

**Abstract of a major presentation at the  
International Conference**

**Forging Effective Strategies to Combat Iron Deficiency**

**Atlanta, GA USA  
7-9 May 2001**

**Organized and sponsored by:  
ILSI Center for Health Promotion  
Centers for Disease Control and Prevention  
Emory University  
Micronutrient Initiative**

**(Additional information and publications from this Conference can be  
found at the website of the International Life Sciences Institute  
(<http://www.ilsa.org/>)**

**The Control of Iron Deficiency Anemia by Sodium Iron EDTA Fortified Soy Sauce**  
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Soy sauce was selected as the food carrier, because about 70% of Chinese population consume soy sauce and NaFeEDTA was selected as the iron compound, because of its high bioavailability for people consuming plant food based diet. In order to promote the use of NaFeEDTA fortified soy sauce as a national strategy for the control of iron deficiency anemia, the following studies supported by ILSI's Project IDEA and Micronutrient Initiatives were conducted.

- The technology for making food grade NaFeEDTA in large scale was completed, and the product meets the JECFA specifications.
- The technology for fortifying NaFeEDTA during soy sauce production was established, which does not require significant additional equipment.
- NaFeEDTA fortification does not cause organoleptic changes in soy sauce and is stable.
- The average rate of iron absorption of NaFeEDTA and FeSO<sub>4</sub> in soy sauce in adult Chinese females was found to be 10.5% and 4.7%, respectively.
- Soy sauce containing 5 or 20 mg Fe as NaFeEDTA was highly effective in the treatment of anemic children within 3 months.
- A double blind controlled efficacy trial covered about 10,000 subjects in a high risk population with about 30% prevalence of anemia was started in September, 2000, using NaFeEDTA fortified soy sauce (4 mg/adult/day). The increase of blood hemoglobin level and reduction of anemia prevalence rate in all age groups in the intervened group after 6 months trial were highly significant, while no obvious change was observed in the control group. The trial will continue for 2 years. In addition to blood hemoglobin level, other variables measured in the study include: blood hematocrit, ferritin, Zn protoporphyrin and retinol; anthropometry; and food consumption (using FFQ).

The next step is to provide advice to the national regulatory authorities to promulgate regulations and standards for the control of NaFeEDTA fortified soy sauce, and also work with national soy sauce association to develop mechanisms of gradually expanding the production of NaFeEDTA fortified soy sauce.