

Balanced Energy and Protein Dietary Supplementation During Pregnancy

November 2024

FACT SHEET

Balanced energy and protein (BEP) dietary supplementation is an **evidence-based intervention to improve the nutrition of mothers and babies**, particularly in food-insecure settings where access to healthy diets and antenatal care services is limited.

Adequate nutrition during pregnancy is critical to support the growing fetus, safeguard maternal health, and reduce the risk of complications such as babies born too small, or with low birthweight.

Providing BEP dietary supplementation to pregnant women offers a safe and effective way to provide **additional energy and nutrients** to meet the increased demands of pregnancy.^{1,2,3} BEP dietary supplementation is meant to **complement the usual diet** and is **not a replacement** for healthy and nutritious food.

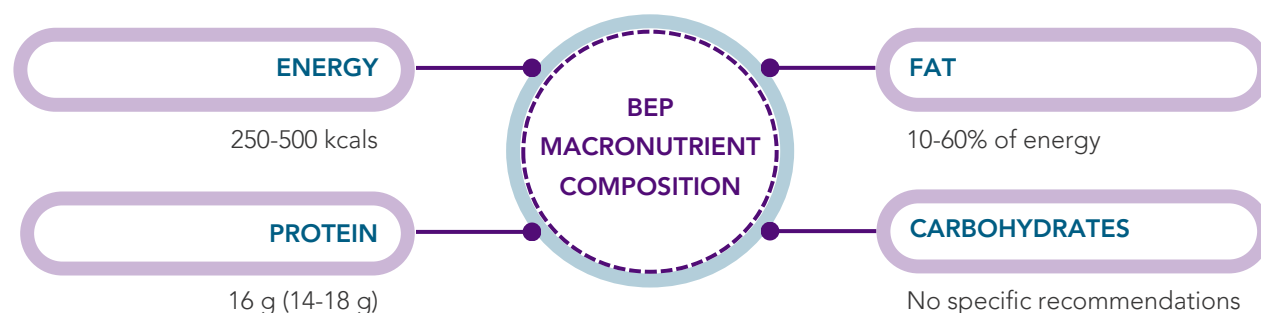
WORLD HEALTH ORGANIZATION (WHO) RECOMMENDATION

Antenatal BEP dietary supplementation should be provided to **pregnant women in undernourished populations** with a prevalence of $\geq 20\%$ underweight women (body mass index [BMI] $< 18.5 \text{ kg/m}^2$).²

WHAT IS BEP DIETARY SUPPLEMENTATION

BEP dietary supplementation refers to **dietary supplements or foods** that provide a **balanced mix of macronutrients**, primarily energy (calories) and protein (less than 25% of the total energy content), tailored to meet the increased nutritional demands of pregnancy. BEP dietary supplements can be **fortified with micronutrients** or **given alongside multiple micronutrient supplements** such as UNIMMAP MMS.

Product specifications for BEP dietary supplementation can vary, but in 2017, an Expert Consultation Report³ proposed the following macronutrient and micronutrient recommendations for BEP dietary supplements:



Required Micronutrients: Vitamins A, D, E, K, B1, B2, B3, B6, folate, B12, C, and minerals iron, zinc, iodine, calcium, phosphorus, copper, and selenium

Optional Micronutrients: Vitamin B5, manganese, potassium, magnesium, biotin, and choline.

EVIDENCE ON THE BENEFITS

Based on the evidence used by the [WHO guidelines](#)² (the Cochrane review by Ota et al., 2016), BEP dietary supplementation, in comparison to no BEP supplementation or placebo, provided to pregnant women, has the potential to:



Improve birthweight in infants



Reduce the risk of stillbirths



Reduce the risk of infants being born too small

CONCLUSION

BEP dietary supplementation is an evidence-based dietary intervention for pregnant women, particularly in settings where undernutrition is common. Implementing BEP dietary supplementation in antenatal care programs ensures healthier pregnancies, healthier birthweights for babies, and in turn could improve the health and well-being of mothers. With growing evidence of its impact, BEP dietary supplementation is a promising intervention to help mothers and babies thrive.

This document is subject to updates as new research and guidelines emerge.

Links to Useful Resources

- [Healthy Mothers Healthy Babies Knowledge Hub](#)
- [UNICEF's Improving Maternal Nutrition Acceleration Plan](#)
- [Review of BEP supplementation during pregnancy](#)
- [WHO ANC guidelines](#)
- [Expert Consultation Report](#)
- [Results from the WINGS trial in India](#)
- [Results from the MISAME-III trial in Burkina Faso](#)
- [USAID case studies](#)

REFERENCES

1. Ota E, Hori H, Mori R, Tobe-Gai R, Farrar D. Antenatal dietary education, and supplementation to increase energy and protein intake. *Cochrane Database Syst Rev*. 2015; Jun 2;(6):CD000032.doi:10.1002/14651858.CD000032.pub3.
2. World Health Organization. *WHO recommendations on antenatal care for a positive pregnancy experience*. Geneva: World Health Organization; 2016.
3. Members of an Expert Consultation on Nutritious Food Supplements for Pregnant and Lactating Women. *Framework and specifications for the nutritional composition of a food supplement for pregnant and lactating women (PLW) in undernourished and low-income settings*. Seattle, Washington: Bill & Melinda Gates Foundation; 2017.

About HMHB

The **Healthy Mothers Healthy Babies Consortium (HMHB)**, hosted by the [Micronutrient Forum](#), is a growing collective of over 300 individuals and organizations dedicated to improving maternal nutrition. We work collaboratively to advance evidence-based interventions such as multiple micronutrient supplementation (MMS) and balanced energy and protein (BEP) dietary supplementation during pregnancy in low- and middle-income countries. HMHB also convenes Technical Advisory Groups (TAGs) on [MMS](#) and [BEP](#), bringing together experts in nutrition, maternal health, and public health to interpret evidence, identify knowledge gaps, and provide guidance to governments, NGOs, and partners.

Visit our [website](#) for the latest knowledge, evidence, guidance, and tools on maternal nutrition. Explore the [World Map on MMS](#), [Knowledge Hub](#), [Advocacy Resource Center](#), [Women's Voices](#) short films, and [Knowledge Byte](#) videos. Join us in powering women's nutrition for promising futures. [Become a member](#).



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