ADDRESS LETTERS TO
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Zinc and nutritional health in the elderly

Dear Editor

Gemma Sampson's article, 'Weight loss and malnutrition in the elderly' (*AFP* July 2009), has surprisingly failed to mention zinc and its critical role in the nutritional health of older adults.

Conditional zinc deficiencies (where demand exceeds supply) are associated with many of the age related morbidities mentioned. A zinc deficiency will most often not occur in isolation. Many nursing home residents will have dietary or conditional deficiencies of many of the following: folate, magnesium, zinc, vitamin E, vitamin B6, protein, vitamin C, and thiamine, calcium, vitamin D, and dietary fibre.[1,2]

Improving the nutritional status of the elderly could become be a primary goal in general practice for slowing or delaying chronic disease progression. Zinc levels are frequently at risk in poorly nourished elderly, however, in my experience, they are rarely investigated or treated. Dietary zinc requirements appear to increase progressively as an age related phenomenon and a decline of zinc levels with age is found. While the majority of elderly are not zinc deficient, many will have a marginal zinc status that can affect, most significantly, neuroendocrine immune function.[3]

Zinc deficiency has a role in the pathophysiology of recurrent bacterial infections and immunosenescence, the protein energy deficiencies, chronic rashes, drug sensitivities and depression in the elderly. An increasing volume of evidence links low zinc intakes or status to vaccine failures, delayed wound healing and chronic venous ulcers, chronic diarrhoea, age related macular degeneration, CVD, CRF, obesity associated conditions, neurological degeneration, several malignancies and both forms of diabetes.[4–6] The huge burden on government, doctors and sufferers of these diseases is all too apparent.

Serum zinc is an acceptable biomarker, while a low ferritin status is also suggestive of a zinc deficiency.[7] Several drugs including ACE inhibitors and diuretics increase renal zinc losses.[6] When prescribing, zinc chelates are generally more well tolerated than the sulphate forms.

Paul Stevens
Melbourne, Vic

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Reply

Dear Editor

Thank you to Dr Stevens for highlighting zinc as another important micronutrient when considering malnutrition in the elderly. My article aimed to identify some of the factors involved in the development of malnutrition and highlight the importance of adequate overall dietary intake rather than directing readers to specific nutrients and supplementation.

Supplementing one nutrient in isolation fails to acknowledge the interactions, necessary balances and amounts between multiple nutrients, as continuously discovered by science.[1,2] For example, excessive zinc supplementation may reduce and compromise calcium and copper absorption in the intestine unless calcium and copper rich foods are present in the diet. Most supplementation studies are conducted on healthy elderly populations, with results not always applicable to malnourished elderly.

As mentioned, zinc is involved in the immune system and wound healing. However, neither pathway relies upon a single nutrient. For example, wound healing requires a complex array of micronutrients and amino acids including vitamins A, C, E, selenium, pantothenic acid, zinc, manganese, copper, arginine, cysteine, methionine.[3]

Inadequate intake of meat, seafood, eggs and other high protein foods combined with a high carbohydrate 'tea and toast' diet would result in impaired or deficient levels of zinc, iron, B12 and other nutrients.[1] Phytates in carbohydrate further block zinc absorption and these factors combined with minimal muscle mass would result in low circulating and stored zinc.[2]

Zinc levels decline with age in a similar fashion to decreases in muscle mass. Total zinc ranges from 1.5–2.5 mg with most (57%) being stored intracellularly in skeletal muscle tissue.[4] Without the muscles to store zinc, naturally levels will be inadequate and storage levels will be impaired and supplementation may not correct this.[1]

I agree that zinc is an important nutrient to consider in the elderly, but believe as health professionals, for both quality of life and scientific reasons, we should be first promoting nutritious foods containing protein, zinc and other essential nutrients before encouraging supplementation with tablets and capsules.

Gemma Sampson
Annadale, NSW

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IUCD expulsion symptom

Dear Editor

With the well deserved return to popularity of the safe and reliable intrauterine contraceptive device (IUCD), particularly the levonorgestrel IUCD (Mirena), GPs are increasingly confronted with making a decision between reassurance and removal when a woman seeks advice about IUCD induced cramps.

This year I have seen two women who presented with this problem who both complained of, or admitted to on questioning, exacerbation of the cramping pain on straining at defecation. Both proved on examination to have the stem of the IUCD in the cervical canal, confirming that extrusion was occurring. Attempts to push the IUCD back into the uterus failed and removal of the IUCD was required in both cases. If the IUCD had not been detected in the cervical canal, the rare condition of a perforation with the device in the Pouch of Douglas producing similar symptoms, would have had to be excluded by a pelvic X-ray.

Exacerbation of IUCD pain on defecation would appear to be a useful signal suggesting that extrusion is probably occurring.

Dennis Chambers
Glen Osmond, SA

Reply

Dear Editor

I would like to thank Dr Chambers for highlighting the welcome increase in popularity of the safe and highly effective intrauterine contraceptive devices (IUCDs). We know that approximately one in 20 women will expel their device, usually within the first year of use, and that the risk is highest in nulliparous women. Most women will experience some cramping pain at the time of IUCD insertion, which may last for a few days, and women with copper IUCDs may have increased dysmenorrhoea. Women should not expect to experience significant pelvic pain, other than in these instances, as a result of having the device in place. If women do detect new onset pelvic cramping or discomfort they should see their doctor to exclude possible complications such as an infection, partial or full expulsion or migration of the device.

While Dr Chambers' practical point regarding pain on defecation is not specifically mentioned in the Sexual Health and Family Planning Australia (SH&FPA) Contraceptive Handbook[1] it may indeed be a useful signal for potential expulsion of the device in some women. It should also be noted that a few women may 'silently' expel their device, usually during menstruation, so it is useful to teach women to check for the presence and length of the IUCD strings in the vagina each month

Deborah Bateson
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Reference

1. Contraception: An Australian clinical practice handbook. Sexual Health and Family Planning Australia, 2nd edn, November 2008.

A patient's duty to follow up

Dear Editor

Your recent correspondence (*AFP* August 2009)[1] includes two remarks which struck me as being of great importance for patients and doctors alike.

Firstly, Brett Hunt states, 'Surely the plaintiff's negligence wasn't 'contributory', it was central and the only cause of his problem'.

Secondly, Sara Bird refers to the RACGP '*Standards for general practices* Criterion 1.5.4' regarding the term 'follow up' in which doctors are expected to follow up on information and patients.

There is a plethora of advice and guidelines requiring adherence by doctors to their contribution to a patient's medical care. Conversely, I should be most interested to read a document that acknowledges the contribution and responsibility of patients, and guidelines for the requirement of patients and carers to adhere to measures required to maintain their health.

If the courts are going to exonerate people for not adhering to health necessities, then the courts' same logic would exonerate people for not adhering to road rules, so there would be no such thing as speeding fines, nor penalties for running a red light!

Ross Philpot
Adelaide, SA