## ANTHROPOMETRY MEASUREMENT FOR DAISY SUBJECTS

## Hypotheses

Using height, weight and girth measurements help obtain an accurate body mass index. Body mass may have an impact on the development of Type 1 Diabetes.

## Definitions

An overall index of obesity will be estimated using the body mass index (BMI): weight $(\mathrm{kg}) /$ height $^{2}$ (meters).

## Methods

## Standardized training will occur with observation of the NHANES III method on the NIH website http://www.cdc.gov/nchs/products/elec prods/subject/video.htm , practice and observation by a previously trained staff member.

Clinic staff will obtain Subject's height and weight on clinical scales. Subjects should be clothed in loose fitting clothing. Other outerwear (sweaters, jackets, shoes, socks) should be removed before anthropometric measures are made. Waist circumference will be taken twice. If there is a difference greater than one centimeter between each reading, a third will be taken.

## Waist Circumference

Equipment: A figure finder tape measure is preferred, because they do not stretch. Each clinician should use the same type of tape measure for each visit.

Procedure:
Circumferences are taken with the subject standing and recorded to the nearest 0.1 centimeter. Waist circumferences will be measured using NHANES measurement.

1. Subject's shirt should be pulled up just to reveal their waist
2. Anthropometric tape applied horizontally above the iliac crest which is the natural identification of the waistline. If natural identification is not visible, have participant bend sideways to identify it and place finger on this spot before participant stands upright again. Waist (minimum) measured at the smallest point between the $10^{\text {th }}$ rib and the iliac crest over the bare skin. Check to see that tape is level front and back (see Figure 5).
3. Skin should not be indented by tape
4. Read measurement
5. Remove tape from skin
6. Repeat and record both measurements (to the nearest 0.1 cm )

Special Circumstances:

In the case of extreme obesity, a minimum waist is difficult to obtain, as there is no easy minimum point. In this circumstance, obtain the smallest measurement midway from the $10^{\text {th }}$ rib to the iliac crest.

## APPENDIX B

## Waist Circumference (minimum)

In Men, the minimum waist is measured with upper garments removed and without an examining gown. Be sure not to measure over a belt or waist of the trousers.

In Women, the minimum waist is measured with upper garment removed and replaced with an examining gown. Apply just enough pressure to the tape to compress the gown, but not the waist.

## Figure 5



3. Check to be sure that the tape measure in back and on the sides is level with the tape measure in front.

