

**DEPARTMENT OF KINESIOLOGY**  
**ASSENT FOR ADOLESCENT MALES TO PARTICIPATE IN RESEARCH INVOLVING DXA TESTING**

**Purpose of the Test**

The purpose of this study is to measure the density of the bones, muscles and fat in your body.

**Background on DXA**

DXA (or DEXA) stands for dual energy X-ray absorptiometry. It is a method that uses X-rays to produce an image that helps us to measure your total body fat, muscle, and bone mass. The test takes about 5 to 10 minutes to complete. During that time, you will lie on your back while the scanning arm passes over your body.

**Benefits**

The advantages of DXA over other body composition assessments are that the results are more accurate and highly reproducible. This is not intended to provide a medical device but you may find it helpful to know how much muscle and fat you have on your body.

**Risks**

The DXA scanner emits a small amount of radiation. Using the standard way of describing radiation exposure, from one DXA scan you will receive an effective dose of **less than one thousandth of one rem (i.e. less than 1 mrem)**. By comparison, the average person in the United States receives this much radiation every day from natural background sources, such as the sun and from radioactive materials that are found naturally in the earth's air and soil. The Food and Drug Administration (Title 21 CFR Part 361) and the National Institutes of Health (NIH) Radiation Safety Committee guidelines for radiation exposure allow for research subjects to be subjected to 5000 mrem per year. If you had high dose X-ray testing or radiation treatment in the last year that may cause you to exceed this guideline, please inform the DXA operator. The table below can be used to calculate the annual radiation exposure from common medical procedures.

**Doses from Medical Procedures (x-ray, single exposure)**

Procedure	Dose (mrem)	Procedure	Dose (mrem)
Chest	10	Mammogram (2 views)	72
Dental	1.5	CT-Full Body	1000
Hand/Foot	0.5	CT-Chest	700
Abdomen	60	CT-Head	200
Pelvis	70	Nuclear Medicine (injected radionuclides)	400

Source: U.S. Nuclear Regulatory Commission: <https://www.nrc.gov/about-nrc/radiation/around-us/doses-daily-lives.html>

I certify that the combined radiation exposure from medical devices/treatments did not exceed 5000 mrem over the last year

\_\_\_\_\_ (please initial)

**Questions**

The Department of Kinesiology has a special committee set up to oversee the operations of the DXA protocol and facility. If you have any questions concerning your test or the DXA facility, you can contact the Kinesiology Department Chair at 410-704-2772.

**You should know that:**

You do not have to complete this test and will not be in trouble from your school or the DXA operator. Your parent/legal guardian has been asked if it is okay for you to be tested. Even if your parent/legal guardian said it is OK to be tested, it is still your choice whether to have the test. You can ask questions before or after the test. If you have questions when you leave the laboratory, you may contact the above number at any time.

**Signature**

By signing this form, you (1) understand what you will be doing during the test, (2) have had all your questions answered, (3) have talked to your parent/legal guardian about this test, and (4) agree to do this test.

**Printed name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Signature of Investigator:** \_\_\_\_\_

**Date:** \_\_\_\_\_