

New National Academy of Sciences Guidelines for Nutrition During Pregnancy

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In June 1990, the Institute of Medicine of the National Academy of Sciences (NAS) released a report, *Nutrition During Pregnancy*, that recommends individualized assessment-based nutritional management for pregnant women. This is the first publication by the NAS on maternal nutrition since the Food and Nutrition Board's landmark report *Maternal Nutrition and the Course of Pregnancy* was published in 1970. The newer report is divided into two parts; the first part is on weight gain, and the second part deals with nutrient supplementation during pregnancy. Dr. Roy Pitkin, Chair of the Department of Obstetrics and Gynecology, School of Medicine, University of California, Los Angeles, chaired the Committee on Nutritional Status During Pregnancy and Lactation, which authored the 1990 report.

Rather than setting a single weight-gain limit, the committee suggested a range of optimal weight gains, depending on the weight-for-height status of the mother at the beginning of pregnancy. Underweight women with a body mass index (BMI; defined as weight/height²) of <19.8 kg/m² should try to gain between 28 and 40 lb, normal-weight women with BMIs of 19.8–26.0 kg/m² should gain between 25 and 35 lb, and overweight women with BMIs of 26.0–29.0 kg/m² should gain between 15 and 25 lb. Obese women (BMI >29.0 kg/m²) should gain at least 15 lb. Rate of gain is important. Women should gain ~1 lb/wk during the second and third trimesters; overweight women should work toward about half that rate. Gains of <2 or >6.5 lb/mo for normal-weight women should be evaluated. Among women studied in the United States, energy intake was a weak determinant of gestational weight gain. Nevertheless, energy supplementation of women who are undernourished should benefit gestational weight gain and therefore fetal growth.

Despite popular opinion that all pregnant women should routinely take vitamin and mineral supplements, the NAS committee concluded that food "is the normal vehicle for delivering nutrients, and nutrient supplementation [is] an intervention" that should be "based on evidence of benefit as well as lack of harmful effects." There is a danger that different nutrients will interact in adverse ways, and this is more likely with supplements than with foods. Supplements should not replace a well-balanced diet.

Iron is the only nutrient for which routine supplementation of all pregnant women is recommended. A low-dose supplement of 30 mg ferrous iron/day is suggested. This recommendation is based on the high prevalence of low iron stores among women of childbearing age in the U.S.

Intake of other nutrients in amounts less than the recommended daily allowance (RDA) is an insufficient basis for recommending supplementation. Because RDAs provide a "wide margin of safety, the needs of many pregnant women can be met with intakes below the RDA." The decision to provide special dietary intervention or nutrient supplementation should therefore be made after routine questioning of all pregnant women about their food intake and special problems that may affect their nutritional needs. For women found to have inadequate dietary intake or special problems, a multivitamin-mineral preparation containing iron, zinc, copper, calcium, vitamin B₆, folate, vitamin C, and vitamin D is recommended.

The NAS report did not address the nutritional concerns of women with insulin-dependent (type I) or gestational diabetes. Specific recommendations for the management of such patients awaits definition. However, based on the NAS guidelines, which focused on healthy women, it is reasonable to recommend that diabetic women gain at least 15 lb. This is comparable to the amount of weight gain recommended for obese women.

Copies of the report are available from National Academy Press (2101 Constitution Avenue, NW, Washington, DC, 20418; \$34.95 each).

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