

Issue 79

3 simple nutrition interventions in primary care

In a nutshell

Three clinical studies show the value of simple nutrition interventions that can be carried out in primary care.

The three interventions reported in this issue are: using 5 quick questions to identify patients with eating disorders, zinc supplements to protect against childhood pneumonia and diarrhoea, and adding more fish to the diet.

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NUTRITION RESEARCH REVIEW

Study one: A simple test for eating disorders

British researchers have demonstrated that a simple 5 question screening tool can identify patients at risk for eating disorders with a very high degree of reliability.

The 5 questions (abbreviated as “**SCOFF**”) are:

- S:** Do you make yourself Sick because you feel uncomfortably full?
- C:** Do you worry you have lost Control over how much you eat?
- O:** Have you recently lost more than One stone in a 3 month period? (1 stone=6.36kg)
- F:** Do you believe yourself to be Fat when others say you are too thin?
- F:** Would you say that Food dominates your life?

Subjects: 116 women from referrals to a specialist clinic who were confirmed on DSM-III criteria as having either anorexia nervosa or bulimia compared with 96 normal women recruited through local college advertising.

Results: A score of at least two positives from these 5 questions had a sensitivity of 100% (95% CI 97-100%) and a specificity of 87.5% (79.2% - 93.4%) for a diagnosis of eating disorder.

Ref: Morgan JF et al. The SCOFF questionnaire: assessment of a new screening tool for eating disorders.. *BMJ* 1999;319: 1467-1468

Study two: Zinc, pneumonia and diarrhoea

A meta-analysis of 10 randomised controlled trials from developing-world countries has shown that dietary zinc supplementation can reduce the incidence of childhood pneumonia by 41%, and the prevalence of diarrhoea by up to a quarter.

Researchers from the Child Health Research Project (coming from Johns Hopkins School of Public Health in the USA and the World Health Organisation) assessed 10 trials, including reassessment of the original trial data.

Trials were divided into those involving continuous supplementation, and those involving short courses, provided in each case the amount was at least half the US RDI for children and there was at least four weeks of follow-up.

Results: The generally positive effects of zinc supplementation are shown in the Table.

Ref: Bhutta ZA et al. Prevention of diarrhea and pneumonia by zinc supplementation in children in developing countries: pooled analysis of randomized controlled trials. *Zinc Investigators' Collaborative Group. J Pediatr.* 1999 Dec;135(6):689-97

Table: Odds ratio for zinc-supplemented vs placebo children

	Continuous	Short course suppl.
Number of trials	7	3
Diarrhoea incidence (95%CI)	0.82 (0.72 - 0.93)	0.89 (0.63 - 0.88)
Diarrhoea prevalence	0.75 (0.63 to 0.88)	0.66 (0.52 - 0.83)
Pneumonia incidence	0.59 (0.41 - 0.83)	0.74 (0.40 - 1.37)

Study three: Fish is good for you!

Adding fish to a weight loss diet enhances the beneficial effects on glucose-insulin metabolism and lipids, according to a new study from Australia.

Subjects: 63 overweight patients being treated for hypertension.

Method: They were randomly assigned to have either a daily fish meal (3.65 g omega-3 fatty acids), a weight-loss regimen, both, or put into a control group for 16 weeks.

Results: There was an average weight loss of 5.6kg in the energy-restricted diets. The weight-loss diet alone was associated with falls in the insulin resistance ($p = 0.003$) and glucose ($p = 0.047$) during an oral glucose tolerance test, whereas fish diet had no significant effects on these variables. However, the combined fish-weight-loss diet had a greater effect than weight-loss diet alone.

Ref: Mon TA et al. Dietary fish as a major component of a weight-loss diet: effect on serum lipids, glucose, and insulin metabolism in overweight hypertensive subjects. Am J Clin Nutr. 1999 Nov;70(5):817-25.

Comments

All three of these studies exemplify the potential positive impact that can result from simple nutrition interventions. All three of these studies relate to things that can be done by physicians and others involved in primary care.

Physicians and primary care professionals always like simple, quick diagnostic tools. For example, the CAGE questionnaire for alcohol abuse has proved very popular. The main thing is that such tools have to be easy to use, and have adequate sensitivity and specificity. The SCOFF tool for diagnosis of eating disorders that is the subject of our first research paper appears to pass both tests.

Some caution is in order because of the fact that the patient sample in this study was taken from a specialist referral clinic. Under such circumstances, you could expect that patients would be more aware of their situation, and perhaps more willing to give honest answers to such questions than they would be in an undifferentiated primary care setting. Nevertheless the evidence presented suggests this could be a welcome new tool, particularly since eating disorders can have such devastating consequences for teenagers and young adults.

In late 1998 we reviewed a number of randomised trials published that year on zinc supplementation in

children in relation to infectious morbidity. We found that the sum of this data was worthy of cautious optimism. The latest meta-analysis reported above confirms that positive view, focussing particularly on the developing world, where zinc deficiency is common. This raises the possibility of population-based zinc supplementation, along the same lines as vitamin A, by fortification of the food supply.

What was not so clear in late 1998 was whether there was any value to be had in giving zinc supplementation in more developed and 'well nourished' countries, and if so to which patient groups. A year later, this issue is still undecided.

Our third research paper continues the unfolding story of omega-3 oils in clinical medicine. Over the three years that we have been publishing these Clinical Updates we have observed steady progress taking the 'story of fish' from academic towards practical primary care applications that any physician can recommend with confidence.

This latest paper is a good example, suggesting definite benefits from prescribing daily fish to patients on weight loss diets. Whilst daily fish intake may be a problem for some patients, in general this is the kind of simple dietary recommendation that most doctors can readily include in their prescription and which most patients can reasonably implement.

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