



**Nutritional support to TB patients
results from two trials in Tanzania**

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Published in:
Annals of Nutrition and Metabolism

DOI:
[10.1159/000248275](https://doi.org/10.1159/000248275)

Publication date:
2009

Document version
Publisher's PDF, also known as Version of record

Citation for published version (APA):
Praygod, G., Faurholt-Jepsen, D., Range, N., Andersen, Å. B., & Friis, H. (2009). Nutritional support to TB patients: results from two trials in Tanzania. *Annals of Nutrition and Metabolism*, 55(Suppl. 1), 227.
<https://doi.org/10.1159/000248275>

print
ISSN 0250-6807

Ann Nutr Metab
55(suppl 1) 1-758 (2009)

55 S1 09

online
ISSN 1421-9697

www.karger.com/anm

ISBN 978-3-8055-9204-8

Annals of Nutrition & Metabolism

An Official Journal of



International Union of
Nutritional Sciences (IUNS)

fens

Federation of European
Nutrition Societies (FENS)

ABSTRACTS 19th International Congress of Nutrition

October 4-9, 2009, Bangkok, Thailand



4-9 October 2009
BITEC, Bangkok, Thailand

Editors

K. Tontisirin, Bangkok

E. Wasantwisut, Bangkok

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Medical and Scientific Publishers
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Bangalore · Bangkok · Shanghai ·
Singapore · Tokyo · Sydney

THE HOUSEHOLD FOOD INSECURITY IS ASSOCIATED WITH HOUSEHOLD MALARIA IN RURAL SOUTH HAITI

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OBJECTIVES: South Haiti is heavily affected by food insecurity (FI) and we examined if these two conditions were associated with each other.

DESIGN & METHODS: We studied a convenient sample of 153 women children under five in Camp Perrin, South Haiti. Household FI was assessed by a previously validated 16-item Latin American and Caribbean Household Food Insecurity Scale (ELCSA).

RESULTS & FINDINGS: Households were categorized as either FI/very FI (ELCSA score range: 1-10) or severely FI (57.3%, ELCSA score range: 11-15). According to maternal report, 34% of the children had malaria during the 12 months preceding the survey. Multivariate analyses showed that severe FI was a risk factor for malaria (OR: 5.4; 95% CI: 1.7-17.2).

CONCLUSIONS: Severe household FI is a strong independent risk factor for malaria among children < 5 year old in Haiti. Supported by the AgroSalud Project (CIDA # 7034161).

EFFECT OF SOY FIBER IN RATS WITH LACTOSE INDUCED DIARRHEA

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Soy fiber has been used in the treatment of constipation, more recently it has been used in the treatment of diarrhea. To determine the value of fiber in the treatment of diarrhea, the effect of isolated soybean fiber (Fibrin®) was studied in rats with lactose-induced diarrhea. In the study, fiber was included in the diet at 0, 5 and 5% to 8 groups of rats. One half of them had diarrhea. The results showed that fiber increased fecal mass, water and dry matter particularly in rats with diarrhea. However, the appearance of the diarrhea in the fiber rats was watery. In addition, a reduction in the absorption of the total diet as well as the dietary protein and iron was observed particularly in the fiber fed rats with diarrhea. These rats also had reduced fat body stores. This reduction was in proportion to the fiber content of the diet. Therefore, in this study, fiber aggravated the negative nutritional effects of diarrhea with only a cosmetic effect on its severity.

PREVALENCE OF IRRITABLE BOWEL SYNDROME IN JAPANESE MEDICAL AND NURSING STUDENTS

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OBJECTIVE & RATIONALE: Irritable Bowel Syndrome (IBS) is a common functional gastrointestinal disorder. This study investigated the prevalence of IBS and the relation of IBS to stress, lifestyle and dietary habits among Japanese medical and nursing students.

DESIGN & METHOD: We conducted a cross-sectional study using a self-administered questionnaire among 2639 Japanese students and 2500 Chinese students studying nursing or medicine. IBS was diagnosed using Rome II criteria.

RESULTS AND FINDINGS: The prevalence of IBS was 35.5% (m: 25.2%, f: 45.6%) in Japanese and 32.1% (m: 26.6%, f: 33.6%) in Chinese. In both Japanese and Chinese, the IBS groups showed significantly higher anxiety levels, life events, sleep disorder and habitually skipped meals with greater frequency compared to those in the non-IBS groups.

CONCLUSION: In both Japanese and Chinese, the prevalence of IBS among medical and nursing students was higher than that in the general population. Japanese and Chinese IBS groups had more stress and their lifestyles were more disordered

than the non-IBS groups.

P24-07

LIPID PEROXIDATION AND VARIATION OF ANTIOXIDANT ENZYMES AND VITAMINS IN MALARIA INFECTED PREGNANT WOMEN

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Malaria infection is accompanied by increased production of Reactive Oxygen Species (ROS). The biochemical injuries caused by oxidative stress represent a key factor in the physiopathology of malaria. Knowing the body antioxidant status may give the possibility of a specific prevention of malaria based on nutrition.

The present investigation was undertaken to determine the extent of lipid peroxidation and to investigate the changes in antioxidant compounds (Superoxide dismutase (SOD), Catalase and major antioxidant vitamins A, E, C) in malaria-infected pregnant women.

Malondialdehyde level was quantified to assess the degree of lipid peroxidation. Activities of antioxidant enzymes were measured and the status of vitamins A, E and C was estimated.

Plasma MDA level was significantly increased in malaria patients. Activities of SOD and catalase as well as the antioxidant vitamins were decreased significantly in malaria patients.

The general depression in antioxidant in malaria patients suggests that nutritional improvements of antioxidant capacities may be a therapeutic strategy to prevent the occurrence of oxidative stress, thus the severity of malaria.

P25: Nutrition & Respiratory Infection

P25-01

NUTRITIONAL SUPPORT TO TB patients: RESULTS FROM TWO TRIALS IN TANZANIA

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RATIONALE & OBJECTIVES: Nutritional support to pulmonary TB (PTB) patients is not integrated in programs. We previously found that micronutrient (MN) supplementation among sputum-positive PTB-patients (PTB+) with HIV (HIV+) was beneficial. We aimed to assess effects of additional energy-protein (E-P) to PTB+/HIV+ patients and of MN to other PTB-patients.

MATERIALS & METHODS: Two trials among PTB-patients during the first two months of TB-treatment in Mwanza, Tanzania. PTB sputum-positive (PTB+)/HIV+ patients were randomized to daily supplementation with 1 or 6 energy-protein (E-P) bars, both with MN. PTB-patients found sputum-negative (PTB-) or HIV- were randomized to a daily energy-protein bar with low or high MN content. Primary outcomes were weight gain and grip strength.

RESULTS & FINDINGS: 1250 patients were enrolled: 379 to the E-P trial and 871 to the MN trial. Mean (SD) baseline BMI were 18.6 (2.9) and 18.9 (3.0) kg/m², respectively, and follow-up rates at two months were 87.9 and 89.4%.

CONCLUSION: Results of the trials will be presented.

P25-02

EFFECT OF L-LYSINE ON ACUTE UPPER RESPIRATORY INFECTIONS IN LOW-INCOME PERI-URBAN SUBJECTS IN ACCRA, GHANA

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RATIONALE AND OBJECTIVES: Lysine, a limiting amino acid in high-cereal diets, is implicated in reducing acute respiratory infections (ARI). The