Chapter 2

Anthropometric measurements; skinfold thickness and waist to hip ratio

To obtain reliable measures of skinfold thickness, procedures are carefully defined. For example, in the triceps measurement, a fold of skin in the posterior aspect of the nondominant arm midway between shoulder and elbow is grasped gently and pulled away from the underlying muscle. The skinfold thickness reading is taken at a precise time, 2 to 3 seconds after applying the caliper, because the caliper compresses the skin. Even when these procedures are performed by trained dieticians, reliable measurements are difficult to obtain.

The waist-to-hip ratio has been used instead of the waist circumference as a measure of abdominal obesity in an attempt to correct for differences between individuals with respect to body type or bone structure. In this measurement, the waist circumference is divided by the hip circumference (measured at the iliac crest). The average waist-to-hip ratio for men is 0.93 (with a range of 0.75–1.10), and the average for women was 0.83 (with a range of 0.70–1.00). However, the waist circumference may actually correlate better with intraabdominal fat and the associated risk factors than the waist-to-hip ratio.