The escalating obesogenic environmental conditions in society strongly influence unhealthy food choices while promoting an infrastructure that favours minimum levels of physical activity. The adverse effects of the modern lifestyle are increasing the burden of non-communicable diseases (NCD). In this article, different aspects of the modern body image and its links to pregnancy and postpartum will be discussed. Malnutrition, in all its forms, is a serious public health issue in Europe and has a direct effect on the births in the 21st century.

Figures from the WHO European Region show that more than 50% of the adult population are overweight or obese (1) and on average, one in every three children aged 6 to 9 years is overweight or obese (2). According to projections, it is estimated that nine in ten adults will be overweight or obese by 2050 (3). There is therefore no doubt that overweight and obesity is a significant problem and its magnitude of spread is increasing by every passing day. There are underlying causes of this change, which include the abundance of cheap, processed, energy-dense foods that are high in fat, salt and sugar, bigger portion sizes and marketing of foods. The sedentary environment at home, school and work, which does not promote energy consumption is also another major factor.

Pregnancy is the time in a woman’s life when weight gain is encouraged and expected while at the same time female body is idealized in our society. The psychological implications of overweight and obesity are depression, body image and stress. The relationship between body image and weight related concerns in the pregnant and non-pregnant phase is also a crucial dimension to ponder. Body image is defined as an internal picture or mental image formed in our minds. It is also the attitude that encompasses the emotional reactions and feeling towards the body and represents the individuals’ valuation of their body. Research suggests that women feel more negative towards their body image in the last trimester as compared to the onset of pregnancy and pre-pregnant phase (4). During postpartum the degree of dissatisfaction towards body size and image decreases but the pressure to return to normal shape still remains the source of grievance and discontent. Thus, given the pervasive sociocultural pressures that reinforce the desirability of the thin-ideal appearance makes it difficult for women in pregnancy to maintain a positive attitude.

Pregnancy is an important time in the life of a woman as her body undergoes immense transformation. During pregnancy and postpartum, women’s dissatisfaction with their bodies increases irrespective of how satisfied they were prior to the pregnancy. Evidence suggests that pregnant women who are affected negatively by changes to their body are less likely to initiate breastfeeding (5). Also, dissatisfaction during pregnancy might lead to unhealthy eating behaviours and weight loss, which might have direct adverse impact on the health of the mother and baby (6). These women have the tendency to compare their bodies and have public self-consciousness, the tendency to be conscious of whether one is being judged by others when in public. There are also environmental factors associated with body dissatisfaction such as teasing and social pressure to lose weight.

Pregnancy causes physical changes to the body, especially in the breasts and stomach and stretch marks, acne, skin pigmentation and varicose veins can also develop. This physical transformation, the internal psychological stress and the external pressure of staying fit make women feel unattractive and depressed. As a result of these changes, negative feelings can lead to weight retention and increased risk of obesity and diabetes throughout the life-course.

The negative evaluation of body size, shape and weight in obese and overweight women during pregnancy and postpartum leads to low self-esteem. Several theories explain the development and maintenance of body image disturbance, including the renowned theory which is the socio-cultural model. This model identifies social pressure as the impetus behind an individual’s need to conform to body shape standards (7). Media, the fashion industry and the clothing industry have direct effects on body image and might cause distress to the female sex. Research suggests that the changing body size and shape of women over the past decade has been portrayed negatively in leading magazines. Bust and hip measurements have decreased and the body weight shown in magazines is 13–19% lower than a healthy weight. Such unattainable standards of appearance set by media make women feel worse about their body (7). Also, the fashion industry compounds the problem by the use of vanity sizes. Pregnant women keep on struggling to find the right size for them and end up wearing loose and shapeless clothes. This leads women to be in distress and might cause women to stay at home or work from home. Staying at home and interacting less with the outside world might make them prone to an unhealthier lifestyle, where they eat more and are less physically active.

The number of women who enter pregnancy overweight or obese is reaching alarming proportions in developed countries with more than 100 million women of reproductive age being obese, while a further 250 million are overweight (8). Overweight and obesity during pregnancy have serious health implications affecting the life-course of both mother and child. In mothers, these can result in miscarriage, caesarean section thrombo-embolism, gestational diabetes mellitus, hypertensive disorders of pregnancy, ovulation failure, polycystic ovarian syndrome and excess androgen production leading to menstrual disturbance, amongst others. Moreover, obesity associated morbidity extends immediately into the postpartum period and beyond. The success of breastfeeding is poor leading to an increased use of infant feeding formulas. In the babies both factors: obesity and feeding formulas can cause neuro-psychological anomalies including neural tube defects, macrosomia, large-for-gestational-age babies, respiratory
distress, shoulder dystocia and increased susceptibility to NCD and obesity throughout the life-course.

The American Institute of Medicine (IoM) recommend that gestational weight gain should be limited to 0.5 to 2.0 kg by the end of the first trimester and about 0.5 kg per week thereafter (9). Although the IoM guidelines are the most utilized ones in Europe (6), a significant number of women gain more weight than recommended. An interesting aspect to shed light upon is that most women do not have the knowledge of the appropriate amount of weight which should be gained during pregnancy. Women with low pre-pregnancy BMI tend to underestimate their recommended weight gain while obese women overestimate their weight gain goal.

The overweight or obese mother and her child may require special medical care, including prolonged and multiple hospital admissions that might require ICU care. This creates an extra burden on medical health care services and economic resources. In contrast to obesity and overweight, underweight is also a highly important issue among pregnant women. This might lead to low birth weight, small-for-gestational-age babies and increased risk of intrauterine growth restriction.

Different community-based behaviour change interventions have been carried out to address the weight issues during pregnancy. Educational messages can be distributed through local radio broadcast, pamphlet circulation, supermarket tour, cooking classes, telephone counseling for motivation, group classes and through home visits. On the other hand, individual approaches to weight management during pregnancy at prenatal and antenatal care have also shown encouraging results. Midwives, nurses and doctors play an active role in counseling women on the importance of healthy eating, physical activity, breastfeeding and weight management.

There is no doubt that obesity is a serious risk factor which impacts both the health and nutritional status of mothers and their babies throughout their life span. In order to decrease the risk of morbidity related to obesity in pregnant women and their offspring, effective and sustainable measures are needed to put the well-tailored strategies in action, for healthier generations. Strong leadership and serious cooperation both on the public health and the political side is needed. Legislations putting high sanctions on unhealthy food options and on advertisement of anorexic bodies in the fashion and clothing industry can help address the issues of body dissatisfaction among pregnant women.

João Breda, PhD, MPH, MBA
Programme Manager, Nutrition, Physical Activity and Obesity, WHO Regional Office for Europe

Nathali Lehmann Schumann, MSc
Consultant, WHO Regional Office for Europe

Salwa Arshad, MSc
Research Assistant, WHO Regional Office for Europe

Corresponding author: jbr@euro.who.int

References