



Nutritional Status of Pregnant Women in China

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This overview presents recent information on the nutritional status of pregnant women in China. Data from 2000, 2002, 2006, and 2010 showed that iron-deficiency anemia (IDA) prevalence was 19.1%, 30.3%, 40.7%, and 36.6%, respectively. The difference is possibly because the sampling since the 2000 data on iron deficiency (ID) was 42.6% by a survey conducted by the collaborating team on children, pregnant women, and childbearing-age women, and the data from the United Nations International Children's Emergency Fund (UNICEF) in 2010 was in three poor counties in China. IDA prevalence in pregnant women in the 1st, 2nd, and 3rd trimesters was 9.6%, 19.8%, and 33.8%, respectively, but the ID percentage for all trimesters was approximately 40% (2000 data).^{1,2}

Little difference was observed in deficiencies of other micronutrients, such as vitamin C, vitamin A, vitamin B₁₂, vitamin B₂, and folate between anemic and nonanemic pregnant women in the 3rd trimester in four provinces during 1999–2001.

Nutrient supplementation is not popular during pregnancy. One third of pregnant women never used supplementation, and 40%–50% used iron or folic acid supplements. Since 2010, free supplementation of folic acid pills for childbearing women became one of the components of the basic public health service of reformed medical care nationwide, but this still is not well implemented because of shortcomings in the delivery mechanism.

The information on the nutritional status of pregnant women 1 year after the Wenchuan earthquake in the affected area indicated that when comparing with the data from 2002, the dietary intake of fruits, soybeans, and dairy products increased, but decreased in animal foods and vegetables. Iron nutrition still was worse than in the rural groups in 2002. Vitamin deficiency prevalence was about 70%, and zinc deficiency was 61.6%. Even the relief from such a serious natural disaster was surprisingly successful in terms of dietary improvement, which was attributed to the support of people of the whole country and later by 18 specified provinces. But more attention is needed.

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Nutrition is very important during pregnancy for child growth. In 2002, data from 1380 pairs of mother and child illustrated that 45% of the stunted children under 2 years of age were from mothers whose height was below 140 cm. Children were significantly shorter than the children whose mother's height was more than 155 cm. Girls born in the disaster years in China (1959–1961) exhibited a 20%–60% increase in overweight and obesity risk in their adult life (Table).

Table. Maternal Nutrition and Obesity Risk During Adult Life³

Year of Birth		n	Overweight		Obesity	
			n	%	n	%
Girls born in disaster years	1959	822	253	30.78*	87	10.58*
	1960	864	280	32.41*	89	10.30*
	1961	680	220	32.35*	61	8.97
			Odds ratio =1.289–1.372		Odds ratio =1.243–1.465	
Girls born after disaster years	1964	1473	390	26.48	108	7.33

Prevalence of girls born in 1964 as the reference

* $P < 0.05$

Multinutrient supplementation is of benefit in reducing the low-birth-weight (LBW) rate of infants. This was proven by observing women during pregnancy in a western county who were provided with multinutrient pills with 10-mg iron supplementation. The LBW percentage declined from 7.31% to 3.21% in 1 year. As estimated by the World Bank, moving one LBW infant to the non-LBW category could save \$510 (US dollars)/infant in a low-income context. The outcome of improved nutrition for pregnant mothers deserves further investigation and in more detail.



In 2006, the fetal macrosomia incidence in 14 provinces was 7.5% in urban areas and 6.3% in the rural areas, and it was higher in the eastern provinces, with incidence of 8.2%. A survey of rural areas in six counties in 2008 showed much higher figures, which were up to 9.91% with big differences between the western province Sichuan and the eastern province Anhui, 4.49% vs 13.14%. Apparently, surveys on more representative samples are required for strategic planning.

References

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Q & A

Q: Thank you for that very interesting presentation. I was wondering, do you have recommendations in China for how much weight women should gain during pregnancy?

Dr Chen: We do not have that right now. People always ask that. We do not have many studies on that. We cannot say what the Chinese recommendation is, so they follow the IOM (Institute of Medicine) recommendation.

Q: Just to follow up with that. I was talking with an obstetrician in Shanghai a few weeks ago, where a series of what they call obstetrics and gynecology hospitals are established across the area. He was telling me that 98% of the women who receive care in these hospitals follow IOM guidelines. This is a completely different obstetric culture. These mothers want to have an appropriate weight gain.

Dr Chen: The nutrition for adolescents in China is a problem, because obesity is not of very much concern. Even in the rural areas, the obesity or overweight prevalence among girls is lower than among boys.

The mothers and the girls always are concerned about their weight. For the boys, it is not that much of a concern right now. The girls control their diet, so many of those young women in China are smaller and shorter. This should become a greater concern for the next generation. We still need some research on that.