

Nutrition Info

Quarterly
September 2004

INTRODUCTION

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The quarterly mailing provides an opportunity of scientific reviews on aspects of nutrition and news of important or emerging issues in the field of human nutrition, particularly in research, health promotion, policy, etc.

The topic on Infant and Young Child Feeding (IYCF) and efforts deployed by the international community including UNICEF country programmes, shows the commitment and the renewed interest in the area of IYCF. Findings of three articles are presented here:

(a) Discussions about the relationship between blood pressure in childhood and breastfeeding, the whole question of whether or not breastfeeding in infancy lowers blood pressure.

(b) The question of breastfeeding and pediatric obesity, can breastfeeding protect against pediatric overweight.

(c) Discussions on the importance of optimal breastfeeding in developing countries, a review and analysis of nationally representative surveys.

The topic on Nutrition Security and Emergencies is presenting key conclusions of the recent WHO Informal Consultation held early September 2004, a process initiated to review current literature and evidence on the management of severely malnourished children that could be considered in the modification of the guidelines drafted by WHO in 1992, and published in 1999. The next step after will be to convene a wider meeting with all stakeholders in the field of the management of severe malnutrition to share the findings of the Informal Consultation and agree on the next agenda toward a unified UNICEF/WHO manual to ensure appropriate guidance in the treatment of severe malnutrition and management of its medical complication.

We hope this quarter's mailing will have information that is of use to you and, perhaps, stimulates new approaches. The contents are described below. Publications marked with (*) will go only to our Field Offices. Please do not hesitate to contact us if you have suggestions regarding the mailing in general or on the materials you receive. We would welcome contributions.

The NYHQ Nutrition Section Team.

GENERAL AND COMMUNITY NUTRITION**Nutrition Papers of the Month****July 2004**

Fawzi, W.W., Msamanga, G.I., Spiegelman, D., Wei, R., Kapiga, S., Villamor, E., Mwakagile, D., Mugusi, F., Hertzmark, E., Essex, M., Hunter, D.J. *A Randomized Trial of Multivitamin Supplements and HIV Disease Progression and Mortality.* The New England Journal of Medicine 2004. 351(1); 23-32

Multivitamin supplements delay the progression of HIV disease and provide an effective, low-cost means of delaying the initiation of antiretroviral therapy in HIV-infected women.

August 2004

Caulfield, L.E., Richard, S.A., & Black, R.E. *Undernutrition As An Underlying Cause Of Malaria Morbidity And Mortality In Children Less than five Years Old.* Am. J. Trop. Med. Hyg. 2004; 71(Suppl 2): 55-63

Undernutrition is highly prevalent in many areas in which morbidity and mortality from malaria is unacceptably high. That undernutrition exacerbates diarrhea and respiratory infections is widely demonstrated; however, research suggests that it may exacerbate, palliate, or have little effect on malaria outcomes. This review examines the global burden of malaria associated with various nutrient deficiencies as well as underweight status in children 0-4 years in age. Although the association is complex and requires additional research, improved nutritional status lessens the severity of malaria episodes and results in fewer deaths due to malaria. Deficiencies in vitamin A, zinc, iron, folate, as well as other micronutrients are responsible for a substantial proportion of malaria morbidity and mortality. It is recommended that nutrition programs be integrated into existing malaria intervention programs.

September 2004

Christian, P., Khatri, S.K. and West, K.P. *Antenatal Anthelmintic Treatment, Birthweight, And Infant Survival in Rural Nepal.* The Lancet 2004; 364 (9438): 981-983

Anthelmintic treatment, which is recommended during pregnancy in areas where there is a high rate of anaemia, needs further investigation. We examined prospectively the association between anthelmintic treatment and maternal anaemia, birthweight, and infant mortality in a study of prenatal supplements, in which women received albendazole twice during pregnancy. Women given albendazole in the second trimester of pregnancy had a lower rate of severe anaemia during the third trimester. Birthweight of infants of women who had received two doses of albendazole rose by 59 g (95% CI 19-98), and infant mortality at 6 months fell by 41% (RR 0.59; 95% CI 0.43-0.82). Antenatal anthelmintics could be effective in reducing maternal anaemia and improving birthweight and infant survival in hookworm-endemic regions.

*UNU. *Food and Nutrition Bulletin* 2004; 25(3)

SCN. *Food and Nutrition Library 3.0.* CD-ROM. 2004

HIV/INFANT AND YOUNG CHILD FEEDING AND CARE**Breastfeeding Papers Of The Month**

This quarterly mailing considers why there is renewed interest in infant and young child feeding and care, and how we might raise the profile of this issue with our government counterparts.

Why is there renewed interest in infant and young child feeding and care at this time?

In honour of World Breastfeeding Day (1 August) and World Heart Day (26 September) this issue of our quarterly mailing is devoted to articles relevant to these considerations.

World Breastfeeding Week 2004

Sixteen countries shared their activities, plans and results with HQ and we are happy to provide this information to all. Congratulations to all for keeping the issue alive and on the agenda of local decision makers. Special congratulations to **India** for its Actions and Plans, including networking, updates, the launching on children's day of a major national behaviour change effort, and the launching of the Exclusive Breastfeeding materials with BPNI. The resulting changes in the Country Plan that resulted included strengthened convergence of efforts, updated guidelines, increased commitment of government resources for IYCF, especially EBF for 6 months as a key indicator of progress – the gold standard – a hallmark of quality child care. Also special kudos to **Uruguay** for increasing training opportunities; **Rwanda**, for catalyzing the development of a wide variety of levels of action for breastfeeding support; **Liberia** for advocacy awareness; **Tajikistan** for developing IEC materials on EBF; **Fiji** for continued commitment to action; **Mongolia** for its work on the Code of Marketing; **Thailand** for its attention to EBF; and **Sri Lanka** for massive capacity improvement and model district work, as well as for efforts to ensure that EBF and CF are in ECD programme work. Other countries reporting included **Burundi, Ethiopia, Senegal, Jordan, Yemen, Vietnam, and Maldives**. A summary matrix of these reports has been sent to these countries. Please contact them directly for additional information. The summary will be posted on intranet with other ECD materials.

WHD: You may be wondering, 'What is the connection between infant and young child feeding and heart health?' One of the key linkages is that breastfeeding, especially exclusive and sustained breastfeeding, is associated with less obesity. Some of the articles that underscore this association have been selected as papers of the month. This issue is summarized in one of the enclosures: *World Heart Federation Heartbeat Journal*, September 2004, p. 4-5 as 'Breastfeeding for Lifetime Heart Health'. It reviews infant feeding, obesity and

heart disease, summarizing new studies that underline the importance of breastfeeding for risk reduction, and can be found at the following Website:

<http://www.worldheart.org/pdf/publications.heartbeat.2004.09.pdf>

At least four important studies in the last year alone help define and clarify the important protective role of breastfeeding against risk factors and determinants of coronary heart disease, including the protection of breastfeeding against obesity in childhood and beyond.

July 2004

Martin, R.M., Ness, A.R., Gunnell, D., Emmett, P., Smith, G.D. *Does Breast-Feeding in Infancy Lower Blood Pressure in Childhood?* The Avon Longitudinal Study of Parents and Children (ALSPAC). *Circulation* 2004; 109:1259-1266.

One of the most convincing articles is that of the Avon Longitudinal Study of Parents and Children (ALSPAC). (1) This group followed a representative sample of a cohort of children over time, with more than 4000 subjects. After controlling for many possible maternal and child factors, there was a 0.2 mm Hg reduction in systolic pressure for each 3 months of any breastfeeding among the children at age 7 years, for an overall reduction of 0.8 mm Hg. The impact was greater for exclusive breastfeeding, although this did not achieve statistical significance. **While this may sound like a small difference, the authors note that this level of change at the population level would result in a measurable reduction in premature mortality** of about 10,000 in the US and UK combined.

August 2004

Grummer-Strawn, L.M. and Mei, Z. *Does Breastfeeding Protect Against Pediatric Overweight? Analysis of Longitudinal Data From the Centers for Disease Control and Prevention Pediatric Nutrition Surveillance System.* *Pediatrics* 2004; 113(2):e81-86

Another eye opener was the US study on obesity (2) that asked, "Does breastfeeding protect against pediatric overweight?" Since obesity is a common predisposing factor for coronary and other arterial disease, it was a very interesting find that **the duration of breastfeeding showed a dose response, protective relationship with the risk of overweight** in non-Hispanic white 4 year old children

This finding confirmed the similar findings of a meta-analysis (3) that found that, among 11 studies that examined prevalence of overweight in children older than 3 years of age and that had a sample size of > or = 100 per feeding group, 8 showed **a lower risk of overweight in children who had been breastfed, after controlling for potential confounders.** The 3 "negative" studies lacked information on the exclusivity of breastfeeding. A dose-response relationship with duration of breastfeeding was observed in some, but not all, of the

"positive" studies.

A study from Iceland (4) considered whether birth weight might contribute to obesity. In the study of 120 children, **a longer duration of breastfeeding was related to higher HDL-cholesterol (good cholesterol) in 6 year old girls, and lower BMI in 6 year old boys.** No association was seen with birth weight. Since both high BMI and low HDLs are associated with heart disease, this may begin to shed some light on how breastfeeding might have a lifetime influence on heart health.

Yet a fourth recent publication from London (5) explored some the biological markers in more depth. These researchers examined the issue of breastfeeding and lower cholesterol in later life by assigning pre-terms to breastmilk or standard formula, along with preterm formula in both groups. At age 13-15 years, **those with a greater proportion of human milk intake had better LDL/HDL ratios, independent of gestation and potential confounding variables, as well as better apolipoprotein ratios.**

Taking the findings into study of adult ischemic health, Rich-Edwards and colleagues (6) note that only 2 studies have evaluated the relation between having been breastfed and the risk of adult cardiovascular events. To address this issue, they examined this association among 87,252 female participants of the longitudinal Nurses' Health Study. Participants (all born between 1921 and 1946) reported in 1992 whether and for how long they were breastfed. Compared with women who were never breastfed, women who were breastfed were seen to have a hazard ratio around 0.90 for coronary heart disease and for stroke, after adjustment for age, birth weight, and smoking, however, none of the findings achieved statistical significance. When body mass index was also included in the model, the results were similar. This study, then, suggests but does not establish, that **breastfeeding in infancy may be associated with a reduction in risk of ischemic cardiovascular disease among women in adulthood independent of obesity.**

This set of studies included subjects aged 4-15 years and into adulthood, and the findings were consistent: the more breastfeeding, the more human milk, the less overweight and other risk factors for heart disease. Even when not all studies achieve statistical significance, with this increasing body of evidence, it is becoming more reasonable to support breastfeeding, not only for its positive impact on health and survival in infancy and childhood (7), not only for its immune protective impact in infancy and beyond (8), not only for its impact on cognitive and neurological development, not only for the reduced cancers seen in children and their mothers who breastfed, but now, also, for the lifelong benefit of reduced obesity and cardiac risk.

References

(1) Martin R, Ness A et al. Does Breast-Feeding in Infancy Lower Blood Pressure in Childhood? *Circulation* 2004; 109:1259-1266.

(2) Grummer-Strawn L, Mei Z. Does breastfeeding protect against pediatric overweight? Analysis of longitudinal data from the Centers for Disease Control and Prevention Pediatric Nutrition Surveillance System. *Pediatrics*. 2004 Feb;113(2):e81-6.

(3) Dewey KG. Is breastfeeding protective against child obesity? *J Hum Lact*. 2003 Feb;19(1):9-18.

(4) Thorsdottir I et al. Association of birth weight and breastfeeding with coronary heart disease risk factors at the age of 6 years. *Nutr Metab Cardiovasc Dis*. 2003 Oct; 13(5):267-72).

(5) Singhal A, Cole T et al. Breast milk-feeding and lipoprotein profile in adolescents born preterm: follow-up of a prospective randomised study. *Lancet* 2004 May 15; 363(9421):1571-8.

(6) JW Rich-Edwards, MJ Stampfer, JE Manson, B Rosner, FB Hu, KB Michels, and WC Willett. Breastfeeding during infancy and the risk of cardiovascular disease in adulthood. *Epidemiology*, September 1, 2004; 15(5): 550-6.

(7) G Jones et al. How many child deaths can we prevent this year? *LANCET*, Child Survival Series, July 2003, 362:65071

(8) Labbok M, Clark D, Goldman A: Breastfeeding and Immunology: Possible public policy impact, *Nature Immunology*. July 2004

(PDFs or abstracts available from Nutrition Section – mlabbok@unicef.org)

How might we raise the profile of this issue with our government and civil society counterparts?

September 2004

Lauer, J.A., Betrán, A.P., Victora, C.G., de Onís and Barros, A. *Breastfeeding Patterns and exposure to Suboptimal Breastfeeding Among Children in Developing Countries: Review and Analysis of Nationally Representative Surveys*. *BioMed Central* 2004; 2(26):1-29

A new WHO study underscores why we should be increasing our attention and support for interventions proven to increase optimal infant and young child feeding, especially exclusive and continued breastfeeding. Lauer et al (*BioMed Central (BMC) Medicine* 2004, 2:26, <http://www.biomedcentral.com/1741-7015/2/26>) show us that compliance with breastfeeding recommendations in developing countries is strikingly low, and more attention should be given to increasing breastfeeding – especially exclusive breastfeeding (EBF) – and to monitor trends. Their findings from 135 developing countries confirm the State of the World's Children figure of 39% EBF. Data are presented by All, by WHO Region and by selected countries (Burundi, Colombia, El Salvador, Gabon, Ghana, India, Morocco, and Niger).

How do we use this highly analytic information? The message from this WHO analysis is useful in and of itself to remind all of the need to be vigilant in support of breastfeeding. In addition, a global report on the State of the Art of Breastfeeding and Complementary Feeding is being prepared, with the aim of supporting you in your work with government and civil society to raise the profile and the level of activities in support of breastfeeding.

Current programme action guidelines exist to support IYCF in general and in the context of HIV/AIDS. The technical guidelines are available from mlabbok@unicef.org and include checklists for implementation in four vital areas:

Activity Area 1

Build Multi-sectoral National Policy and Commitment.

Activity Area 2

Create Mother and Baby-friendly Care through Health Services and Training Reform.

Activity Area 3

Support Community/ Communications/ Social Advocacy.

Activity Area 4

Ensure Crosscutting Programming Issues and Needs are considered in all IYCF activities (e.g., HIV/Infant Feeding and Emergencies).

These guidelines are available in near final draft in two versions: one for UNICEF offices and one for counterparts and others interested in implementing the Global Strategy for Infant and Young Child Feeding.

Additional attachments

LINKAGES produces a good series, entitled "Facts for Feeding". We will try to supply you a copy of these in the quarterly mailings.

USAID/AED. *Guidelines for Appropriate Complementary Feeding of Breastfed Children 6-24 Months of Age*. Updated April 2004

USAID/AED. *Breastfeeding and HIV/AIDS Frequently Asked Questions (FAQ)*. Updated April 2004

USAID/AED. *Mother-to-mother Support For Breastfeeding Frequently Asked Questions*. Updated April 2004

UNICEF NYHQ. *Baby-Friendly and Beyond*. Issue One, 2004

UNICEF NYHQ. *Press Release—Taking Early Childhood Nutrition to Heart*. 2004

MICRONUTRIENTS

Davidsson, L., and Nestel, P. *Efficacy and Effectiveness of*

Interventions to Control Iron Deficiency and Iron Deficiency Anemia. 2004

*WHO/UNICEF. Focusing on Anaemia—Towards and Integrated Approach for Effective Anaemia Control. 2004.

Hetzel, B., Delange, F., Dunn, J., Ling, J., Mannar, V., Pandav, C. Towards The Global Elimination of Brain Damage Due to Iodine Deficiency – A global program for human development with a model applicable to a variety of health, social and environmental problems. 2004

ICCIDD. IDD Newsletter. 20(2); 2004

NUTRITION SECURITY AND EMERGENCIES

The Management of Severe Malnutrition in emergency and non emergency settings

WHO, in collaboration with UNICEF and academic professionals, held an informal consultation (Geneva 6-7 September 2004) as first step of the process to review current literature on the management of severe malnutrition. The aim of the consultation was to: i) critically review new evidence in relation to current WHO guidelines on the Management of severe malnutrition; ii) consider if changes to guidelines may be required as a result of the new evidence; iii) consider if guidelines need modifying for infants aged <6months; iv) assess the guidelines in relation to care of severely malnourished children with HIV/AIDS, or children of unknown status in areas where there is a high prevalence of HIV; and identify a research agenda for inpatient care of severely malnourished children.

At this early stage of this process, the major conclusions are:

- There have been no fundamental modifications to the WHO guidelines.
- Some important issues have emerged (e.g. feeding very young infants, care of HIV- exposed or infected infants) and, as new information emerges in the future, specific changes to the guidelines may be needed.
- These new issues do not challenge the fundamental principles upon which the guidelines are based.
- As regards to infants less than 6m, the first priority is to stabilise the child with F75. In the rehabilitation phase there are no data to indicate that some other formulation would be preferable to F100. More information is sought on rehabilitation with a) infant formula, b) diluted F100 and c) F100.
- care of LBW infants who are not severely wasted or oedematous should follow the WHO-CAH guidelines for LBW in-

fants.

- Advances and availability in a) HIV testing b) ARVs have made some statements in the guidelines anachronistic. The statements advising against testing and not revealing results to staff will therefore need rewording. ARVs are effective in reducing viral load but the pharmacokinetics and pharmacodynamics of these drugs in severely malnourished children are unknown. Research is therefore needed to define the combination of drugs and dosages to use, and the time to start ARV treatment.

- In preparing ReSoMal with the new WHO 75mmolNa/L sachet, the recommendation is to continue with the dilution as currently given. The Na content of ReSoMal will thus become 37.5mmol/L (instead of 45 mmol/L).

- The need for careful monitoring to prevent fluid overload during rehydration was re-emphasized.

- the importance of providing potassium was stressed. If CMV or KCl are unavailable, crushed Slow K (half a tablet/kg/day) can be substituted.

A wider meeting in a near future including more partners in the treatment of severely malnourished children will be the next step.

*UNSCN. Nutrition Information in Crisis Situations. II; 2004

MEETINGS/WORKSHOPS/TRAINING

Upcoming trainings

It would not be accurate to assume that sufficient in-country expertise exists in support of optimal infant and young child feeding without careful assessment and evaluation of your local situation. Many of the individuals who were trained in the 1990s are no longer available, and new information, especially concerning HIV/AIDS and emergencies, as well as optimal complementary feeding, has not been included in previous trainings.

Please consider sending individuals to trainings or setting up local or regional trainings. While PMTCT trainings are being promulgated, there are not sufficient to address the needs of the majority. Special breastfeeding and complementary feeding support skills are not included, and are assumed to be taught in other trainings. One training course that we recommend is that of the CICH. We understand that new courses are being developed in Spanish by the University of Puerto Rico and in French by McGill University in Montreal, and we will let you know the details as soon as we do. Follows is the information from the brochure of the CICH training:

***Capacity Building on Infant and Young Child Feeding: High**

Level Training Courses which concord with the WHO/UNICEF Global Strategy.

BREASTFEEDING COULD PREVENT 13% OF CHILD DEATHS - MORE THAN ANY OTHER INTERVENTION

Interventions to improve breastfeeding practices have been shown to have the greatest potential to save lives. Improving complementary feeding **and** breastfeeding practices could prevent almost 1 in 5 child deaths.*

WE KNOW WHAT NEEDS TO BE DONE, BUT WE NEED TRAINED PEOPLE TO LEAD AND ACT

Few senior health professionals have had the kind of training that equips them for leadership and advocacy on infant feeding. Opportunities for comprehensive and up-to-date training on infant feeding are rare and breastfeeding is usually poorly covered in pre-registration training.

AS YOU MAKE YOUR PLANS FOR 2005/2006, INCLUDE CAPACITY BUILDING ON INFANT FEEDING.

(1) Specialist Training in London

The annual **Breastfeeding: Practice and Policy Course at the Centre for International Child Health, London** has an established track record for training senior health professionals and UNICEF staff to take an active role in improving breastfeeding practices, implementing international initiatives on infant feeding and training others. It is held in collaboration with UNICEF (Nutrition Section) and WHO (Department of Child and Adolescent Health).

New for 2005 - 2 x 2-week modules

In recognition that it has often been difficult for candidates to take 4 weeks study leave, the course can now be taken as two separate 2-week modules which can be taken individually or over successive years. See Dates and Details below.

(2) Provincial Level Training In Country

The **Breastfeeding: Advocacy and Practice Course** offers provincial level training for trainers, co-ordinators and resource personnel. It is a flexible 2-week course, held in partnership with host country breastfeeding coordinators and tailored to suit the particular needs of the country. It has been successfully piloted in South Africa with partners UNICEF SA and the Nutrition Directorate of South Africa. For further details please email bfeed@ich.ucl.ac.uk.

Dates and Details

Breastfeeding: Practice and Policy Certificate Course, 4 weeks. 13th June - 8th July 2005, Course fees - £2300 (approximately US\$4000)

Provides comprehensive and up-to-date scientific and technical and practical training on all aspects of breastfeeding and feeding of the breastfed baby from birth to two years or beyond. For many years, this course has been the only advanced

masters-level international training course on breastfeeding available worldwide.

Part 1: *Breastfeeding and Public Health: Essential Knowledge and Skills*. 2 weeks—13 - 24 June 2005, Course fees £1150 (approximately US \$2000)

Concentrates on feeding the younger baby, examines the science behind good practice recommendations and looks at how mothers can be supported to breastfeed and the skills required.

Part 2: *Breastfeeding and Beyond: Addressing Challenges to Optimal Infant and Young Child Feeding*. 2 weeks—27 June - 8th July, Course fees £1150 (approximately US \$2000)

Takes up the UNICEF theme of 'Baby Friendly and Beyond' to address medical and programmatic issues affecting the breastfed infant and young child. It looks at feeding of older babies, babies with special needs, and whose mothers have HIV. Covers the BFHI, International Code and Global Strategy. Useful for those working in non-clinical and clinical settings.

For further details **visit course website** www.cich.ich.ucl.ac.uk/cich under *Teaching Programme (new web pages end September)* or contact the course organisers directly on bfeed@ich.ucl.ac.uk."

Final Announcement

IVACG. XXXII IVACG Meeting—15-17 November 2004. Vitamin A and The Common Agenda for Micronutrients. Lima, Peru.

INACG. 2004 INACG Symposium 18 November 2004. Iron Deficiency in Early Life: Challenges and Progress.

IzINCG Symposium "Moving Zinc into the Micronutrient Program Agenda. 19 November 2004.