

Editorial

Good health begins in the womb, but climate change is a growing threat to the unborn

Women are disproportionately impacted by climate change, and it has a direct and indirect effect on the survival of childbirth and pregnancy. The factors that affect pregnancy outcomes and long-term health go far beyond individual behaviours. A complex system of environmental, social, and economic factors is inextricably linked to health outcomes at every stage of life. Climate change is an increasingly salient part of this system, and it can harm early development in various ways.

In 2007, the Intergovernmental Panel on Climate Change presented much evidence about global warming and the impact of human activities on global climate change. The Lancet Commission has identified many ways climate change can influence human health: lack of food and safe drinking water, poor sanitation, population migration, changing disease patterns and morbidity, more frequent extreme weather events, and lack of shelter. Pregnant women, the developing foetus, and young children are considered the most vulnerable members of our species.

Poor nutrition during pregnancy, for example, has been linked with a range of adverse outcomes for children, including high blood pressure and metabolic diseases. The effects of smoking or being exposed to second-hand smoke during pregnancy are also widely recognised and include increased risk of stillbirths and congenital disabilities. We also know that adverse pregnancy outcomes, including preterm birth and low birth weight, are risk factors for health problems in adulthood.

Air pollution has been linked to a range of adverse pregnancy outcomes, including preterm labour and low birth weight, which are risk factors for conditions such as cardiovascular disease and diabetes in adulthood. Exposure to pollution can also affect lung development and function and is thought to contribute to the development of childhood asthma. Air pollution disproportionately affects socioeconomically disadvantaged populations in many countries.

Emerging evidence from around the world suggests that more extreme temperatures – especially high temperatures are linked to climate change and associated with preterm birth, low birth weight and stillbirth. These findings have garnered some attention in recent years, but plans and resources related to climate change or extreme heat often fail to address pregnant women as a vulnerable population.

Some mosquito-borne diseases, such as malaria and Zika virus, are known to harm foetal health and development. Malaria affects placenta function and increases the risk of low birth weight, preterm birth, and miscarriage. Zika virus passes from mother to foetus and causes a severe brain defect known as microcephaly as well as damage to eyes, joints, and muscles. As climates become wetter and warmer, mosquito populations will thrive, facilitating the spread of the viruses they carry. If no climate action is taken, mosquito-borne diseases could reach an additional one billion people by 2080, with most first exposures occurring in Europe.

Many nutrients are critical for pregnant women and their babies to support good health and development. However, changing weather patterns and extreme weather events can severely affect food supplies and the availability of critical nutrients in some regions. In land-locked, low-income countries, especially, food supplies are volatile and reliant on local weather conditions. In these countries, extreme weather can reduce nutrient supplies by as much as 7.5%. An estimated 250 million children under five are currently at risk of poor development because of poverty and stunting caused by malnutrition, repeated infection, and limited psychosocial stimulation. As climate change affects weather patterns and food supplies, malnutrition could pose a significant threat.

Climate action is a core part of giving children the best start. Organisations worldwide, including WHO and UNICEF, highlight the importance of the first 1,000 days in setting the foundations for lifelong development and health. Giving every baby the best start in life is even written into the national policy of many countries, highlighting this period's importance in shaping a person's lifelong health and well-being. While the role of environmental influences is sometimes acknowledged, the wide-ranging implications of climate change, particularly on the most vulnerable populations, are rarely included in the discussions. Just as the social determinants of health are firmly established in the public health parlance, climate change must also be seen as a critical determinant of health right from the start of life.

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