

# Department of Health & Exercise Science

APPALACHIAN STATE UNIVERSITY

## Health and Fitness Assessment INFORMED CONSENT AND WAIVER

### PARENTAL PERMISSION FORM TO BE REVIEWED BY PARENTS WITH CHILD 12-17 YEARS OLD

#### **Why is my child taking part in this assessment?**

The Exercise Physiology Laboratory invites your child to take part in a Health and Fitness Assessment because you and your child are interested in having your child's cardiovascular health and physical performance assessed. During the visit, the Laboratory Director and a group of laboratory assistants, will assess your child's anthropometric measures (height, weight, body composition), walking and balance, blood pressure and arterial health, resting metabolic rate (how many calories your child's body uses at rest), and aerobic fitness ( $VO_{2max}$ ).

#### **Are there reasons my child should not take part in this assessment?**

Any individuals that are in the following groups should not participate in this assessment:

- (1) anyone who is or may be pregnant; or
- (2) any individual younger than 12 years of age or older than 17 years of age.

#### **Any individuals in the following groups should not participate in the aerobic fitness ( $VO_{2max}$ ) test:**

- (1) any individual that has been advised by a doctor to avoid moderate or vigorous exercise;
- (2) any individual who has cardiovascular disease, diabetes, or renal/kidney disease; or
- (3) any individual who has symptoms of cardiovascular or renal/kidney disease.

#### **What the assessment consists of?**

Your child will receive a complete health and fitness assessment. The total time required to participate in this assessment is 120 minutes. During the assessment, your child will be asked to answer questions about their health and physical activity, and we will measure your child's height, weight, waist and hip circumferences, body composition, blood pressure, resting metabolic rate, and aerobic fitness. Additional details about these data points are provided below:

1. *Questionnaires*: We will give your child one short survey including 5 generic questions about their daily activity level. We will give you a short survey including questions about your child's health. The questionnaires will take approximately 5 minutes.
2. *Anthropometric measurements*: We will measure your child's height and weight using a scale and a stadiometer, and waist and hip circumferences with a tape measure at

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the natural waist and around your child's widest hip area. This test will last about 5 minutes.

3. *Walking assessment:* We will ask your child to walk (at their normal pace) over a 16 ft carpet and to stand at the end of the walkway for a period of 30 seconds, in a normal comfortable stance, looking forward. Your child will walk across the mat four times. The test will last 10 minutes.
4. *Body composition:*
  - 4.1. Dual Energy X-Ray Absorptiometry (DEXA). A prescription from your child's pediatrician for the DEXA scan is required to perform this test. Please bring the prescription with you the day of the test. A trained and qualified technician will operate the machine. We will measure the amount of lean, fat and bone mass using an x-ray machine. The results will be provided in the form of a report created by the machine that you are free to take to your child's personal pediatrician to assess, however, no interpretation of the results will be provided by App State employees. We will ask your child to remove all jewelry, hair accessories, glasses, and other metal objects and lay down on a padded bed. A trained technician will help your child position themselves on the table and we will ask your child to lay still while we complete the body scans. The scan will last about 5 minutes.

In case we cannot perform the DEXA scan, or your child prefers not to do this measure, we will use one of the following methods:

- 4.2. Bod Pod. We will measure the amount of fat and fat-free mass using the Bod Pod. The Bod Pod is a special egg-shape chamber that your child will seat in during the test. For this test, your child will have to wear minimal, tight clothes like a bathing suit (for women) or a pair of compression shorts (for men). We will ask your child to wear a swim cap and to remove all jewelry. We will ask your child to step on a scale and then sit inside the chamber for one minute. The entire test will last 10 minutes.
- 4.3. Bioelectrical impedance (BIA). BIA estimates fat and fat-free mass while your child stands on a scale without shoes and socks and holding handlebars. This test takes 5 minutes.
5. *Blood pressure and arterial health:* We will place a blood pressure cuff around your child's right arm and leg and a small cuff around your child's middle finger. We will press a small pen on the side of your child's neck. The blood pressure cuffs will inflate and deflate to measure blood pressure and the speed of your child's blood. Your child should not experience any physical discomfort during this test. This test will last 20 minutes.
6. *Resting metabolic rate:* Your child will lay quietly in a dimly lit room, while wearing a finger clip and a transparent hood. We will monitor your child's heart rate and breathing for 15 minutes while your child relaxes in bed. This test will last 20 minutes.

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7. *Aerobic fitness*: This test will measure your child's aerobic capacity during exercise. Your child will perform this test on a motor-driven treadmill or cycle ergometer. The test will last 8 to 20 minutes and be based on your child's fitness level. The exercise intensity will start at a low level and will increase in stages. Your child will either walk/run on a treadmill at different combinations of speed and elevation, or pedal on a cycle ergometer against different resistances. Prior to the test and several times during the test, we will ask if your child experiences chest pain or discomfort, dizziness or faintness, shortness of breath, mental confusion. During the test, we will check for sudden pallor loss of coordination. We will stop the test if your child experiences any of these conditions. Your child may stop the test at any time if they feel fatigue or experience any type of discomfort. Before the test, your child should be rested, well nourished, and hydrated, and avoid stimulants such as caffeinated drinks for at least four (4) hours prior to the assessment, avoid exercise for at least twenty-four (24) hours prior to the assessment and be dressed in exercise clothing. During the test, a chest belt to measure heart rate and a facemask to measure oxygen consumption will be used. The time commitment for this test is approximately 40 minutes.

## Optional tests:

1. *Electrocardiogram (ECG)*: If desired, a 12-lead ECG can be performed at rest and/or during the physical fitness test. We will attach 10 soft electrodes with a gel to your child's chest. We may have to shave small areas to ensure the electrodes stick properly to skin. During the resting ECG test, your child will lay on a table and breathe normally. During the physical fitness test, we will record your child's ECG prior, during, and up to 10 minutes after exercise. The preparation of the ECG test will take about 10 minutes.
2. *Blood lactate*: If desired, a trained and certified technician will collect blood samples via finger or earlobe prick (only few drops) at rest and at multiple times throughout the exercise test.
3. *Blood analysis*: If desired, we will collect a blood sample via finger prick (only few drops) to measure hematocrit, glucose, LDL, HDL and triglycerides at rest.
4. *Hydration*: If desired, we will provide a sterile plastic cup with lid to collect a urine sample upon arrival to the laboratory. We will provide information on your child's hydration level.

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## What are possible harms or discomforts that your child might experience during the test session?

You can find potential risks associated with all assessments in the following table.

Procedure	Possible Risks
Questionnaires	Anxiety answering questions
Anthropometric	No known risks
Walking assessment	No known risks
DEXA	Exposure to small amounts of radiation (equivalent of 4 extra days of sunlight)
Bod Pod	Claustrophobia/anxiety (discuss w/investigator if your child has history of difficulty with enclosed spaces)
BIA	No known risks
Blood Pressure	Discomfort on arm
Arterial Stiffness	No known risks
Resting Metabolic Rate	Claustrophobia/anxiety using helmet (discuss w/investigator if your child has history of difficulty with enclosed spaces)
Aerobic fitness	Abnormal heart beats, abnormal blood pressure responses, muscle cramps, muscle strain and/or joint injury, delayed muscle soreness (1 to 2 days afterwards), light headedness, fainting, fatigue, and in rare instances, heart attack
Electrocardiogram	Skin irritation at electrode sites
Blood	Pain & bruising at site of finger prick
Lactate/analysis	
Hydration	No known risks

As with any exercise, there exists the possibility of certain changes occurring during the test (see possible risks listed in the table). Every effort will be made to minimize these risks by evaluation of preliminary information related to your child's health and fitness and by careful observation during testing.

The Appalachian State University Exercise Physiology Laboratory (the Lab) has trained personnel and procedures in place to respond to emergencies. **Please note that there will NOT be a physician present on site.** Based on your child's current health status and your child's level of risk for exercise, the Lab reserves the right to not conduct the exercise test at this time. Your child's prompt reporting of any unusual feelings during the test is of great importance.

## What are possible benefits of this test session?

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Your child will receive a report with the results of each one of your child's tests. Your child can see an example of the test report on the Exercise Physiology Laboratory website ([link](#)). You and your child may benefit by gaining a better understanding of your child's body composition, cardiovascular health and exercise performance.

**No information provided through this test should be considered medical advice and any results should be discussed with your child's personal pediatrician.**

## **What will be the cost of this test session?**

The costs associated with this service are available on the Exercise Physiology Laboratory website ([link](#)). You will receive a free parking pass for the Leon Levine Hall building the day of the visit.

## **What your child gets sick or hurt while participating in this test session?**

In the rare event of an injury during testing, we will follow standard emergency procedures. If your child gets hurt or sick when they are not at the test session site, you should call your doctor or call 911 in an emergency. If your illness or injury could be related to the assessment, tell the doctors or emergency room staff about the assessment, the name of the Laboratory Director, and provide a copy of this consent form if possible. You are also encouraged to promptly report any injury or illness to the Laboratory Director, Marco Meucci at 828-262-2935.

## **How will we keep your child's information confidential?**

To keep your child's information confidential, we will use an identifier (a code) instead of your child's name. The results of your child's assessment will be stored in a password-protected computer inside the laboratory.

## **Voluntary Consent**

I hereby consent to permit my child to engage in the health and fitness assessment to determine their exercise capacity. My permission to perform this assessment is given voluntarily. I understand that I may stop or my child may stop the assessment at any point if we so desire. I have read this form and I understand the assessment procedures and the attendant risks and discomforts. I understand that there will NOT be a supervising physician onsite. Knowing these risks and possible discomforts and having an opportunity to ask questions that have been answered to my satisfaction, I consent to permit my child to participate in the assessment.

## **Waiver/Indemnification**

I will and I will ensure that my child shall comply with all instructions and directions of Appalachian State University officials, students, and staff during the assessment.

I understand the possible risks and dangers to my child, my child's property, and the property of others associated with my participation in the assessment, and I undertake

