Tanita Technical Bulletin: Visceral Fat Measurment

Visceral Adipose Tissue (VAT) is located deep in the abdominal area surrounding and protecting the vital organs. High levels of visceral fat and trunk fat are scientifically proven to be associated with increased risk of developing lifestyle-related diseases such as metabolic syndrome, type 2 diabetes, and other lifestyle diseases. Accordingly, knowing and periodically checking the estimated VAT accumulation serves as one of a number of factors in assessing the prevention of lifestyle related diseases.

Tanita has developed the technology for measuring the VAT accumulation risk through bioelectrical impedance analysis (BIA) in comparison with image analysis applied to magnetic resonance imaging (MRI), in addition to the established technology for measuring the percent of body fat. The VAT accumulation risk is calculated by estimating the VAT area by the BIA method on the basis of MRI image processing. This method has a higher correlation than the estimation of the VAT accumulation risk based on

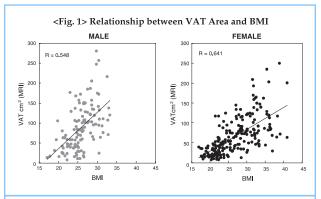


*The VAT area by MRI is calculated by carrying out an image processing of the cross section of the lumber vertebra L4-L5 regions.

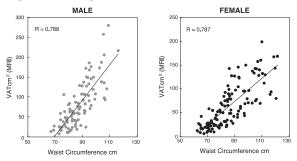
BMI or abdominal circumference (waist circumference), allowing estimation that corresponds more precisely to individuals

Tanita's body composition monitors perform the VAT accumulation risk by performing a visceral fat calculation and assigning a value from 1 to 59. A rating of 1-12 indicates a healthy level of visceral fat. Monitor this regularly to ensure the rating stays within this range. Ratinas from 13 to 59 indicates an excess level of visceral fat. Consider making changes in lifestyle possibly through diet changes and/or increasing exercise.

(Fig. 1 - Fig. 3: Research results by N. Y. Columbia University and Jikei University Published by the North American Association for the Study of Obesity [NAASO] in 2004.)



<Fig. 2> Relationship between VAT Area and Waist Circumference



<Fig. 3> Relationship between VAT Area by MRI and Estimated VAT Area by Tanita's BIA

