LETTERS

Note to authors of letters: Please note that all letters submitted for publication should be typed with *double spacing*. Failure to comply with this may lead to delay in publication.

Dietary sources of vitamin B_{12} for vegans and other special groups

Sir,

Symptoms of deficiency in vitamin B_{12} manifest slowly, owing to the efficiency of enterohepatic recycling in consumers whose dietary intakes are low, such as vegans, Rastafarians and followers of macrobiotics. Doctors, dietitians and health visitors, as well as the consumers themselves, may assume that fermented foods and certain marine and lacustrine plants provide appreciable sources of the vitamin.[1]

We recently submitted a number of typical fermented foods, and some other products, to the laboratory of the Government Chemist in London, for vitamin B_{12} analysis using *Lactobacillus leichmannii* as the assay organism. Less than 0.5 μg per 100 g was found in the following samples: very strong special beer, 'natural' umeboshi plums (salt-pickled and bottled), sourdough bread, zenryu-fu (dried wholewheat and wheat gluten rings), sauerkraut (canned), seitan, tofu, miso, tempeh, tamari and shoyu. We conclude that such foods contribute little vitamin B_{12} to the diet.[2] Laver bread (a seaweed) was found to contain 1.6 μg of vitamin B_{12} per 100 g and Mexican spirulina tablets (Healthlife) 74 μg per 100 g (or 0.55 μg of vitamin B_{12} per tablet), but some of this may be added as a supplement.

Interpretations of the microbiological assays assume that bacterial responses reflect human needs. Daily intakes of 1.5 μg of vitamin B_{12} suffice for most people, the supply being especially important for pregnant and nursing women.[3]

Many foods are supplemented with vitamin B_{12} (hydroxo- and cyanocobalamines) in forms acceptable to vegetarians and vegans. These comprise yeast extracts, stock cubes, mixes and convenience foods such as burgers, sausage and rissoles, textured vegetable protein, breakfast cereals, soya milks and margarine. We would be happy to supply further details of these products and their contents.

Correction of a dietary deficiency of vitamin B_{12}, folic acid, or iron should be followed by checks for the other factors, inadequacy of which may not manifest while one of the others is in short supply.

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References

1. Hinds A, Judd PA. The composition of macrobiotic diets. *Abstracts of Communications.* Nutrition Society Meeting 22–23 July 1986.
2. Truesdell DD, Green NR, Acosta PB. Vitamin B_{12} activity in miso and tempeh. *J Food Sci* 1987; **52**: 493-494.
3. Bates CJ. Recommended dietary intake of folate and vitamin B_{12} — is there agreement? *Chem Ind* 1987; **16**: 558-562.

While the above letter was in press, similar observations have been reported. Van den Berg H, Dagnelie PC, Van Staveren WA. Vitamin B_{12} and seaweed. *Lancet* 1988; **1**: 242.

Well woman advisory centre

Sir,

A 'well woman' advisory centre in Cardiff offers counselling, health education and access to a woman doctor. Of 288 clients seen over three years, 35% attended for medical reasons, 30% for problems related to the physiology of menstruation, 14% for social/emotional problems, 15% for screening which was not available and 6% for other reasons. It would appear that this type of centre forms a useful complement to the statutory health services.

The Cardiff centre was launched in September 1983 following pressure from local women's groups. It is sponsored by the community health council but receives no funding. It aims to help women solve specific health problems and help them in their general understanding of health. Emphasis is placed on giving the client adequate time to present her problem and on offering advice, information and self-help. The centre is staffed by one paid woman doctor and two volunteer women counsellors. The clients come principally from the skilled and semi-skilled occupational groups.

Clients want primarily to talk: many come because they do not want to take up any more of their family doctor's time; others, because there is no woman doctor in their practice. Clients also come for information. Some want to be able to distinguish between physiological discomfort and pathological disorder: if they have a symptom they want to know that it constitutes a valid medical problem before consulting their family doctor so as not to 'waste' his or her time. Others want to know about a possible disorder to prepare themselves for what might lie ahead. Clients often want information they have been given by their general practitioner to be clarified. The centre presents itself as an additional not an alternative service, so that any client who is undergoing treatment is strongly urged to revisit her doctor.

The 'well woman' centre appears to answer a need among women patients. It may also be cost-effective for the National Health Service. Since most women prefer to consult a female than a male health professional,[1] the 'well woman' centre could contribute to early diagnosis. In addition, the 'well woman' service can help defuse social and emotional problems by offering counselling, a service which is time-consuming for the general practitioner.

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Reference

1 Marsh GN. Further nursing care in general practice. *Br Med J* 1976; **2**: 626-627.

Audit of diabetic care

Sir,

One recommendation in the Government's white paper *Promoting better health*[1] is the provision of a wide range of services which are available to the majority of patients within primary care. In 1984 our six-partner practice with 11 000 patients decided to investigate our standard of diabetic care. The survey showed