Acutely ill elderly people may benefit from nutritional supplements

Research question Do nutritional supplements help elderly people who are acutely ill in hospital?

Answer Probably. Supplements rich in protein and vitamins improve patients' nutrition and reduce readmission rates over six months.

Why did the authors do the study? There's already evidence that sick elderly people do better when they are well nourished, but most research has focused on chronic care settings. These authors wanted to find out whether elderly people benefit from nutritional supplements given during and after an acute illness.

What did they do? They randomised 445 acutely ill, hospitalised patients aged over 65 years to an oral nutritional supplement drink or to an indistinguishable placebo daily for six weeks. The supplement provided extra protein, 995 kcal (4.16 MJ), and 100% of the daily vitamins and micronutrients recommended for elderly people. The authors followed up their patients for six months to look for the effects of the supplement on nutrition (as indicated by serum biomarkers), length of hospital stay, disability (measured with the Barthel index), infections, hospital readmissions, and deaths. Participants had a wide variety of acute illnesses including heart attacks, strokes, and chest infections. A minority were in hospital after elective joint surgery. The authors used intention to treat analysis to compare the two groups.

What did they find? Those who took the supplement were less likely to be readmitted during the six months of the trial than those who took the placebo (65/223 (29%) *v* 89/222 (40%); adjusted hazard ratio 0.68 (95% CI 0.49 to 0.94)). They also had higher serum albumin concentrations that persisted for six months (42.0 g/l *v* 40.5 g/l, *P* = 0.04). Serum concentration of vitamin B-12 and red cell folate concentration were significantly higher in the supplement group after six weeks, but not after six months.

The supplements had no effect on length of hospital stay, disability, infections, body mass index, or measurements of body fat such as the thickness of the triceps skin fold. But the authors found a non-significant increase in deaths among patients taking the supplement (32/223 (14%) *v* 19/222 (9%), *P* = 0.06).

Adherence to treatment was poor. Nearly 60% of both groups took less than a quarter of their allocated treatment. Only 10-15% of both groups took more than 64 of the possible 84 drinks.

What does it mean? The supplements seemed to improve nutrition in acutely ill elderly people and reduce readmission rates over six months, even though few participants took them all. Adherence to nutritional supplements by elderly people is notoriously poor, and it's possible the benefits would have been greater if the supplements had been taken as directed. There's an urgent need for research on why older people don't take their nutritional supplements, even when in hospital, and what can be done to make sure they do.

The increase in mortality at six months was unexpected, but the authors think it unlikely that the excess deaths were caused by the nutritional supplement: half (15/32) of the patients who died in the supplement group had taken fewer than three of the 84 prescribed supplement drinks.

Gariballa et al. A randomized, double-blind, placebo-controlled trial of nutritional supplementation during acute illness. *Am J Med* 2006;119:693-9

This summarises a paper that has been selected by bmjupdates. To register for bmjupdates (free email alerts about high quality new papers in your favourite subjects) go to <http://bmjupdates.com/>

Editor's choice

Questions, questions

Editors spend a lot of time debating whether the questions examined in research studies are important, interesting, new, and relevant enough to readers' practice and decision making. It's only when we're happy with a research question that we move on to look at methods and findings.

Here's a question we decided to air in the *BMJ*: do field tests for visceral leishmaniasis (kala-azar) work well enough in endemic areas? There are half a million new cases of kala-azar a year worldwide, mostly in poor rural areas of east Africa, South Asia, and Latin America. It can be fatal if untreated, but its diagnosis by microscopy of tissue smears (aspirated from spleen, bone marrow, or lymph node) often proves too difficult and dangerous where resources are scarce. Chappuis and colleagues show in a meta-analysis that two field tests based on serology perform pretty well (p 723). But Diana Lockwood and Shyam Sundar warn that lack of commitment from industry for this neglected disease could make even these affordable tests—and further research—hard to come by (p 711). In their rapid response from Iran, Abdolvahab Alborzi and Behrooz Astaneh echo the need for more evidence and pose further questions about testing, particularly in children (bmj.bmjournals.com/cgi/eletters/bmj.38917.503056.7Cv1).

Another research question yields a less definite answer. But the question is clear, important, relevant, and timely, and that's why we have published the research (p 729). Flood and colleagues asked whether joint crisis plans—advance directives about emergency care for psychosis, agreed between a clinical team and individual patients when reasonably well—are better than general service information in cutting healthcare costs and reducing the need for coercive care and treatment. The answer, from the economic evaluation of a randomised trial, is “yes, probably.”

Now, does this count as a question? “This is what we intend to do; tell us how much you agree” is often asked in modern consultation exercises. Given that the consultants don't really want to know anyone's views, Jeff Aronson says responders might as well use his Likert scale: agree/agree strongly/agree very strongly/agree enthusiastically/couldn't agree more (p 737).

At the *BMJ* we're more optimistic and still believe in two way communication, even with people in high places. To prove it, we're giving you the chance to quiz Sir Liam Donaldson, England's chief medical officer, as part of our first *BMJ* interview (p 722). Please send your questions to thebmjinterview@bmj.com by 16 October. You will be able to hear the interview from Friday 20 October on bmj.com/misc/audio.

Sir Liam will be interviewed by Sue MacGregor, former co-host of BBC Radio Four's *Today* programme. *Today* is the one show on which Britain's politicians love to appear, and it's such an institution that submarine commanders are told to assume, apparently, that the country is under nuclear attack if they cannot pick up the programme for a few days (http://en.wikipedia.org/wiki/Today_programme). Can this really be true? Now there's a question.

Trish Groves deputy editor (tgroves@bmj.com)