

Mother Nature equipped women with approximately 5-10% more body fat than men. The reason for this is based on pregnancy and lactation reserves. The body fat portion, the relation of the passive fat to active muscles and organ tissues, is not incorporated for the Broca formula (Broca Index) or the [Body-Mass-Index](#). The body fat portion influences significantly the basic metabolism and therefore, the calorie consumption. The meaning is illustrated in the following example:

*„Harry“ und „Bob“ both weigh 72kg, are 180 cm tall and have a BMI of 22,2. Basically ideal weight but Harry has a body fat portion of 15%, Bob of 19%. Both fat portions are in the healthy range but due to the slightly higher fat portion, the basic metabolism of Bob is about 63 kcal lower a day. Both eating the same food, Bob would weigh 3 kg more than Harry after one year! The reason: while muscle cells also burn calories at night in bed (they are repaired and cared for), fat cells only sleep.*

A body fat measurement shows the real fitness status since being slim does not mean being fit! Slim but unathletic women for example do not give the impression of having a relatively high fat portion. Women have a high portion of fat hidden inside the body, men wear it often quiet visible around the belly! One can stay slim by smoking or holding diet but has no muscles and is therefore, not fit! Diets (if working at all) can reduce the weight but cannot increase muscles and the cardiac circulation system such as doing while running. The only reasonable way of losing weight and simultaneously become fit is to adapt the nutrition and exercise with endurance sports, which should be accomplished by [weight training](#). If you loose your muscles via passivity, the basic metabolism is also lowered. Furthermore, your backbone becomes instable and you can get back problems.

Body fat over 25% for men and 35% for women is health alarming whereas the mortality for slightly overweight but endurance trained persons is hardly increased. A measurement with modern **"Fat scales"** (bio impedance procedure) or with fat forceps (calip method) can be done. For modern fat scales most users are desperate. In the morning, being lighter, the fat value is higher. In the afternoon, the fat value is lower but the weight higher. How does this work? Is it a paradox? Only at first sight. Do not throw away the scale because: in the morning, the body is missing water. We register happily our weight. The fat content stayed the same over night but is percentaged higher. It is backwards in the afternoon. Assuming that you have not drunk a liter oil, your weight increased due to eating and drinking but the fat portion has been diluted and is now percentaged lower. The scale is not inexact: it even registers the daily deviations. Women show higher deviations than men due to the menstrual cycle.

<b>Comparison values:</b>	<b>Body fat portion (Bio impedance method):</b>
<b>Target value for fit, healthy women</b>	18 - 27 %
<b>Target value for fit, healthy men</b>	13 - 22 %
<b>Normal runner male (10km time over 50 min) *</b>	durchschnittlich 20 %
<b>Top runner male (10km time 30-35 min) *</b>	durchschnittlich 12 %
<b>Peak runner male</b>	6-8 %
<b>Peak runner female</b>	8-15 %
<b>Herbert Steffny (European Championship 1986)</b>	8 %
<b>Herbert Steffny (Boston Marathon April 1996)</b>	11 %
<b>Herbert Steffny today (as of 17.2.2006)</b>	15 %