

3. **Pregnant and lactating women**

3.1 **Introduction**

3.1.1 **Background**

Anthropometric evaluation of nutritional status during the reproductive cycle, particularly during pregnancy, is a widely used, low-technology procedure that may be expected to generate much valuable information, yet it has seldom been rigorously evaluated (1, 2). The biological mechanism that underlies the relationship between women's nutritional status and reproductive outcomes is not fully understood except in extreme situations (e.g. famine).

Unlike nutritional evaluation during other periods of life, which is concerned only with the individual(s) in whom measurements are made, measurements made during pregnancy and lactation are expected to reflect both the nutritional status of the woman and, indirectly, growth of the fetus and, later, the quantity and quality of breast milk.

At the clinic level, anthropometric measurements are routinely made on all pregnant women at the time of first contact with the health services and several times thereafter. Information obtained is also routinely incorporated into medical records. The impact of these activities, in terms of benefits for the health of the mother and the fetus or newborn, remains to be demonstrated by randomized controlled trials and has recently been challenged (2).

Measurements taken early in pregnancy should be used to evaluate the nutritional status of the woman and to predict how well she can cope with the physiological demands of pregnancy. Unfortunately, this objective is usually neglected, despite clear evidence that, in developing countries, pregnancy and lactation represent a major nutritional drain on the mother (3). Among well nourished women, moreover, excessive weight gain during pregnancy, followed by only a brief period of lactation, will be associated with postpartum overweight, increasing the risk of chronic diseases later in life. Measuring a woman's height provides a proxy indicator of childhood growth and skeletal pelvic structure and a good predictor of the risk of cephalopelvic disproportion and obstructed labour, which is a major cause of maternal death in developing countries.

Thus, anthropometric measurements made during the reproductive period should be designed to evaluate women's capacity to deal with the physiological stress of pregnancy, and to identify those women who would benefit most from nutritional interventions.

Perhaps the most widespread use of anthropometric measurements during pregnancy has been in evaluating the risk of fetal growth retardation and selecting women or populations for nutritional interventions aimed at improving fetal growth or prolonging gestation. This application has unfortunately not lived up to expectations (4, 5).