

Diagnosis of obesity and determination of nutritional requirements: Challenges for the area of Nutrition

The nutritional profile of the Brazilian population has changed. Although malnutrition with respect to a deficit in stature/height and with respect to a deficit in body mass in relation to stature/height still exists in vulnerable segments of the population and at unacceptable levels, it continues to decline in all regions. Overweight/obesity is a nutritional problem that is of the greatest concern, both due to the rapid and progressive increase of its prevalence and because the phenomenon occurs at all stages of life. It is above all of the greatest concern in children and adolescents. This internationally observed phenomenon is caused by environmental changes, particularly with regard to physical activity and eating habits and presents a framework of positive energy balance (energy intake greater than energy expenditure). This situation leads to the modification of the agenda for food, nutrition and health in the country to tackle the expected increase in chronic non-transmissible diseases. Some actions of the Ministry of Health already reflect the new epidemiological situation. The development of a system for monitoring chronic diseases (VIGITEL) seeks to ensure permanent monitoring of the healthy behavior of the population and evaluation of health promotion actions. The National Health Survey (NSP) is programmed for 2013 and it will feature a domicile questionnaire focusing on non-transmissible chronic diseases, the lifestyle of the adult population and will include anthropometric measurements and laboratory tests.

The articles presented in the current issue of *Ciência e Saúde Coletiva* include several important aspects of this new agenda in terms of the research, the methods or the services. The topics involve aspects of the role of Nutrition in the area of primary health care, the perception of obesity, food safety and a healthy diet. Two other topics in articles in this issue highlight methodological gaps that deserve to be examined in the area of Nutrition: body composition and energy requirements.

Initially, obesity is defined in one way – the state of excess body fat that affects health – and then measured in another – the relationship between body mass and height expressed as the body mass index (BMI). The use of BMI was suggested due to the ease of obtaining it, and due to its relationship to body composition (quantity of body fat) and health problems. However, evidence is accumulating in the sense of documenting the fact that the relationship between BMI and body fat is not universally equal, which leads one to think of specific cutoff points for each population, as indeed has already been accepted by the WHO for the Asian population. The development of simpler methods for estimating body composition will make it possible to establish specific cutoff points for obesity for each population or, preferably, the migration to the use of body composition in population studies in the near future.

Possibly the greatest challenge for the field of Nutrition, in times of high prevalence of obesity, is the determination of energy requirements. From the 1980s onwards, the energy requirement is understood as the level of energy intake which considers energy expenditure compatible with the good health of the population. Since then, the need has arisen to develop more reliable methods to estimate the physical activity of the population in order to document – preferably using objective methods – the energy expenditure of different activities and total daily energy expenditure. Without methods to estimate energy expenditure in a reliable manner, food and nutrition planning will be prejudiced as demonstrated in a probabilistic sample of adults from Niterói, State of Rio de Janeiro (see Anjos LA, Ferreira BCM, Vasconcellos MTL, Wahrlich V. Gasto energético em adultos do município de Niterói, Rio de Janeiro: resultados da Pesquisa de Nutrição, Atividade Física e Saúde – PNAFS. *Cien Saude Colet* 2008; 13(6):1775-1784).

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