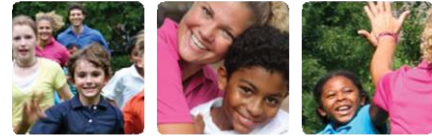


NFL PLAY 60 FITNESSGRAM Project



NFL PLAY 60 FG – Welcome Series Part 4 of 6

What FITNESSGRAM Tests Do I Have to Conduct?

Welcome to Part 4 of our 6-part Welcome Series. I'm Julie Stefko, Associate Director for the NFL PLAY 60 FITNESSGRAM project. In this segment, we will take a closer look into the specific FG test items to include as a part of this grant. Let's get started!

(Recommended Tests)

FITNESSGRAM emphasizes health-related fitness for life by measuring three components: 1) aerobic capacity; 2) body composition; and 3) muscular strength, endurance, and flexibility. Under each component there are several test options to choose from. Participating sites must select a minimum of one test item per component. Let's begin by taking a closer looking into each of these health-related components.

(Aerobic Capacity)

Aerobic capacity is the amount of oxygen the body can take in, transport, and then utilize during exercise. It is perhaps the most important area of any fitness program. It is usually expressed relative to bodyweight to account for differences in body size and the ability to carry out weight bearing tasks. Good aerobic capacity is important because it is linked to a reduced risk of coronary heart disease, hypertension, type 2 diabetes, obesity, fatigue, some forms of cancer, and other chronic diseases.

The FITNESSGRAM aerobic capacity standards reflect the VO₂ Max values that define potential risks for metabolic syndrome and take into account the normal changes in growth and maturation. Metabolic syndrome is described as a group of risk factors that collectively promote the development of cardiovascular disease and also increase risk for diabetes. These risk factors include: high fasting glucose, high waist circumference, high triglycerides, low high-density lipoproteins cholesterol, and high blood pressure. The current standards allow for the following three zones:

- Healthy Fitness Zone®
- Needs Improvement Some Risk, and
- Needs Improvement High Risk

To determine which zone a student is in, FITNESSGRAM offers three different types of tests to determine a child's level of aerobic capacity; the mile-run, Progressive Aerobic Cardiovascular Endurance Run, or PACER, and the walk tests.

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What FITNESSGRAM Tests Do I Have to Conduct?

(Aerobic Capacity Test Descriptions)

PACER* stands for **P**rogressive **A**erobic **C**ardiovascular **E**ndurance **R**un. Set to music, a paced, 20-meter run increasing in intensity as time progresses; **OR** a one-mile run. With the **One-Mile Run**, students are timed running, or walking if needed, one mile as fast as they can; **OR** a walk test. When the **Walk Test** is selected, students walk one mile as fast as they can and at the end the student's heart rate and walk time is recorded. This test has only been validated for students ages 13 or older and is a great test option *for students* who are obese, or severely out of shape. The FG recommends the PACER, but it is up to you to select the one that will work best at your site.

(Body Composition)

The next test is body composition. Body composition provides an estimate of body fatness. High levels of body fatness are linked to an increased risk of coronary heart disease, hypertension, stroke, type 2 diabetes, and other chronic diseases. Obesity and heart disease risk factors are known to track through the life span, so it is important to document body composition as a part of a comprehensive health-related fitness profile.

The FITNESSGRAM body composition standards are established by determining what percent of body fat value distinguishes youth who did and did not have metabolic syndrome, taking into account normal changes in growth and maturation. The current standards for body composition allow for the Healthy Fitness Zone®, the Needs Improvement Some Risk zone, and the Needs Improvement High Risk zone.

FITNESSGRAM offers several alternatives to assess for body composition; skinfold measurement, bioelectrical impedance analysis or BIA, and Body Mass Index, also known as BMI. Skinfold measurements are the recommended method as they are highly correlated to total body fatness. However, skinfolds may not be practical in the school setting because it requires touching students with skinfold calipers. BMI is a measure of weight to height and is an alternate indicator of body composition but it does not reflect the actual degree of body fatness. However, this is the most common method used by schools. Measuring students' height and weight is required as a part of this grant. Let's look at tests that can be performed for body composition.

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What FITNESSGRAM Tests Do I Have to Conduct?

(Body Composition Test Descriptions)

To determine body composition, you may select one of three tests. The **SkinFold*** method measures percent body fat by testing the triceps and calf areas; **OR** the body mass index. For determining **Body Mass Index** or BMI, weight and height are calculated using a specific formula or a BMI calculator. This is **REQUIRED!**

With the **Bioelectric Impedance Analyzer**, the device works by sending a very low electric current throughout the body to determine percentage of body fat. Height and weight of each student will be needed.

There are a few addition things we'd like to share with you. Please remember to be sensitive as you measure height and weight of children. Never post their results or say results in front of others.

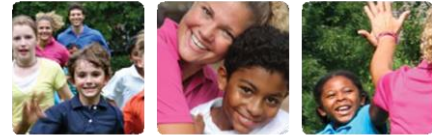
There are many strategies you can utilize, but make sure to educate the students first and keep a positive testing environment. Students results should be kept personal and kids should not be pressured to share their results.

The CDC suggests that to reduce the risk of harming students, BMI measurements programs should follow the following 8 suggestions.

- (1) introduce the program to school staff and community members and obtain parental consent;
- (2) train staff in administering the program (ideally, implementation will be led by a highly qualified staff member, such as the school nurse);
- (3) establish safeguards to protect student privacy;
- (4) obtain and use accurate equipment;
- (5) accurately calculate and interpret the data;
- (6) develop efficient data collection procedures;
- (7) avoid using BMI results to evaluate student or teacher performance; and
- (8) regularly evaluate the program and its intended outcomes and unintended consequences.

This information can be found in the document entitled: [Body Mass Index Measurement in Schools](http://www.cdc.gov/healthyweight/assessing/bmi/)

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What FITNESSGRAM Tests Do I Have to Conduct?

(Muscular Strength and Endurance)

Muscular strength is the ability of a muscle to exert force and maximum power during an activity. Muscular endurance is the ability of a muscle group to sustain repeated contractions over an extended period of time without fatigue. Muscular strength and endurance are important because they are linked to a reduction in risk factors, disease development, and all-cause mortality as well as performing activities of daily living, functional health, and promoting good posture.

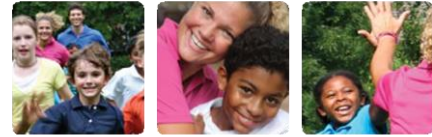
FITNESSGRAM offers five different tests to determine a child’s level of muscular strength & endurance: Curl-ups, which uses the abdominals. These are required by the program; Trunk lifts, which measure low back strength and flexibility and are also required. For the upper body, there are 3 tests to choose from: the push-up, the modified pull-up, or the flexed arm hang. The push-up is the most common test item to test upper body strength because it only requires the cadence CD and no additional equipment. The objective of these test items are to see how long and how many times an activity can be performed before the individual is fatigued. Students are then placed into the “Healthy Fitness Zone®” or “Needs Improvement.” More detailed information can be found in your FG manual and on your training DVD.

(Flexibility)

Flexibility is the body’s range of motion at each joint. Flexibility is important because it helps prevent injuries and maintains good overall health. FITNESSGRAM offers three different tests to determine a child’s level of flexibility; the trunk lift which also measures muscular strength, the back-saver sit and reach, and the shoulder stretch. Students are then placed into the “Healthy Fitness Zone®” or “Needs Improvement.”

Let’s look at **Flexibility Test Descriptions** for the **Back-Saver Sit and Reach*** - Testing one leg at a time, students sit with one knee bent and one leg straight against a box and reach forward with both hands one on top of each other. This is repeated 4 times with a hold on the 4th repetition. The total number of inches reached is recorded. The maximum number that can be recorded is 12 inches so not to encourage hyper flexibility; **OR** the shoulder stretch can be done. With one arm over the shoulder and one arm tucked under behind their back, students try to touch their own fingers and then alternate arms. If students cannot touch their fingers, a “Y” for yes and an “N” for no is recorded in the application. **You can determine which one of these tests best fits your environment.**

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What FITNESSGRAM Tests Do I Have to Conduct?

Lastly, when defining your test event you must also select to include the activity day questions. These are located within the FG application. There are 3 activity questions to ask students which are included in the FG student application:

1. On how many of the past 7 days did you participate in any physical activity for a total of 30-60 minutes or more over the course of a day?

This includes moderate activities such as walking, slow bicycling, or outdoor play, as well as vigorous activities like jogging, participating in active games, or active sports like basketball, tennis or soccer.

2. On how many of the past 7 days did you do exercises to strengthen or tone your muscles?

This includes exercises such as push-ups, sit-ups or weight lifting.

3. On how many of the past 7 days did you do stretching exercises to loosen up or relax your muscles?

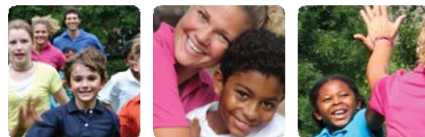
This includes exercises such as toe touches, knee bending or leg stretching.

Including these questions helps to customize the student report card. For example, if a student answers that they are only aerobically active 2 out of 7 days each week, but achieve the HFZ, then they will receive a message on the report card encouraging them to do more aerobic activity while receiving positive feedback for achieving the HFZ. Thus, including these questions definitely helps to give more specific feedback to your students. Here is a sample student score that makes collecting the answers to these three questions doable. It is important that you go over the questions with your students as they may need additional examples and clarification for remembering what they did over the past week.

You can also use this card to collect fitness scores on the other assessments that you choose to conduct. Students can record their results on this card before handing them in to you. You can have a student alphabetize the cards so they'll be ready for efficient data entry, whether by you, your students, or a responsible volunteer.

For more information on these questions please refer to the help document or pages 61-62 in your FG manual.

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What FITNESSGRAM Tests Do I Have to Conduct?

Now, for a quick review, here is a list of the FG test ITEMS you MUST include:

For Aerobic Capacity, the one mile, PACER, or Walk Test;

For Body Composition, height and weight are required;

For Upper Body Strength, push-ups, modified pull-ups, or flex arm hangs;

For Flexibility, shoulder stretches, or the back-savior sit and reach;

The Trunk Lift is required;

Curl-Ups are required; and finally,

Three Activity Day Questions found on pages 61 – 62 are required.

So, there you have it – the tests that you will have to conduct! This completes part 4 of 6. The next segment, part 5 will discuss project related resources.