



## Tanita BC-601CG Inner Scan Body Composition Monitor



Segment body analysis scale with 3-year history display and segment measurements for fat and muscle mass for each arm, leg and torso area separately. The values are stored on SD card and can be transferred to the PC.

**CHF 309.00**

With the BC-601 the following values are displayed, stored on **SD card** and can be transferred to PC:

1. weight 100 gram division, 150 kg capacity
2. body fat percentage with assessment 0.1% steps
  - Whole body
  - Right arm
  - Left arm
  - Right leg
  - Left leg
  - Torso
3. muscle mass with assessment 100 gram steps
  - Whole body
  - Right arm
  - Left arm
  - Right leg
  - Left leg
  - Torso
4. bone mass 100 gram steps
5. body mass index
6. daily calorie requirement kcal and kjoule
7. metabolic age
8. body water percentage 0.1% steps
9. visceral fat level with assessment and trend display

**Dual frequency measurement:**

Guarantees even greater accuracy and reproducibility compared to the previous single frequency measurement. Fluctuations are thus specifically minimized. A weak current is passed through the body twice in succession and the resistance is determined. At the first frequency, the current flow seeks its way around the cells; at the second, the current flow passes through the cells.

**SEGMENTAL****Segmental measurement:**

An additional 4 electrodes, 2 for each hand are located on the extendable handle. The electrical resistance is measured a total of five times at different distances (foot to foot, hand to hand, left hand to right foot, right hand to left foot and left hand to left foot). This gives us 100 percent body coverage as opposed to about 75% of the other models. This means higher accuracy especially for athletes and people whose physique differs from the standard. With the measured resistances, the scale can then break down the segments. So you can see the fat percentage in % and the muscle mass in kg individually for the right and left arm, the right and left leg and the torso. Dysbalances between right and left or arm to leg can thus be detected and tracked

**Display and assessment of body fat**

Body fat is vital for daily bodily functions. It protects organs, cushions joints, regulates body temperature, stores vitamins and serves as the body's energy store. Even our appearance depends on it. Skin, hair and nails would be dull, brittle or non-existent without body fat.

But again, too much body fat can lead to adverse health effects such as cardiovascular disease or diabetes. Most people believe that weight, not body fat percentage, is evidence of health and physical fitness. A fallacy! During a diet or exercise program, for example, weight may increase but body fat percentage may slowly decrease. Which, when measured against the success of the program, means weight down, but body fat percentage still clearly too high. In this case, conclusions must be drawn about dietary and exercise habits. With the TANITA body fat analysis scales you can monitor your body fat percentage regularly at home. The Fit/Fat Body Index compares the measured values with the recommended values for your gender and age group and provides an assessment.

**Fit/Fat Bodyindex also available for children 7 years and older.** As part of a two-year research project, the body fat of 2000 children was examined with the aid of TANITA body analysis scales (NAASO 2004, [www.mrc-hnr.com.ac.uk](http://www.mrc-hnr.com.ac.uk)) The results obtained in the process now serve, exclusively for Tanita, as reference values for the special requirements in the growth phase for children aged 7 - 17 years.

**Display and assessment of total muscle mass**

The size of the total muscle mass is displayed in absolute terms in kg. The size of the total muscle mass measured at

is the decisive health indicator for

current metabolic activity, cardiovascular capacity, immune activity and

joint protection. Through the display in KG, you can easily monitor a change in muscle mass

. The muscle and bone mass is an indirectly determined value with high information quality. A certain



percentage of the lean mass is assumed to be bone mass, the rest is muscle mass. Here the skeletal muscles (in men on average 40% and the woman 30% of the total weight) and the visceral muscles (all organs) are combined.

### **Indication of the daily calorie requirement**

Calculated value from the lean body mass (weight minus fat mass)

and the input of the activity level in 3 steps. Shows you how many calories you consume in a day. Our muscles are our most metabolically active organ, accordingly you can increase the calorie basal metabolic rate by building muscle, which is desirable from a health point of view.

The GU covers the energy needs of all internal organs, such as the metabolically active liver, kidneys, brain and nervous system, heart muscle, etc. Even

adipose tissue uses some energy and especially skeletal muscle, even when it is not working (burning fat). Muscle mass essentially determines the amount of basal metabolic rate and thus daily caloric needs, which thus also depends on gender and age.

This method of calculating the basal metabolic rate is much more accurate than the previously known method of calculating the basal metabolic rate from the total body weight. The corresponding formulas were developed using the results of indirect calorimetry (measurement of nutrient turnover via respiratory gas analysis - O<sub>2</sub> uptake and CO<sub>2</sub> release measurement of nitrogen excretion in urine).

For weight reduction in the sense of fat loss, only a higher

calorie consumption with negative energy balance per day (or week) is decisive. With

negative energy balance the organism gets the still needed but missing

energy from the fat tissue. At rest, the body (especially our muscles) primarily burns fat. The higher the so-called basal metabolic rate, the more fat is burned.

To reduce one kilogram of fatty tissue, you have to save about 7000 kcal (not

9000 kcal, because fatty tissue does not consist of 100% fat). With a daily energy-

minus of not even 250 kcal, this means about 1 kilo of fat loss per month.

### **Assessment of body composition( body composition value)**

Assesses your weight and fat percentage in relation to height, gender, age and weight relative to average values. The value is displayed as a dimensionless number (from 1 to 9, see appendix). The optimum is as much muscle as possible and as little body fat as possible.

### **Calorie basal metabolic rate with reference to age**

Comparative value based on age, height, sex and the current calorie basal metabolic rate, in relation to average persons.

From the age of approx. 16/17 years, the body slowly loses muscle and gains fat mass. Accordingly, the caloric basal metabolic rate decreases. This can be counteracted by sporting activity, i.e. by building up muscles.

This shows the statistical age to which your basal metabolic rate can be assigned

. If your basal metabolic rate is higher than your actual age, this is an indication of excessive muscle loss. Building muscle will improve your basal metabolic rate

again. If your basal metabolic age is lower or much lower than your

actual age, this is an indication of good physical condition - you will usually have little or no problem maintaining your weight even if you eat a lot of calories.

### **Determination of visceral fat ( fat depot in the free abdominal cavity)**

Our body generally deposits fat depots under the skin (subcutaneous fat) and especially in the free abdominal cavity (visceral fat). Pathologically increased visceral fat (mainly due to lack of exercise and malnutrition) is considered a serious health risk, especially with regard to



cardiovascular diseases (such as heart attacks and strokes) and type II diabetes, and should therefore be avoided as far as possible. Increased subcutaneous fat is more of an aesthetic problem. Visceral fat is reported as a dimensionless number in two gradations with subscaling.  
( up to number 12 good = display : " O " / greater than 12 display " " )

### **Determination of the total bone mass**

For this purpose, the bone weight is given in kg. The medical evaluation can be taken from the operating instructions. From a health point of view, the aim is to achieve a large bone mass through regular muscle-building training (sport), preferably outdoors (UV light) and calcium-rich food.

**Physical activity strengthens muscle and bone health.** Regular exercise leads to stronger muscles, tendons and ligaments and denser bones. Weight-bearing exercises such as jogging, in-line skating and dancing have been shown in studies to make bones denser in young people. In adults, they maintain bone density and slow the loss of bone mass (osteoporosis) that begins with age.

40 ller women over the age of 50 have an increased susceptibility to bone fracture due to osteoporosis. In women, the risk of developing osteoporosis 5x higher than breast cancer.

Muscle and bone mass is an estimated value with high informative quality. A certain percentage of the lean mass is assumed to be bone mass , the rest is muscle mass. Bone weight is only 1 to 2% of our body weight.

The Tanita measurement available in individual cases, which is an indirect estimate , cannot be used for diagnostic purposes, e.g. in the case of suspected osteoporosis or bone fracture. This always requires medical expertise with high-resolution special medical equipment.

### **Display of body water**

Every person should drink 2-3 l of water daily. Less affects the vital value for health and anti-aging.

That generally by all ages too little is drunk, is known for a long time. Especially older people often suffer from dehydration with massive consequences: Decreasing memory performance, thickening of the blood with increased risk to infarcts or strokes and headaches.

The cells can regenerate better and "age" more slowly. The blood remains more fluid, which relieves blood vessels and the heart and thus also reduces the risk of infarctions. All organs, even the intervertebral discs, benefit from optimal hydration. Even visually, good hydration is noticeable: The skin is plumper and remains smooth and young.