



Editorial

## Undernutrition in Early Life and Chronic Diseases in Adulthood

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### Editorial

The Chinese famine of 1959–1961 is the largest one in human history leading to approximately 30 million excess deaths<sup>[1-4]</sup>. During the Chinese famine, the lack of food, the serious shortage of nutrition, especially for pregnant women that need a lot of nutrition, also caused fetus or infant malnutrition and stunting.

Under nutrition refers to the pregnant mother's nutritional status, the fetus intrauterine nutrition and the first three years of the baby's nutritional status. The developmental origins hypothesis proposes that under nutrition in early life is associated with an increased risk of disease in adulthood<sup>[5]</sup>. Previous research suggested that increased risk of chronic diseases in adulthood might actually originate from adverse exposures or under nutrition during fetal period<sup>[6,7]</sup>. Studies also demonstrated that severe under nutrition during pregnancy adversely affects fetal brain development and delays the progress of the central nervous system and brain<sup>[8-11]</sup>. Prenatal under nutrition may induce a permanent physiologic response, which predisposes the fetus to disease development in later life<sup>[7,12]</sup>.

Emerging findings on the Chinese famine indicated that exposure to such famine in early life was related to elevated risk of diabetes<sup>[13]</sup>, metabolic syndrome, hypertension, short height<sup>[14,15]</sup>, and overweight<sup>[16]</sup> among adults. In contrast to the Dutch and Leningrad famines, the Chinese famine was more recent, had longer duration (three years), was not due to war, and affected most areas of China. The effect of prenatal famine exposure on the risk of chronic diseases in adulthood may distinctly affect non-European populations; limited information on the effects of prenatal famine exposure in adulthood is published in developing countries<sup>[17]</sup>. Prenatal exposure to the Chinese famine provides scholars and researchers with an ideal population to explore the long-term consequences of severe fetal and early-life under nutrition of adult chronic disease in a non-European population.

In my opinion, it's necessary to focus on people's nutrition in early life, especially pay attention to pregnant women and infants' nutrition and health, and improve the nutritional status of pregnant women. This has important significance on the prevention of adult chronic diseases. With the improvement of people's living standard, it's important to pay more attention to the intake of nutrition. The government should make early intervention policies and take measures to reduce the occurrence of various chronic diseases.

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