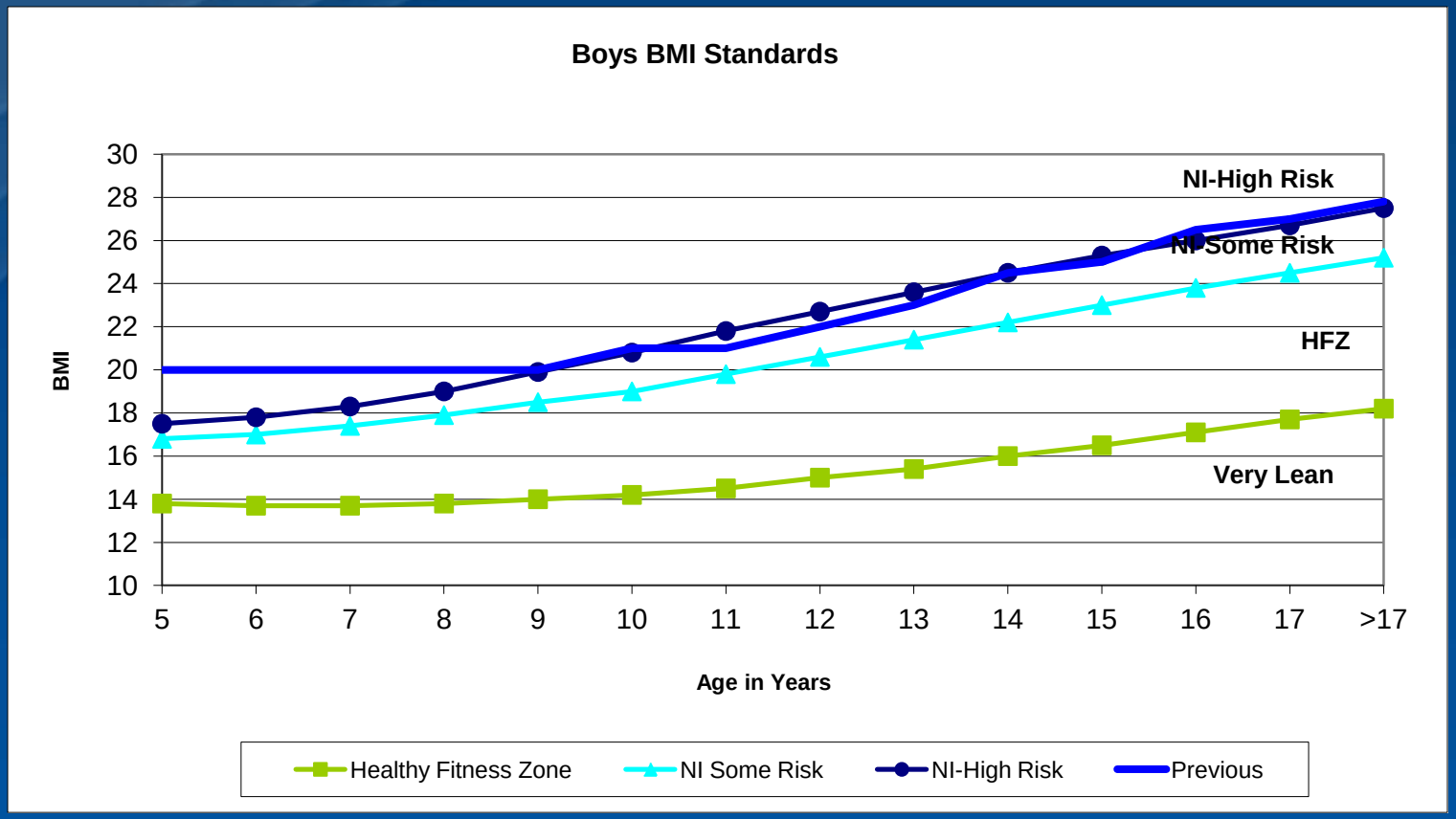
Body Composition for Females



Body Composition for Males



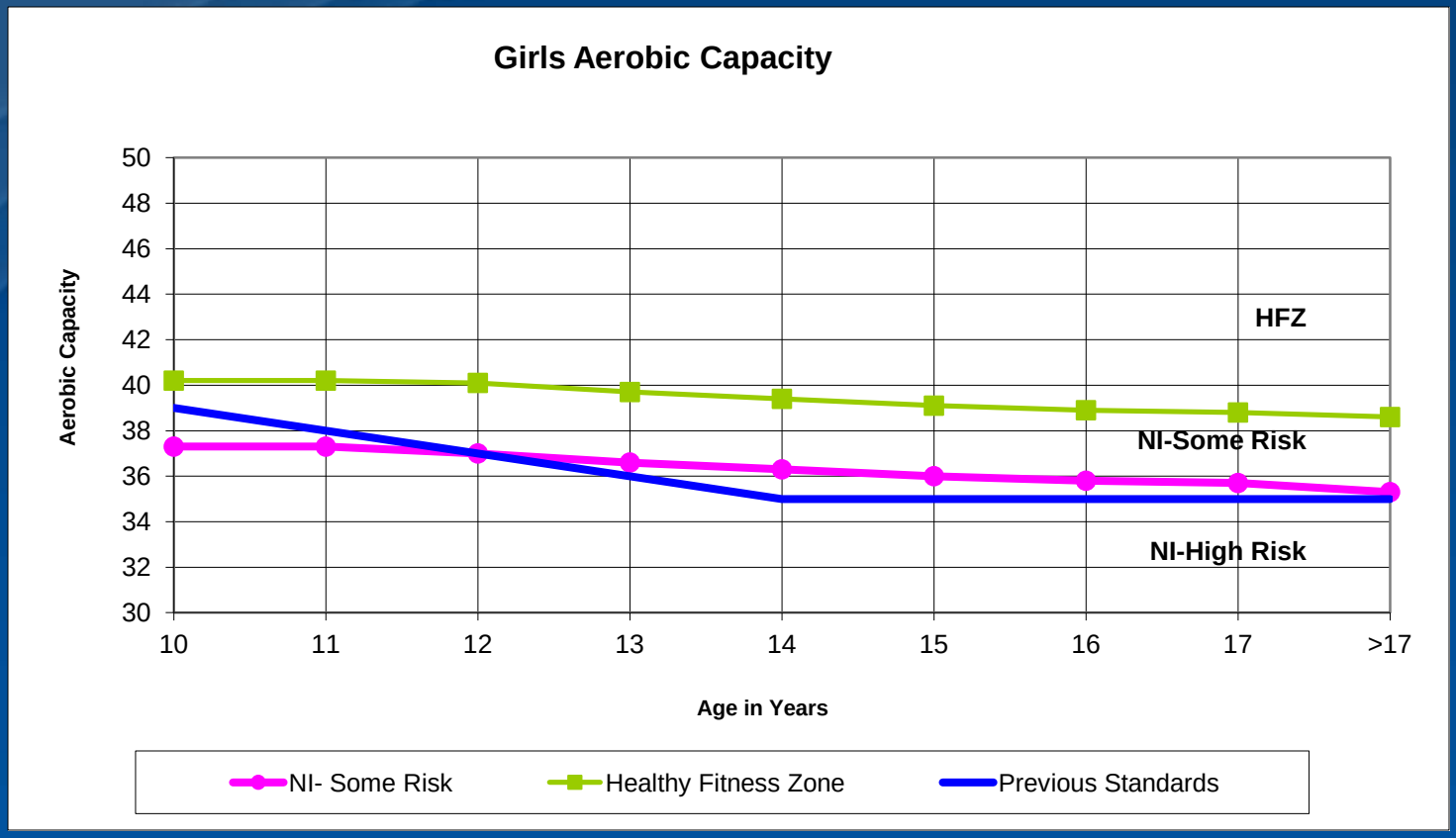
Body Composition for Males



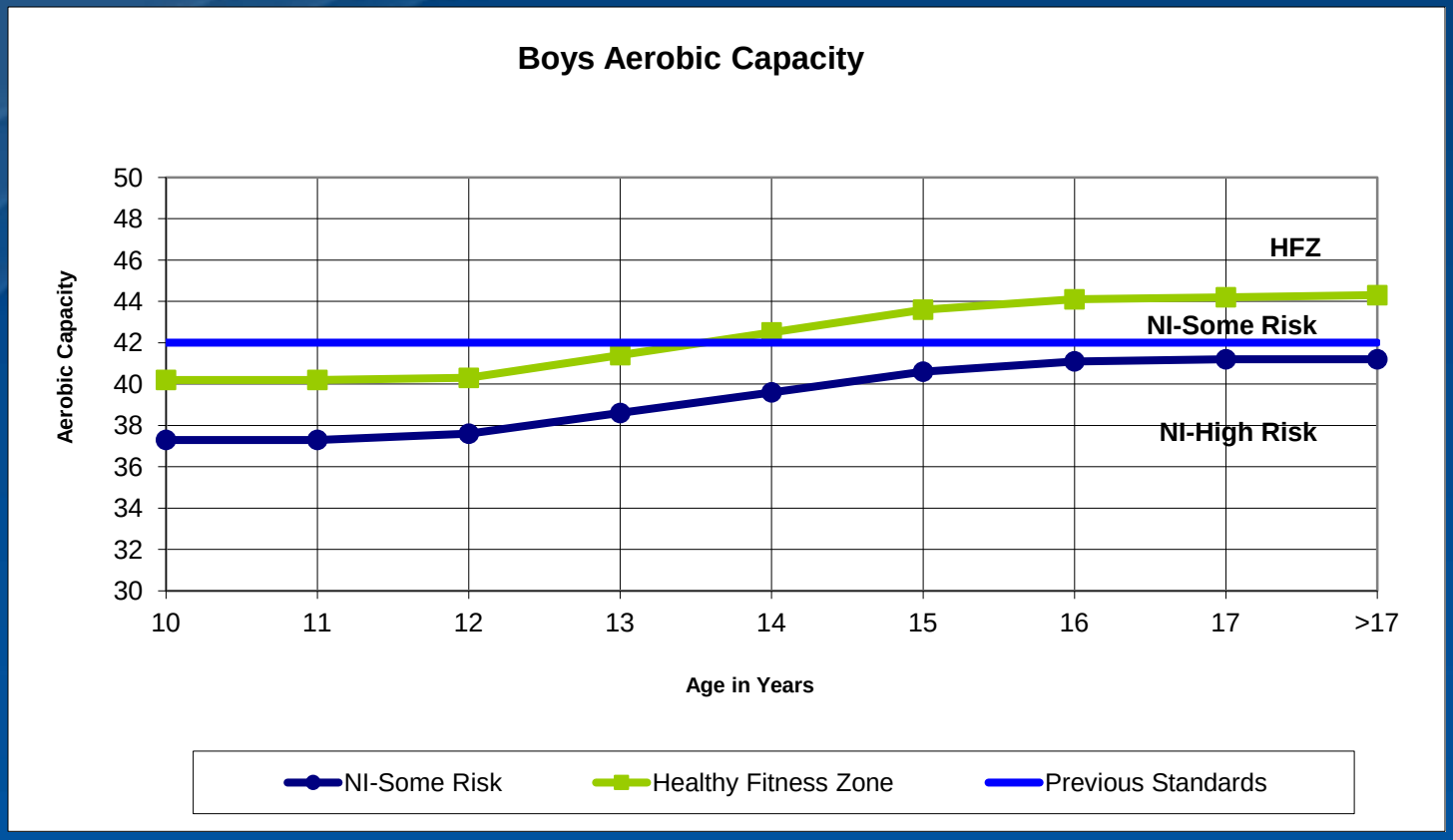
Unique to FG2010 Aerobic Capacity Standards

- All output will be expressed as Aerobic Capacity (VO_{2max}) rather than as PACER laps or One Mile Run time.
- Calculation of Aerobic Capacity requires the input of height and weight – body size is a very critical factor in one's ability to perform aerobically. Without BMI many students are classified incorrectly.
- Expressing Aerobic Capacity relative to body size provides a much better prediction of actual aerobic ability.

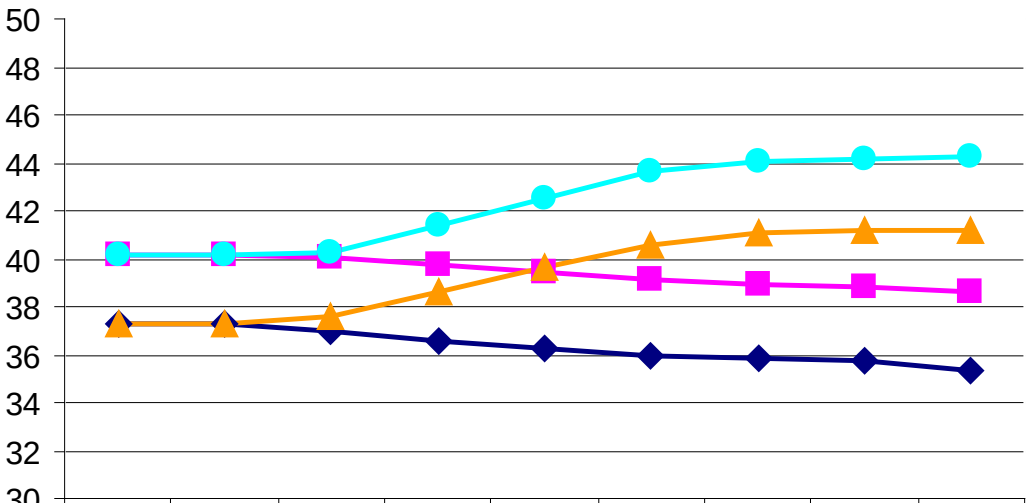
Aerobic Capacity (VO_{2max}) for Females



Aerobic Capacity (VO_{2max}) for Males



Aerobic Capacity (VO_{2max}) Males vs. Females



	10	11	12	13	14	15	16	17	>17
Girl's NI	37.3	37.3	37	36.6	36.3	36	35.8	35.7	35.3
Girl's HFZ	40.2	40.2	40.1	39.7	39.4	39.1	38.9	38.8	38.6
Boy's NI	37.3	37.3	37.6	38.6	39.6	40.6	41.1	41.2	41.2
Boy's HFZ	40.2	40.2	40.3	41.4	42.5	43.6	44.1	44.2	44.3

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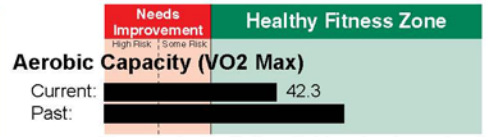
IN PARTNERSHIP WITH Play60 THE NFL MOVEMENT FOR AN ACTIVE GENERATION

John Jogger
Grade: 5 Age: 10
FG All-level School
Instructor(s): Bobby Dooley

	Date	Height	Weight
Current:	9/21/2010	5'5"	127 lbs
Past:	9/18/2009	5'4"	120 lbs

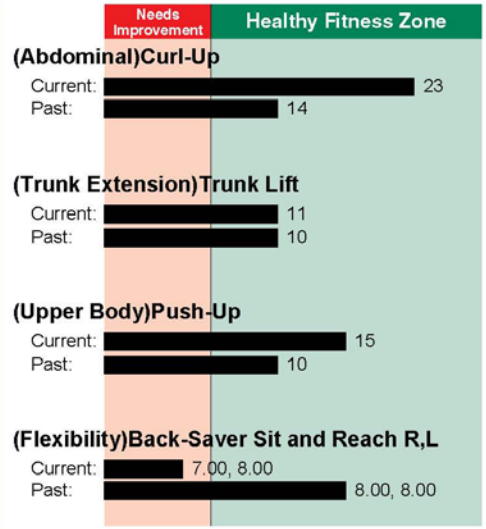
AEROBIC CAPACITY



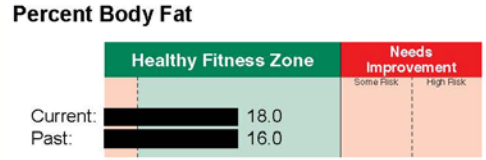
Your score for Aerobic Capacity is based on the number of PACER laps and your BMI. It shows your ability to do activities such as running, cycling, and sports at a high level.

	PACER Laps	BMI
Current:	23	21.1
Past:	16	20.6

MUSCLE STRENGTH, ENDURANCE, & FLEXIBILITY



BODY COMPOSITION



Being too lean or too heavy may be a sign of (or lead to) health problems.

ACTIVITY

	Number of Days
On how many of the past 7 days did you participate in physical activity for a total of 30-60 minutes, or more, over the course of the day?	3
On how many of the past 7 days did you do exercises to strengthen or tone your muscles?	0
On how many of the past 7 days did you do exercises to loosen up or relax your muscles?	2

MESSAGES

Although your aerobic capacity score is in the Healthy Fitness Zone now, you are not doing enough physical activity. Try to do more physical activity (60 minutes every day) to feel good and remain healthy.

Your abdominal, trunk, and upper-body strength are all in the Healthy Fitness Zone. To maintain your fitness, you should begin doing strength-training activities that include exercises for each of these areas. Abdominal and trunk exercises should be done 3 to 5 days each week. Strength activities for other areas should be done 3 days.

Improve your flexibility by doing slow stretches 3 or 4 days each week, holding the stretch 20-30 seconds.

John, Good News. Your body composition score is in the Healthy Fitness Zone but you are not getting enough physical activity. To maintain this healthy level, do the following:
-Try to get more activity (at least 60 minutes every day).
-Limit time spent watching TV or playing video games.
-Eat a healthy diet including fresh fruits and vegetables.
-Limit foods with solid fats and added sugars.

Healthy Fitness Zone for 10 year-old boys
Aerobic Capacity: >= 40.2 ml/kg/min
Curl-Up: >= 12 repetitions
Trunk Lift: 9-12 inches
Push-Up: >= 7 repetitions
Back-Saver Sit and Reach: At least 8 inches on R & L
Percent Body Fat: 8.9% - 22.4%

To be healthy and fit it is important to do some physical activity almost every day. Aerobic exercise is good for your heart and body composition. Strength and flexibility exercises are good for your muscles and joints.

Good job! You are doing some aerobic activity. Do aerobic activity each day and add strength and flexibility exercises to improve your overall fitness.