

# Most Commonly Asked Questions About the FUTREX

Provided below are brief answers to the top questions asked about FUTREX body composition analyzers.

## **Why is only one body site used for testing?**

The FUTREX 5000 has been tested on multiple sites. The dominant bicep provided the best correlation as a single site test. When test data are used with the other variables provided (sex, age, height, weight, exercise level, body frame), the computer chip can estimate total body composition from the single site as accurately as a hydrostatic tank. While multiple site testing (in the lab) has been able to produce even better results, the ease of single site testing, combined with the accuracy of the generally accepted standard (hydrostatic testing) was the key to development of the FUTREX.

## **Why do we measure the wrist?**

The wrist measurement is a good estimation of frame size. Other methods may be substituted, i.e. the elbow breadth gauge used by Metropolitan Life.

## **What are the guidelines for water percentages?**

While we don't have guidelines on this, generally men run from 57-69% and women from 50-67% water. This comes from impedance machines which determine water density and then estimate fat percentage. Some insurance programs will not reimburse unless water percentage is listed on the printout. For this reason, the FUTREX provides the estimate.

## **Will the FUTREX work on tattoos?**

Not consistently. On tattoos, the ink absorbs light, causing problems. Different skin tones do not affect the readings however.

## **Will the body fat reading change if the wrong frame size is entered?**

Yes, because the computer calculates a bone weight dependent on frame size that is entered.

## **What do I need to do?**

My body fat has increased? The only known way to reduce body fat is to decrease caloric intake while increasing the basal metabolic rate to burn off calories. While some people generally burn off everything without working at it, others need to work extremely hard to change the balance.

## **Will results vary if I measure before or after a workout?**

While other measurement techniques (notably impedance) will produce widely varying results before/after strenuous exercise, the FUTREX will produce consistent results as it measures fat directly. Marathon runners may change only .5-1.0 percentage point during an entire race.

## **Are special preparations needed before testing?**

As above, our machine measures fat directly, not water. There is no need to fast or reach a stabilized hydration state to obtain accuracy.

## **What key points do you recommend for accurate, repeatable results?**

For good repeatability, you need to make sure the wand is 'zero adjusted' and protruding 1/16" from the light shield. Hold the wand perpendicular to the bicep. Make sure you have found the 'belly' of the midpoint. Make sure the patient is relaxed and the wrist is not twisted (as this twists the muscles in the bicep). If you follow these steps and use the same point on the arm, you will obtain extremely repeatable results.

## **Why is the 'exercise level' used.**

Through statistical testing, it was determined that measurement at the dominant bicep accounted for 89% of variation in Total Body Fat. The final 11% was found to be predictable from the other questions asked (Sex, weight, height, body frame, exercise level). Some people prefer to use the F.I.T. program which provides a similar input to the computer.