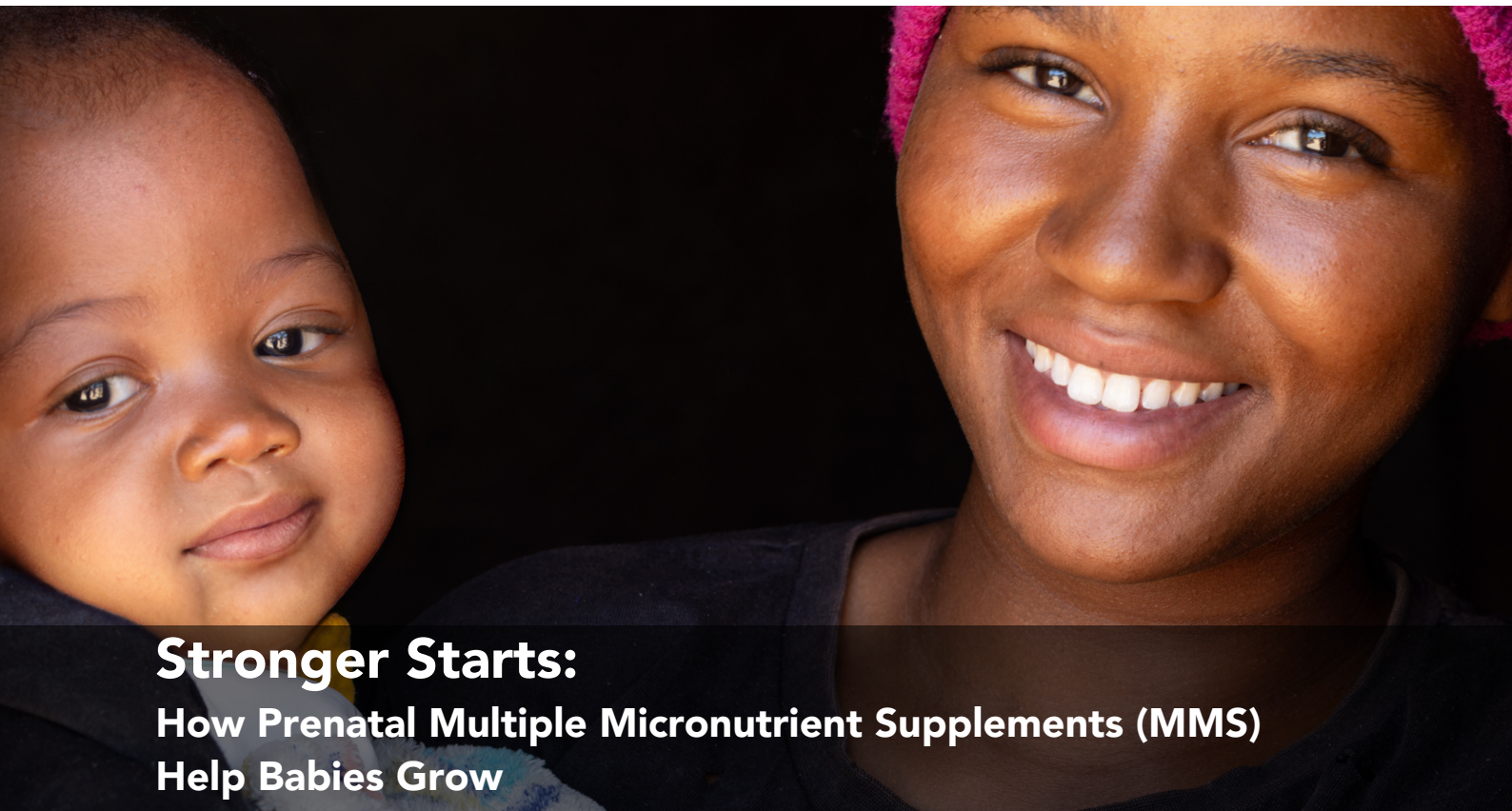




Stronger Starts: How Prenatal Multiple Micronutrient Supplements (MMS) Help Babies Grow

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PUBLICATION BRIEF

New research shows that when pregnant women take multiple micronutrient supplements (MMS), their babies are more likely to be born healthy and grow better during the crucial first months of life. These babies are less likely to suffer from undernutrition, a key risk in the earliest and most vulnerable stage of life.

A new global study, led by the MMS Technical Advisory Group and published in the *American Journal of Clinical Nutrition*, has found that MMS during pregnancy help babies grow longer, gain more weight, and show early signs of stronger brain development – compared to the standard iron and folic acid supplements (IFA) commonly used in many low-and middle-income countries (LMICs).

MMS help prevent vitamin and mineral deficiencies in pregnant women, supporting a healthier pregnancy and improving outcomes for both mother and baby.

The Study

To better understand how prenatal MMS affect a baby's growth, a global team of researchers conducted a systematic review and meta-analysis of 19 high-quality studies. These studies compared outcomes in babies born to mothers who took MMS versus those who received only IFA – the standard prenatal supplement in many countries. The analysis included over 20,000 mother-baby pairs from low- and middle-income settings.

Key Findings

Babies whose mothers took MMS during pregnancy were born longer, heavier, and with larger head and arm circumferences – signs of healthy growth. These advantages continued through the first six months of life. Specifically, babies whose mothers took MMS had:

- **Greater length and weight at birth** and through the first six months of life
- **Larger head circumference** through 12 months (a sign of brain growth)
- **Higher mid-upper arm circumference (MUAC)** through three months (an early sign of better nutritional status)

MMS also reduced the risk of undernutrition in early infancy. At birth and three months of age, babies whose mothers took MMS were less likely to:

- **Be stunted** (too short for their age)
- **Be underweight** (too light for their age)
- **Have a small head circumference** or low MUAC

Additionally, MMS lowered the risk of wasting at birth (being too thin for their length), a severe form of early malnutrition.

Why It Matters

These findings have major implications for public health. Compared to IFA alone, MMS help babies achieve a healthier size at birth and support growth in the first six months of life – a critical window for infant growth and development.



Prenatal MMS offers a safe, effective, and affordable way to help babies get a healthier start at birth and through the first 6 months of life, influencing what happens in the crucial first 1,000 days.

Dr. Parul Christian
Professor, Johns Hopkins Bloomberg School of Public Health

In fact, beyond health benefits, MMS are also highly cost-effective, delivering an estimated return of over \$37 for every dollar invested, by improving health outcomes and reducing long-term healthcare costs, particularly in LMICs.



These results clearly show that the growth benefits of prenatal MMS go beyond the known effects at birth and extend to 3 or even 6 months of age. Importantly, this window supports previous reports of prenatal MMS on improved child cognition in early and late childhood.

Dr. Anuraj H. Shankar
Senior Scientist, Nuffield Department of Medicine, University of Oxford

Implications

- 1. Global Health Impact:** Babies born too small or who grow poorly in early infancy face higher risks of illness, developmental delays, lifelong health challenges, or even death. MMS can help change that.
- 2. Policy Implications:** This new evidence strengthens the case for scaling up MMS in national health programs, especially in countries where IFA is the norm.
- 3. Nutritional Equity and Access:** MMS address multiple nutritional gaps simultaneously. Providing MMS to all pregnant women, regardless of income or where they live, can help close gaps in nutrition and early childhood development.



Stronger Starts

How Prenatal Multiple Micronutrient Supplements (MMS) Help Babies Grow

What are MMS?

- Blend of essential vitamins and minerals, including iron and folic acid (IFA)
- Taken daily during pregnancy, to fill critical nutrient gaps
- Known to benefit pregnancy outcomes (e.g., reduce low birthweight and preterm births)



What the study shows: MMS vs. IFA



Length and weight from birth to 6 months of age
Head circumference from birth to 12 months of age

Prenatal MMS reduces risks of poor growth up to 3 months of age

• Stunting	9%
• Underweight	13%
• Wasting	10%
• Small head circumference	12%
• Stunting or underweight	14%
• Small head circumference	16%
• Low mid-upper arm circumference	10%

At birth

At three months



Prenatal MMS results in healthier growth and lower risk of undernutrition up to 6 months of age

Why it matters

- Prenatal MMS reduce the risk of **infant undernutrition** during a **critical period** of rapid growth and development
- **Highly cost-effective** (\$37 return for every \$1 invested)



A switch from IFA to MMS during pregnancy can help millions of babies grow stronger, healthier, and smarter



Learn More

1. [The Publication - Effect of prenatal multiple micronutrient supplementation compared with iron and folic acid supplementation on size at birth and subsequent growth through 24 mo of age: a systematic review and meta-analysis.](#)
2. [WHO Antenatal Care Recommendations for a Positive Pregnancy Experience Nutritional Interventions Update: Multiple Micronutrient Supplements during Pregnancy.](#)
3. [Adult consequences of growth failure in early childhood](#)
4. [Wasting and stunting in infants and young children as risk factors for subsequent stunting or mortality: Longitudinal Analysis of Data from Malawi, South Africa, and Pakistan](#)
5. [Global Action Plan \(GAP\) on Child Wasting - Ending Child Wasting: A Multisystem Approach Towards 2030](#)



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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