

Department of Health & Exercise Science

APPALACHIAN STATE UNIVERSITY

Health and Fitness Assessment INFORMED CONSENT AND WAIVER

Why am I taking part in this assessment?

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

Are there reasons I should not take part in this assessment?

Any individuals with 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 18 years of age; or
- (3) any individual older than 80 years of age (Please Note: Anyone over the age of 66 will not participate in the VO_{2max} test, but will be permitted to participate in the rest of the assessment).

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;
 - (3) any individual who has symptoms of cardiovascular or renal/kidney disease;
- and
- (4) individuals over 66 years of age.

What the assessment consists of?

You will receive a complete health and fitness assessment. The total time required to participate in this assessment is 100-120 minutes. During the assessment, you will be asked to answer questions about your health and physical activity, and we will measure your height, weight, waist and hip circumferences, body composition, blood pressure, resting metabolic rate, and your aerobic fitness. Additional details about these data points are provided below:

1. *Questionnaires*: We will give you two short surveys, one including 5 generic questions about your daily activity level and the other including questions about your health. The questionnaires will take approximately 5 minutes.
2. *Anthropometric measurements*: We will measure height and weight using a scale and a stadiometer, and waist and hip circumferences with a tape measure at the natural waist and around your widest hip area. This test will last about 5 minutes.
3. *Walking assessment*: We will ask you to walk (at your 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. You will walk across the mat four times. You can rest up to 5 mins if needed in between the walks. The test will last 10 minutes.

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4. *Body composition:*

4.1. Dual Energy X-Ray Absorptiometry (DEXA). A prescription from your physician 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 personal physician to assess, however, no interpretation of the results will be provided by App State employees. We will ask you to remove all jewelry, hair accessories, glasses, and other metal objects and lay down on a padded bed. A trained technician will help you position yourself on the table and we will ask you 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 you prefer 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 you will seat in during the test. For this test, you will have to wear minimal, tight clothes like a bathing suit (for women) or a pair of compression shorts (for men). We will ask you to wear a swim cap and to remove all jewelry. We will ask 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 you stand 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 right arm and leg and a small cuff around your middle finger. We will press a small pen on the side of your neck. The blood pressure cuffs will inflate and deflate to measure blood pressure and the speed of your blood. You should not experience any physical discomfort during this test. This test will last 20 minutes.

6. *Resting metabolic rate:* You will lay quietly in a dimly lit room, while wearing a chest belt around your chest and a transparent hood. We will monitor your heart rate and breathing for 15 minutes while you relax in bed. This test will last 20 minutes.

7. *Aerobic fitness:* This test will measure your aerobic capacity during exercise. You will perform this test on a motor-driven treadmill or cycle ergometer. The test will last 8 to 15 minutes and be based on your fitness level. The exercise intensity will start at a low level and will increase in stages. You will either walk/run on a treadmill at different combinations of speed and elevation, or pedal on a cycle ergometer. Prior to the test and several times during the test, we will ask if you experience 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 you experience any of these conditions. If you are between 51 and 65 years of age, we will stop the test when your heart rate is equal to the 75% of your theoretical maximal heart rate. You may stop the test at any time if you feel fatigue or experience any type of discomfort. Before the test, you should be rested, well nourished, and hydrated; avoid alcohol, caffeine, and tobacco 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

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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 chest. We may have to shave small areas to ensure the electrodes stick properly to skin. During the resting ECG test, you will lay on a table and breathe normally. During the physical fitness test, we will record your 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 hydration level.

What are possible harms or discomforts that I 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 you have 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 you have history of difficulty with enclosed spaces)

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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 Lactate/analysis	Pain & bruising at site of finger prick
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 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 current health status and your level of risk for exercise, the Lab reserves the right to not conduct the exercise test at this time. Your prompt reporting of any unusual feelings during the test is of great importance.

What are possible benefits of this test session?

You will receive a report with the results of each one of your tests. You can see an example of the test report on the Exercise Physiology Laboratory website ([link](#)). You may benefit by gaining a better understanding of your 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 personal physician.**

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 if I get 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 you get hurt or sick when you 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 information confidential?

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

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Voluntary Consent

I hereby consent to engage in the health and fitness assessment to determine my exercise capacity. My permission to perform this assessment is given voluntarily. I understand that I may stop the assessment at any point if I so desire. I have read this form and I understand the assessment procedures that I will perform 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 participate in the assessment.

Waiver/Indemnification

I will 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 me, my property, and the property of others associated with my participation in the assessment, and I undertake those risks voluntarily in reliance upon my own judgment and ability. I assume all risk of personal injury, death, and property damage or loss from any cause whatsoever that is related to this assessment, including, but not limited to, my own conduct, the failure of anyone to enforce rules and regulations or inspect equipment or facilities, and the negligence of anyone else.

I release and shall indemnify, defend and save harmless Appalachian State University, the University of North Carolina System, the State of North Carolina and their respective trustees, officers, agents, students and employees (hereinafter the "indemnified persons and entities") from all liabilities, losses, costs, damages, claims or causes of action of any kind or nature whatsoever, and expenses, including attorneys' fees, arising or claimed to have arisen out of personal injuries or death, or property damage or loss, sustained by me as a result of any cause whatsoever, including but not limited to my own conduct, negligence or other misconduct on the part of indemnified persons and entities, or those injuries or property damage sustained by others as a result of my own negligence or intentional acts, during my participation in the test.

I certify that I am at least eighteen (18) years of age, medically and mentally sound, physically fit to engage in the event described above, and competent to enter into this agreement. Finally, I certify that no oral promise, agreement, warranty or representation concerning safety or liability has been made to me.

I HAVE READ AND UNDERSTAND THIS PARTICIPATION AGREEMENT AND AGREE THAT IT WILL LEGALLY BIND ME AND MY ESTATE, AND I SIGN IT VOLUNTARILY.

Participant's Name (PRINT)

Signature

Date

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Authorization to share test results with a third party:

With your permission, the results from your test session collected during the study will be deidentified (no name and date of birth) and shared with _____, contact information _____ in order to assist in further developing your health, fitness level or performance. Please indicate below whether or not you agree to share this information and sign and date the authorization.

_____ I consent to having my data shared with _____.

_____ I do not consent to have my data shared.

Participant's Name (PRINT)

Signature

Date