OPEN ACCESS Freely available online

ISSN: 2161-0509
Journal of Nutritional Disorders & Therapy

Perspective

Effect of Macronutrient and Micronutrient Deficiencies in Pregnant Women

Marianne Phyo*

Department of Nutrition, University of Nevada, Las Vegas, United States

DESCRIPTION

Nutrient shortages or diseases can be caused by poor dietary intake, chronic or acute health conditions, medicines, altered nutrient metabolism or a combination of these factors, which can impact the amounts of macronutrients and micronutrients in the body. If the shortage occurs during foetal development or early childhood, energy metabolism, immunological function, cognitive function, bone formation and muscle function, as well as growth and development, can all be affected. The Centers for Disease Control and Prevention (CDC) estimates that nutritional deficiencies affect less than 10% of the population in the United States. Nutrient deficits, on the other hand, differ by age, gender, race and ethnicity.

Nutrient shortages can affect up to a third of the population in some areas. Individual dietary choices can lead to nutritional deficiencies in the population as a whole. Nutrition intakes that are consistently below the Dietary Reference Intakes (DRI) might result in a reduction in the amount of nutrient stored in the body and available for biological processes. The Recommended Dietary Allowance (RDA), Adequate Intake (AI), Estimated Average Requirement (EAR) and Tolerable Upper Intake Level (TUIL) are DRIs that are dependent on age and gender.

Macronutrient and micronutrient deficiencies

Macronutrient deficiencies include protein, fat and calorie deficiencies, which can result in stunting, pronounced wasting (marasmus) or an abnormally big abdomen (a sign of kwashiorkor). Marasmus is a wasting condition caused by a lack of protein, carbohydrate and fat for an extended period of time. Kwashiorkor is an illness caused by a lack of protein over an extended period of time. Deficits in essential fatty acids, such as omega-3 fatty acid insufficiency are regarded to be uncommon in the general population. A dry scaly rash, decreased growth in babies and children, a diminished immunological response and poor wound healing are all signs of an essential fatty acid deficit.

Micronutrient deficiencies in the body include vitamin and mineral deficiencies. According to statistics from the National Health and Nutrition Examination Survey (NHANES), the most common dietary deficiencies in the general US population from 2003 to 2006 were vitamin B6, iron, vitamin D, vitamin C and vitamin B12. Because the National Health and Nutrition Examination Survey (NHANES) do not test for all vitamins and minerals, other micronutrient deficiencies may exist in the population but are not considered common.

According to NHANES data from 2005 to 2012, a large number of WIC participants have insufficient vitamin E nutritional consumption (96% to 100%). In addition, more than half of the pregnant women said they didn't get enough iron and 10% to 50% said they didn't get enough magnesium, folate, zinc, vitamin A, vitamin C or vitamin B6.

Micronutrient deficiencies in pregnancy are not only a source of concern for the mother, but also for the growing baby, who is at risk of birth abnormalities caused by low levels of particular nutrients such as B vitamins, vitamin K, magnesium, copper and zinc. Deficiency in iodine during pregnancy might have lasting consequences for foetal growth and development. Iodine deficiency is the most common cause of mental retardation in the globe. According to data from the National Health and Nutrition Examination Survey (NHANES) from 2005 to 2008, 56.9% of pregnant women had urine iodine concentrations below the recommended level of 150 mcg/L.

This implies that more than half of all pregnant women are deficient in iodine. Multiple vitamin deficits are frequent during pregnancy because pregnant women's eating habits can eliminate or limit specific food groups. For example, iron insufficiency is frequently associated with other vitamin and mineral deficits. Nutrient intake was also observed to be low among WIC participants who were postpartum or nursing. More than half of breastfeeding WIC participants had insufficient vitamin A intakes and 10% to 50% had insufficient magnesium, zinc, vitamin C, vitamin B6, folate, copper and calcium intakes.

More than half of non-breastfeeding postpartum women had insufficient magnesium, vitamin A and calcium intakes, while

Correspondence to: Marianne Phyo, Department of Nutrition, University of Nevada, Las Vegas, United States, Email: marianne.p@phyo.edu

Received: 02-May-2022, Manuscript No. JNDT-22-17119; **Editor assigned:** 06-May-2022, PreQC No. JNDT-22-17119 (PQ); **Reviewed:** 20-May-2022, QC No JNDT-22-17008; **Revised:** 27-May-2022, Manuscript No. JNDT-22-17119 (R); **Published:** 06-Jun-2022 DOI: 10.35248/2161-0509.22.12.186.

Citation: Phyo M (2022) Effect of Macronutrient and Micronutrient Deficiencies in Pregnant Women. J Nutr Disorders Ther. 12:186.

10% to 50% had insufficient vitamin C, folate, copper, zinc, thiamin, vitamin B6, vitamin B12, iron and riboflavin intakes. Formula fed infants had an average normal consumption of choline that was below the AI for that vitamin, according to NHANES data from 2011-2012. Other vitamins and minerals, on the other hand, were thought to be adequate. Vitamin D, iron and zinc intakes in breastfed newborns can be concerning if the infant is not given suitable and timely complementary foods or vitamin and mineral supplements.

Between 2009 and 2012, at least 10% of infants receiving human milk between the ages of 6 months and 12 months had insufficient iron and zinc intakes, according to NHANES data. Human milk has been found to contain low vitamin D levels.