

TANITA®

Monitoring Your Health

Live a Healthy

LIFE



Body Fat/Body Water Analysis
Full Body Composition Analysis
Segmental Body Composition Analysis

Technologically advanced instruments from Tanita can help you feel better and live a healthier life.

This booklet includes information to help you understand body composition monitoring and its importance to a healthy lifestyle.





Innovative

Products for Your Health

Tanita is a world leader in weight measurement. Since 1944, scales have been Tanita's core business. Tanita's dedication to helping people enjoy healthier lives has led to the development of products that take innovative design one step further by providing added value and precision.

Ordinary bathroom scales measure only one thing—weight. They can't distinguish between pounds that come from fat and pounds that come from muscle. Tanita's body Composition analysis lets you monitor weight, body fat, body water, muscle and so much more in the comfort of your home.

Tanita was the first company to design and manufacture body fat monitoring scales for in-home use. The technology in our consumer models is based on the same advanced technology found in our professional body composition analyzers used by doctors, medical centers, professional athletic teams, fitness clubs and personal trainers. Tanita's Medical Advisory Board continues to research body composition and its effects on health and disease. This research drives ongoing technological innovation and product enhancements, ensuring Tanita's continued position as a category leader.

Innovative

Products for Your Health



Using the same technology as in our professional analyzers, Tanita developed the first body fat monitors and advanced body composition monitors to help you stay healthy and feel your best. Tanita offers the widest range of products for monitoring your body composition.

Tanita Products for Home Use

- Analog/Dial Scales
- Solar Scales
- Digital Scales
- Radio Wireless Scales and Accessories
- Body Fat/Body Water Monitors
- InnerScan™ Body Composition Monitors
- Ironman™ Body Composition Monitors
IRONMAN® and the "M-DOT" logo are registered trademarks of World Triathlon Corporation. Official Product of the IRONMAN TRIATHLON. Used here by permission.
- Segmental Body Composition Monitors
- Full Body Composition Monitors
- Handheld Monitoring Products
- Single and Dual Frequency BIA Monitors

Tanita invented the world's first stand-on Body Fat Monitor in 1992 and is now a global brand leader manufacturing the world's best-selling Body Fat Monitor range with international sales of over 20 million units.

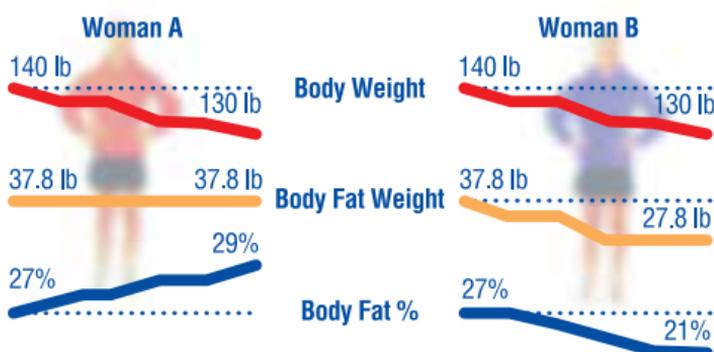


Know Your Weight

and Body Fat %

Losing Weight Can Make You Fatter

“A” and “B” were the same height and weight, and had the same percentage of body fat. Each lost 10 lb. over the same period of time. Although their weights are identical, “A” is now fatter. She simply cut calories, resulting in loss of muscle tissue, meaning her percentage of body fat increased. By exercising and eating right, “B” lost 10 lb., and her body fat dropped to 21%.



It's Important to Know Your Body Fat

It's not the amount of weight you have but the amount of body fat that's potentially dangerous to your health.

Carrying too much body fat can increase your risk of developing serious health problems such as high blood pressure, high cholesterol, heart disease, diabetes and cancer. Maintaining a healthy body fat percentage can reduce your risk and help prevent the onset of these conditions.

Until now, getting a body fat reading has been expensive and time-consuming, usually conducted only through medical and athletic facilities—or simply left to guesswork.

Products

*Let You
Take Control*



Tanita products give you a more complete picture of the shape you're in because they tell if you're losing pounds from fat or from muscle. They're essential tools for monitoring the progress of any exercise and diet program. They provide the facts you need to make the right decisions, and used over time, they can help you take the right steps toward a healthier life.

How BIA Works

Tanita uses a state-of-the-art method of body composition assessment called Bioelectrical Impedance Analysis (BIA). Body impedance is measured when a safe, low electrical signal (100-500 Micro Amp) is passed through the body, carried by water and fluids. Fat tissue does not contain much water and creates resistance or impedance to the signal. (Fat is approximately 10-15% hydrated, whereas muscle is normally between 50-70%.) This impedance information is then used to estimate the amount of lean and fat tissue within the body.

Through a process called multiple regression analysis, Tanita has developed highly researched proprietary formulas that are based on impedance, height, weight, gender, body type (normal adult or athletic build), and in some cases, age. Tanita's reference is Dual X-ray Absorptiometry (DXA), which many experts now believe is better than Hydrostatic Weighing because of its accuracy and reliability. All analytical methods use equations derived from large, multi-ethnic population studies to predict body composition.

All Tanita BIA monitors are **cleared by the FDA**. They are easy to use, provide clinically accurate results, and make body composition assessment accessible in professional environments as well as the home. Tanita's patented foot pad pressure-contact electrodes have revolutionized weight management.



Tanita

Compared to other Methods

Method Comparisons

DXA (Dual Energy X-ray Absorptiometry). This method allows fat distribution throughout the entire body to be read in a single scan. It is extremely reliable and provides a high degree of precision requiring only one measurement. However, the equipment is very expensive, a person must lie perfectly still for 10-20 minutes while the scan is taken, exposing them to low level radiation. DXA is used mainly in research studies.

Hydrostatic Weighing. Done correctly, this method is also quite accurate, and the results are often repeatable. However, the test is somewhat subjective because it relies upon the subject's ability to expel all oxygen from their lungs while submerged in a tank of water. Oxygen remaining in the lungs will skew the results. In clinical settings, this procedure is repeated a number of times, and an average is taken. The "tank" is expensive and the inconvenience to the user is considerable. Because of the cost, lengthy testing process, and physical burden to the subject, this method is more suitable for research studies.

Conventional BIA. Conventional Bioelectrical Impedance Analysis methods are accurate, but the process is not as convenient as the Tanita BIA method and may be somewhat subjective based on the placement of electrodes. The user must be in a horizontal position while electrodes and conductive jelly are placed on a wrist and ankle. This procedure is usually performed in a physician's office or clinic. Most conventional BIA manufacturers use Hydrostatic Weighing as the reference method.

Tanita BIA. Tanita's version of BIA produces very accurate results that are highly correlated with both DXA (Tanita's reference method) and Hydrostatic Weighing. Measurements are very repeatable when tests are performed under consistent conditions. The equipment is not expensive, making Tanita the only

Tanita

Compared to other Methods

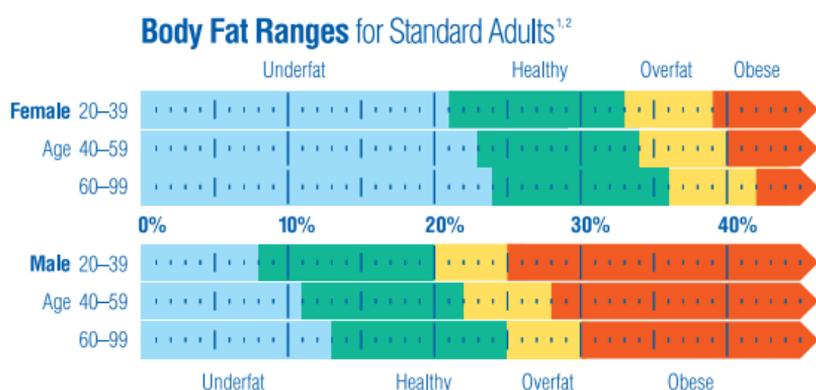


professionally-accepted method that can be adapted easily for home use. There is no physical imposition to the user; no need for a trained technician to operate the equipment; and the entire procedure takes less than one minute.

Calipers. Skinfolds measurements taken by calipers are easy to do, inexpensive, and the method is portable. However, results can be very subjective depending on the skill of the technician and the site(s) measured. The quality of the calipers is also a factor. Inexpensive models sold for home use are usually less accurate than those used by an accredited technician. Additionally, the more obese the subject, the more difficult to “pinch” the skin correctly. Many people find calipers to be uncomfortable and invasive.

NIR (Near Infra-Red). This method has become popular because it is simple, fast, non-invasive, and the equipment is relatively inexpensive. However, studies have produced mixed results, and a high degree of error has occurred with very lean and very obese people. Numerous sources report that more research is needed to substantiate this method.

Healthy Body Fat Ranges for Standard Adults^{1,2}



¹ Based on NIH/WHO BMI Guidelines.

² As reported by Gallagher, et al, at NY Obesity Research Center.

To determine the percentage of body fat that is appropriate for your body, consult your physician.



Body

Water %

Water—The Vital Fluid

Water is found in every cell of your body and plays an important role in all its vital processes. Being properly hydrated helps to:

- Enhance digestion and metabolism
- Boost brain function
- Regulate body temperature
- Carry nutrients, oxygen, enzymes and glucose to the cells
- Remove toxins and other metabolic waste from the body
- Cushion joints and strengthen muscles
- Provide natural moisture to skin and other tissues

Feel Your Best

Staying properly hydrated will help keep your body feeling great and performing at its best. Proper hydration increases energy levels, makes you more alert and can even help reduce stress. Common signs of dehydration include achy joints and muscles, fatigue, headaches and dry skin. More serious dehydration can lead to dizziness and nausea, and in more extreme cases, death.

Why You Should Monitor Body Water %

If you're like most people, you're not drinking enough water. If you wait until you feel thirsty, your body is already suffering from the effects of mild dehydration. You continually lose water during the day through sweat, urine and breathing. The amount varies due to physical activity level, climactic conditions, illness, medications, hormone changes and poor nutrition.

Body

Water %



Monitoring your body water % allows you to quickly compensate if your levels are low. Your body will function more efficiently, you'll feel healthier and you'll reduce your risk of developing serious health problems.

Normal Total Body Water Percentage (TBW%) Ranges*

- Female: 45–60%
- Male: 50–65%

* Based on Tanita Internal Research

For athletes, the figure is approximately 5% above these ranges, as they have greater muscle mass, and skeletal muscle contains more water than fat (adipose) tissue.

Tips for Staying Properly Hydrated

- Drink at least 6–8 glasses of fluid every day—more if you are very active. Drink a variety of fluids, but watch out for beverages that contain caffeine or alcohol, as these substances act as diuretics, causing the body to lose fluids.
- Don't wait until you feel thirsty before drinking, as you will already be mildly dehydrated.
- Carry a bottle of water around with you, keep a bottle in the car and one at your desk.
- Drink plenty of fluids before, during and after physical activity.
- Increase your fluid intake during warmer weather and at higher altitudes.
- Check your urine. It should be clear to pale yellow in color. If your urine is dark yellow, you probably need to increase your water intake. You should be urinating every 2 to 3 hours during the day.

A Revolution in Scales

InnerScan™ Body Composition Monitors provide information never before available from a consumer scale—essential information for staying healthy and living a more active, vital life.

InnerScan gives you greater control over monitoring and improving your health and fitness. It's exciting technology from Tanita, the company that brought you the first body fat scales for in-home use. These products are also available in a co-branded **IRONMAN®** series.

InnerScan Monitors:

- Weight
- Body Fat %
- Muscle Mass
- Daily Caloric Intake
- Metabolic Age
- Muscle Quality
- Visceral Fat Rating
- Body Water %
- Physique Rating
- Basal Metabolic Rate
- Bone Mass
- Body Mass Index

* *Varies based on model*

Technology Used by Doctors

InnerScan uses BIA, the same advanced technology found in our professional body composition analyzers, and that is used by doctors, hospitals and professional athletic trainers.

Who Should Use InnerScan?

InnerScan is for anyone who is serious about monitoring their health and fitness. It provides professional-quality body composition analysis in the comfort and privacy of your home.



Warning: Do not use the body fat reading feature of these products if you are pregnant or have a pacemaker or other internal electronic medical device.



Segmental

Body Composition Monitors



What Is Segmental?

This innovative way of measuring body composition adds another dimension to health monitoring. Segmental gives you more information than standard body composition monitors. This totally unique method gives individual body composition readings for each body segment- trunk, right arm, left arm, right leg and left leg in addition to full body composition readings.

How Does it Work?

Segmental InnerScan uses innovative retractable handgrip electrodes, along with standard feet electrodes. These four point bioelectrical impedance analysis (BIA) electrodes allow the body composition monitor to go well beyond standard body composition; giving you a segmental review of what you are made of. In seconds, these products can display a complete body composition profile.

Who Should Use Segmental Body Composition?

Segmental InnerScan is especially useful for anyone who is monitoring the balance of left and right side of body or trying to build or rehabilitate a particular part of one's body. They are also useful for the dedicated sports and fitness person to assess the impact of any training routine on their full and segmental body composition. Our professional segmental analyzers provide invaluable information to researchers, medical experts and sports scientists working in the fields of obesity, cardiology, physiology, diabetes and rehabilitation therapies.



Segmental

Features

Segmental and Full Body Composition Monitors:

- Weight
- Full Body Fat %
- Total Body Water %
- Full Muscle Mass
- Muscle Quality
- Body Mass Index
- Full Bone Mass
- Basal Metabolic Rate
- Metabolic Age
- Physique Rating
- Visceral Fat Rating
- Daily Caloric Intake

Segmental Readings of:

- Left Arm Fat %
- Right Arm Fat %
- Right Leg Fat %
- Left Leg Fat %
- Trunk Fat %
- Left Arm Muscle Mass
- Right Arm Muscle Mass
- Right Leg Muscle Mass
- Left Leg Muscle Mass
- Trunk Muscle Mass

** Varies based on model*

Based on the very latest technology and research in body composition monitoring, Tanita has created a new generation of products that allow personalized in-depth and accurate readings to be taken.

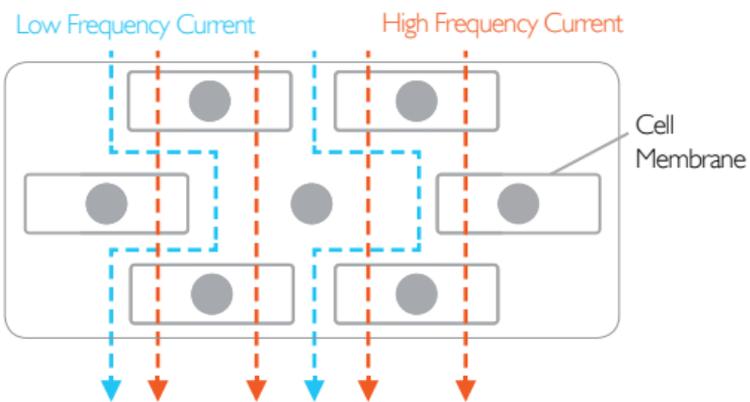
DUAL -Frequency

Technology



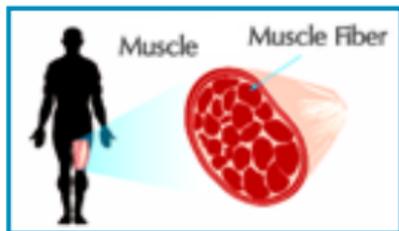
What is "Dual Frequency"?

Research has shown that using two different bio-electrical impedance frequencies provides essential data of a person's intracellular and extracellular status. This advanced technology allows greater accuracy when calculating body composition measurements.



What is Muscle Quality Score?

Dual-Frequency also gives us the ability to analyze the quality of the muscle tissue.



HIGH

Higher density of muscle fiber with little fat, water and connective tissue, etc.

⇒ **Maintain regular exercise to ensure your Muscle Quality stays within the healthy range.**



LOW

Muscle fiber is thinner and fewer as compared with other substances

⇒ **Increase exercise on a regular basis to improve your Muscle Quality Score**



Comparing *Models*

If you would like to include body composition readings in your health monitoring program, Tanita offers a range of Body Fat Monitors and Body Composition monitors for every lifestyle and budget—from two-person monitors to full-featured radio wireless models.

To improve the results of the body fat and body composition reading and increase ease of use, Tanita products have been designed with various features to fit the user's individual needs. Please make sure to choose the model with the appropriate features for each potential use. (See *Available Features* on pages 13-15).

All models have at least a 300-lb. weight capacity and can measure in pounds, kilograms or British stone pounds. Batteries are always included.

For questions or additional information, visit www.tanita.com or call Tanita at 847-640-9241.

Consider the Following When Comparing Models

We recommend models with a programmable memory button for each potential user.

If any of the potential users are very fit, they may require a model with Athlete Mode (see *next page for definition*).

In addition, many models incorporate exclusive features into their result displays. Look for features such as Weight Recall, Daily Caloric Intake, Weight-Only button, Healthy Range[†] Indicator, basal metabolic rate, muscle mass, bone mass and visceral fat ratings.

[†] Adapted from Gallagher, et. al. *AJCN* vol. 72, September 2000.

Available

Features



Guide to Tanita Features & Icons

Adult Standard Mode:

Adults age eighteen and older who have inactive or moderately active lifestyles.

Child Mode:

Children (5–17) with inactive to moderately active lifestyles.

Adult Athlete Mode:

Recommended for those who are 18 years or older and meet the following conditions.

- People who carry out 12 hours or more of cardiovascular exercise a week.
- People who belong to a sport team or a sport organization with the aim of participation in competition, etc.
- People who are professional athletes.

Multiple Program Memory:

Many units are designed for use by more than one person and can store data (user mode, gender, height) for multiple individuals.

Weight-Only Button:

Allows users to monitor weight independently from body fat.

Radio Wireless:

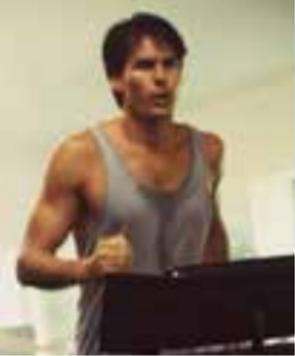
Using ANT+, Bluetooth and Wi-Fi your data can be transmitted and reviewed on smartphones, computers and other remote devices

Recall Feature:

Makes a comparison between current and previous readings.

Guest Mode:

Allows a guest to check body fat or body composition without storing personal data in memory.



Available

Features



Body Fat %

WHAT IS BODY FAT PERCENTAGE?

Body fat percentage is the amount of body fat as a proportion of your body weight.

Everybody needs body fat to be healthy. Body fat is vital to basic bodily functions such as regulating body temperature, storing vitamins and cushioning joints. Yet, too much fat can damage your health. Reducing excess levels of body fat has shown to reduce the risk of certain conditions such as high blood pressure, heart disease, diabetes and cancer.

Tanita's Body Composition Monitor automatically compares your body fat percentage reading to the Healthy Body Fat Range chart displayed on page 6.



Weight:

Allows users to monitor weight alone, without receiving a body fat or body composition readings.



BMI:

A standardised ratio of weight to height, used as a general indicator of health.

Your BMI can be calculated by dividing your weight (in kilograms) by the square of your height (in meters).

BMI is a good general indicator for population studies but has serious limitation when assessing on an individual level.

** Tanita's Monitors do not directly measure bone density. Please consult a physician if you are concerned about osteoporosis*

Available

Features



Body Water %

WHAT IS TOTAL BODY WATER PERCENTAGE?

Total Body Water Percentage (TBW%) is the total amount of fluid in the body expressed as a percentage of total weight.

Water plays a vital role in many of the body's processes and is found in every cell, tissue and organ. Maintaining a healthy TBW% ensures the body functions efficiently and reduces the risk of developing associated health problems. Being well hydrated will also help concentration levels, sports performance and general well-being.

As a general guideline, the average TBW% ranges for a healthy adult are:

Female 45 to 60% Male 50 to 65%.

Patented Technology

High investment into Research and Development ensures Tanita is at the forefront of innovation, presenting products with exclusive features - bringing you tomorrow's technology today.



Muscle Mass

WHAT IS MUSCLE MASS?

The weight of muscle in your body.

Muscles play an important role because they act as the body's engine in consuming energy (calories). As you exercise more, your muscle mass increases, which in turn accelerates the rate of energy or calories consumed. Increasing your muscle mass will raise your metabolic rate, helping you reduce excess body fat and lose weight the healthy way. Track your progress with Tanita's Body Composition Monitor as you increase your activity levels.



Muscle Quality Score

WHAT IS MUSCLE Quality Score?

Indicates the condition (quality) of muscle, which changes according to factors like age and exercise level. The muscle of young people or those who exercise regularly is normally in a good state, but the state of muscle deteriorates in elderly people or those who not have enough exercise. Both Quantity and Quality are important for a healthy muscle! Please make sure you maintain a good balance between muscle mass and quality.

Muscle Quality Judgement Chart

Male	18 - 29	30s
High	74 and higher	73 and higher
Average	49-73	47-72
Low	48 or less	46 or less
Male	40s	50s
High	70 and higher	64 and higher
Average	44-69	39-63
Low	43 or less	38 or less
Male	60s	70s
High	56 and higher	46 and higher
Average	33-55	25-45
Low	32 or less	24 or less
Male	80 and Over	
High	39 and higher	
Average	21-38	
Low	20 or less	

Female	18 - 29	30s
High	68 and higher	70 and higher
Average	48-67	48-69
Low	47 or less	47 or less
Female	40s	50s
High	69 and higher	67 and higher
Average	45-68	41-66
Low	44 or less	40 or less
Female	60s	70s
High	61 and higher	54 and higher
Average	34-60	26-53
Low	33 or less	25 or less
Female	80 and Over	
High	50 and higher	
Average	22-49	
Low	21 or less	



Physique Rating

WHAT IS PHYSIQUE RATING?

The Physique Rating on Tanita Body Composition Monitors offers the user the opportunity to track their Physique as they follow their health/fitness program.

As a person increases their activity levels, their weight may not change but their balance of body fat and muscle may alter which will change the user's overall physique

According to body fat and muscle mass levels the Monitor will assess your physique into the following categories (the ratings will range from 1-9).

Physique Rating Explanation

1. SMALL FRAME OVERFAT

This person seems to have a healthy body type based on physical appearance; however, they have a high body fat % with low muscle mass level.

2. MEDIUM FRAME OVERFAT

This person has a high body fat percentage, with a moderate muscle mass level.

3. LARGE FRAME OVERFAT

This person has both a high body fat % and a high muscle mass.

4. LOW MUSCLE & AVERAGE BODY FAT %

This person has an average body fat % and a less than average muscle mass level.

5. AVERAGE MUSCLE & AVERAGE BODY FAT %

This person have average levels of both body fat and muscle mass.

6. HIGH MUSCLE & AVERAGE BODY FAT %

This person has an average body fat % and higher than normal muscle mass level.

7. LOW MUSCLE & LOW FAT

This person has both a lower than normal body fat % and muscle mass level.

8. THIN & MUSCULAR (ATHLETE)

This person has lower than normal body fat % while having adequate muscle mass.

9. VERY MUSCULAR (ATHLETE)

This person has lower than normal body fat % while having above average muscle mass.



Daily Caloric Intake

WHAT IS DAILY CALORIC INTAKE?

Daily caloric intake is the estimated number of calories that can be consumed within the next 24 hours to maintain current weight based on your Basal Metabolic Rate (BMR)



Basal Metabolic Rate

WHAT IS BASAL METABOLIC RATE?

Basal Metabolic Rate (BMR) is the daily minimum level of energy or calories needed at rest to function effectively. A person with a high BMR can burn more calories at rest than a person with a low BMR. BMR is based on the level of muscle mass.

Understanding the Basal Metabolic Rate will allow a user to monitor the number of calories their body requires according to their physique and lifestyle. The more muscle or general activity a person takes the more calories required — a diet and fitness program can be based on this information.

The Basal Metabolic Rate level also decreases as the body ages. However the Basal Metabolic Rate will increase through a regular routine of cardiovascular exercise and increased activity.



Metabolic Age Rating

WHAT IS METABOLIC AGE?

Metabolic Age Rating indicates what age level the user's BMR is currently rated at.

WHY IS THE METABOLIC AGE RATING IMPORTANT?

The monitor will calculate your BMR and an age will be given relating to statistical information collated during our extensive research.

If the age indicated is higher than the user's actual age then the user needs to improve their Basal Metabolic Rate. Increasing exercise levels will build healthier muscle tissue which will burn more calories consequently improving the user's metabolic age rating.

You will obtain a reading between 12 and 50 on some models, and between 12 and 90 on others.

Example

A 30 year old woman with a 35 year old Basal Metabolic Age rating would need to address her fitness and health program in order to lower her Metabolic Age Rating.



Bone Mass

WHAT IS BONE MASS?

This feature indicates the weight of dry bone (bone mineral level, including calcium or other minerals) in the body.*

Research has demonstrated that exercise and the development of muscle tissue are related to stronger, healthier bones. While bone structure is unlikely to undergo noticeable changes in a short period, it is important that you develop and maintain healthy bones by having a balanced diet and plenty of exercise.

Following is the result of estimated bone masses of people aged 20 to 40 that can be used as a guide

Features continued

Bone Mass

Average of estimated bone mass (lb) Women

Less Than 110 lb 4.3 lb	110 lb - 165 lb 5.3 lb	165 lb and up 6.5 lb
----------------------------	---------------------------	-------------------------

Average of estimated bone mass (lb) Men

Less Than 143 lb 5.9 lb	143 lb - 209 lb 7.3 lb	209 lb and up 8.1 lb
----------------------------	---------------------------	-------------------------

* Tanita's Monitors do not directly measure bone density. Please consult a physician if you are concerned about osteoporosis.



Visceral Fat

WHAT IS VISCERAL FAT?

Visceral fat is the fat in the abdominal cavity (stomach), surrounding the vital organs.

Research has shown that even if your weight and body fat remain constant, as you get older the distribution of fat changes and is more likely to increase in the trunk area.

Ensuring you have the right healthy level of visceral fat reduces the risk of certain conditions such as heart disease and high blood pressure, and may delay the onset of type 2 diabetes.

The Tanita Body Composition Monitor will provide you with a visceral fat rating from 1 to 59.

Rating from 1 to 12: Indicates you have a healthy level of visceral fat. Continue monitoring your rating to ensure that it stays within the healthy range.

Rating from 13 to 59: Indicates you have an excess level of visceral fat. Consider making changes in your lifestyle possibly through diet changes and/or increasing exercise.

Tanita

Full Range of Products



Recommended by doctors

Tanita's heritage in professional medical technology is used and endorsed by medical professionals around the world. Tanita is the only company to offer home use products that incorporate sound independent medical research spanning 20 years and incorporating over 100,000 people in its studies, ensuring Tanita's readings are the most accurate on the market.

Consumer Products

- Segmental and Full Body Composition Monitors
- Body Composition Monitors
 - InnerScan Monitors
 - Ironman Monitors
- Body Fat Monitors
- Digital Scales
- Digital Lithium Scales
- Solar Scales
- Analog/Dial Scales
- Kitchen Scales
- Handheld Monitoring Products

Professional Products

- Pediatric Scales
- Professional Body Composition Analyzers
- Digital Healthcare Scales
- Acute and Long-term Care Scales
- Veterinary Scales
- Food Service/General Purpose Scales
- Mini Scales

**For more information on our
complete line of products please
visit www.tanita.com.**



*The best in accuracy,
reliability and value.*

*Trust Tanita, the world leader
in precision weighing and
health monitoring*



WARNING

Do not use the body fat reading feature of these products if you are pregnant or have a pacemaker or other internal electronic medical device.

Tanita Corporation of America Inc.

2625 South Clearbrook Drive
Arlington Heights, Illinois 60005 USA

Phone: 847-640-9241

Fax: 847-640-9261

www.tanita.com

4health@tanita.com

© 2017 Tanita Corporation. All rights reserved. 01-17/LT.
Tanita reserves the right to change specifications and make substitutions without prior notice.
All products subject to availability.

BC5487891(3/TUSA)