Overweight and increased energy intake before conception are powerful risk factors in the development of gestational diabetes mellitus (GDM) and may also represent important determinants of the so-called fetal (mal-)programming, which may have long-term consequences for the health of the newborn. Thus, an adequate intake of energy and nutrients is of fundamental significance in the treatment of GDM, along with regular self-monitoring of blood glucose. This concept suffices in most cases to achieve the strict therapeutic goal of normoglycemia. However, because of a lack of data from interventional studies, there is uncertainty about the optimal macronutrient composition of the diet (carbohydrates, fat, protein) and meal distribution, as well as of the mode of calorie restriction in overweight and obese women with GDM. Varying the carbohydrate intake between 40 and 55 % of total energy intake appears to be acceptable and may be distributed across main meals and snacks. Thus, individualized nutritional treatment together with other specific lifestyle interventions are the principal components in the management of GDM.