



Journal of

# Trace Elements

in Medicine and Biology

Journal of the Federation of European Societies on Trace Elements and Minerals (AISETOV, GMS, RUSTEM, SEQCET, SFERETE)  
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## ABSTRACTS X. ISTERH CONFERENCE TRACE ELEMENT RESEARCH ON HEALTH AND DISEASES

Keio Plaza Hotel Tokyo, Tokyo, Japan  
18–22 November 2013

**Joint Conference**

Japan Society for Biomedical Research on Trace Elements

**Corporate Backer**

Japanese Society of Clinical Nutrition



**ISTERH** International Society For  
Trace Element Research in Humans



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## The Effects of Iron/Folic Acid/Zinc Supplementation on Insulin-Like Growth Factor-1 Levels in Anemic Pregnant Women

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Zinc, a micronutrient associated with anemia and growth, is thought to potentially alleviate anemia in pregnant women and increase fetal growth. The present study aimed to clarify the mechanism responsible for this improvement by administering iron/folic acid/zinc supplements in pregnant women with anemia and documenting levels of Hb and Insulin-like Growth Factor-1 (IGF-1). This was a quasi experimental study with a pre-test and post-test non-randomized control group design. The treatment group comprised pregnant women with anemia who were administered supplements containing iron, folic acid and zinc (n=18; 60 mg, 0.25 mg and 50 mg, respectively). Subjects in the control group received supplements with only iron and folic acid (n=18; 60 mg and 0.25 mg, respectively). A significant difference in IGF-1 levels were found between groups (p<0.05). The control group showed improvement in anemic status and fetal growth through increases in Hb and IGF-1, while this was not observed for the treatment group. We conclude that increases in Hb contribute to increases in IGF-1 by as much as 36.5%.