

Ying Yang Bao: Improving Complementary Feeding for Chinese Infants in Poor Regions

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Ying Yang Bao (YYB, a Chinese translation of nutrient sachets) is a soy bean powder-based complementary food supplement containing vitamins A, D, B₁, B₂, B₆ and B₁₂, folic acid, calcium, iron and zinc. YYB can be used as a home fortification product and added to porridge, noodles and other homemade complementary foods.

Development of YYB

YYB could be traced back to a home fortification intervention study on complementary feeding of infants which was organized by the Chinese Centers for Disease Control and Prevention (CDC) and ILSI during 2001–2003. The results showed that YYB improved nutrition status and cognitive scores of the test group. Nestlé developed the YYB product and donated the product for the intervention [1]. In 2008, the Chinese CDC implemented the project ‘Infants Nutrition Intervention Project in Wenchuan Earthquake Regions’. The project supplied infants with YYB in 11 counties from 2008 to 2011. The survey data showed that the anemia rate decreased and z-scores increased remarkably. The national standard of complimentary food supplements was proven by the Ministry of Health in 2008. There have been 15 national or regional intervention projects carried out in rural China so far. The Ministry of Health launched a national project aiming to improve child nutrition in poor regions in 2012.

Nutrition Effects of YYB

Results of the Gansu study suggested that the YYB group had lower anemia rates, higher length-for-age and weight-for-age z-scores, and better cognitive scores [2–4]. Zhang et al. [5] systematically reviewed the studies of different YYB projects. Thirteen groups of qualified data from 9 YYB intervention studies were used. The results showed that

YYB significantly increased the level of hemoglobin, reduced the prevalence of anemia, and increased weight-for-height and weight-for-age z-scores.

Improving Child Nutrition in Poor Regions

The project 'Improving Child Nutrition in Poor Regions' aimed to supply all the 6- to 24-month-old infants with YYB in poor rural counties combined with the distribution of nutrition knowledge to the guardians. In 2015, the fund amounted to 500 million CNY and 341 counties covered. It is expected that the coverage will extend to all the 834 poverty counties mainly located in west and middle regions. The Chinese government has continuously purchased YYB products and distributed them to families in 341 poor counties and thus to more than 4 million infants.

In conclusion, the YYB studies indicate the effectiveness of this fortification method, and YYB might also be beneficial for malnourished infants in other developing countries to improve nutrition and health. To strengthen the scientific observations and research on YYB, further studies aiming to improve the formula, randomized controlled trials and cost-benefit analyses are warranted. The working system for YYB project implementation should also be studied in terms of sustainability and feasibility.

References

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