hypophosphataemia needs to be examined in patients with progressive encephalopathy. Moreover, since hypophosphataemia responds to treatment, it should not be difficult to test the hypothesis.

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Are dietitians a luxury?

The NHS employs about 700 dietitians, but their scatter over the country is extraordinarily uneven: fifty districts employ none at all; some have as many as ten. Most work in hospitals, but about 100 district dietitians have recently been appointed to co-ordinate and advise on dietetic policy. These statistics, presented last week at an informal colloquium on dietitians of the future, show the lack of any clear consensus on their place in the Health Service. Eighteen months ago Professor Macdonald's working party[1 2] argued a case for a reappraisal of their function, but the response was muted. Since then economic circumstances have discouraged health authorities from recruiting any new staff, and newly trained dietitians are having difficulty in finding work.

No one doubts the importance of expert advice on nutrition in health and disease, but much of the traditional work of the hospital dietitian has become obsolete in recent years. No longer are scrupulous dietary regimens prescribed for peptic ulcer, and much of the obsessional attention to detail has gone from the control of diabetics' diets. The Macdonald report suggested that dietitians should spend less time in one-to-one consultation with patients and in preparing individual diets. Speakers at the colloquium agreed that more priority should be given to advice to health educators and others concerned with changing public attitudes and to the food industry. There was no clear agreement, however, on the balance that should be drawn between therapeutic dietetics and more general advice on hospital catering and general nutrition. Yet—as was emphasised by several speakers—if dietitians themselves do not specify the areas in which their expertise is essential then hard-pressed health authorities will not employ them. Only the profession itself can agree what its future should be (though there is a large fund of medical good will from which advice can be drawn), and it needs to do so urgently.

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Boots, boots, boots

As we all know, disabilities arising from disease or deformities of the feet are extremely common; patients are often (for a variety of reasons) reluctant to remove their socks or stockings. When they do so various abnormalities may be disclosed, the commonest being osteoarthrosis of the first metatarsophalangeal joint with considerable hallux valgus, the other toes being displaced in a number of different directions. This is essentially a disease of the western world, where boots and shoes are constantly worn, and it is much less common where sandals are the fashion or people walk barefoot. Women suffer more than men, as their footwear is usually more constricting, and they will suffer discomforts for years in the name of fashion that no man would tolerate for a day. It is no wonder that chiropody is so popular and so necessary.

The Royal National Hospital for Rheumatic Diseases in Bath has long been interested in and working on this problem and recently Dixon and his colleagues[1] completed a study on the great toe as a clinical problem in rheumatoid arthritis. Two hundred consecutive inpatients with rheumatoid arthritis were assessed for pain or deformity of the feet and of the great toe in particular. Rheumatoid arthritis may present in the metatarsal heads, and radiological signs are often seen first here; and, as Dixon *et al* point out, surgery on the big toe before the true diagnosis has become apparent may cause more trouble and more deformity as the disease progresses. Of these 200 rheumatoid patients some deformity occurred in 104; 12 feet were excluded because of previous foot surgery, leaving 196 great toes for detailed examination. There were 114 with hallux valgus, defined as deviation of the great toe laterally from the long axis of the metatarsal bone by over 20°; and 99 had shoe-pressure lesions.

The patients with rheumatoid disease, in contrast to those with non-rheumatoid hallux valgus, rarely showed bony exostoses or bursae, and their shoe pressure lesions affected the skin only, except in four cases where sepsis and sinus formation had occurred. Medial drift of the first metatarsal (metatarsus primus varus) was seen most commonly with severe valgus deformity of over 40°; in 32 feet bony erosions were present at the base of the metatarsal. This metatarsal medial drift is a substantial factor in the forefoot spread seen so often in rheumatoid arthritis, and this in turn renders pressure lesions over the medial aspect of the metatarsophalangeal joint more likely to occur unless particular care is taken with footwear. The great toe showed rotation deformity (hallux tortus) in 56 feet, producing painful pressure under the medial aspect of the interphalangeal joint; this could be eased

by a moulded insole which spread the distribution of weight more evenly. The Bath authors warn that the shoe should be deep enough to take such an insole; otherwise dorsal pressure lesions will occur. Hallux rigidus was noted in partial form in 43 feet, the average duration of rheumatoid disease being 12·4 years; complete hallux rigidus occurred in 12 feet with an average disease duration of 25·2 years. Hyperextension of the interphalangeal joint of the great toe was seen in 83 feet, 43 having the "chisel toe syndrome," where the nail presses up into the toecap of the shoe.

What can be done for all these poor sufferers with toes like these? Their life is tedious enough without their being unable to walk without discomfort in the big toe. Dixon and his colleagues emphasise that not only should we appreciate what deformities are present in our rheumatoid patients' feet and what effect they have on function, but we must also understand that these deformities are not static but change as the years go by. Giving a patient some shoes which may be useful for only a few months is fully justified, as during these few months they may help walking very greatly and enable the patient to keep at work. The whole system depends on rapid delivery to the patient, yet too often there is a three months or more delay. Research is urgently needed into improved methods of shoe manufacture for diseased or deformed feet, for better shoes more quickly delivered throughout the country would improve patient mobility and lessen time off work and disability payments. Much more time could usefully be spent in the clinic fitting the patient for shoes; surgical operations on great toe deformities could often be avoided by so doing. For the poor rheumatoid at present, to misquote Kipling, there's all too often no discharge in peace or war.

[1] Jacoby, R K, *et al*, *Rheumatism and Rehabilitation*, 1976, **15**, 143.

Chemoprophylaxis of malaria

Anyone planning holidays or other trips abroad should remember that the simplest method of preventing malaria (and several other serious diseases) is not to travel to endemic areas. However, indigenous peoples, expatriate residents, and international travellers cannot avoid the risk in that way, and all need to take drugs if they are to prevent malaria.

The choice is least difficult for the international traveller, since his drugs will need to be taken only for weeks or months rather than years, and toxicity is less likely to occur. The prophylaxis of malaria has received regular attention in the *BMJ*.[1–5] In 1973 the World Health Organisation prepared a special issue of the *Weekly Epidemiological Record*,[6] which has now been updated,[7] giving information on the risks of malaria for international travellers. This tabulates the risks of malaria for all the countries and areas of the world and then discusses preventive measures, including drugs. Personal measures include the screening of windows, aerosol sprays, mosquito netting around beds, and the use of insect repellent.

In areas where falciparum malaria is sensitive to chloroquine WHO recommends that any one of four drugs may be used for prophylaxis: two 4-aminoquinolines (chloroquine and amodiaquine) and two inhibitors of folic acid metabolism (proguanil and pyrimethamine). The doses for children need to take account of age, body weight, and general health.

The usual adult dose of chloroquine is 300 mg weekly begun one week before exposure, but in highly malarious areas WHO recommends 300 mg twice weekly or 100 mg daily. American authorities recommend chloroquine (a drug developed in the United States) rather than proguanil because it is a more powerful curative drug and *Plasmodium falciparum* is less often resistant.[8] The British argue that chloroquine should not be used for prophylaxis because resistance to the drug may thereby be induced and its therapeutic value eventually impaired.[9] This hypothesis is logical but has never been proved. Retinopathy has been described[10 11] in a few patients taking 100 mg chloroquine daily (instead of the usual 300 mg a week) for about 10 years—a total of over 365 g—but it was not detected[12] in 57 US Foreign Service personnel who had taken 300 mg weekly for over five years (over 78 g). WHO considers that the risk of retinopathy begins when more than 100 g of chloroquine has been ingested and advises that an alternative should then be taken.[7] Amodiaquine (standard adult dose 400 mg weekly) is sometimes more effective than chloroquine, but it is not widely used.

Proguanil was developed in Britain and is recommended by most British authorities because it is not used for treatment, it is rarely toxic, and is given daily. WHO considers that a weekly dose is more easily forgotten than a daily dose and that omission of a weekly dose may be more serious; its advice, therefore, is that a daily dose regimen is preferable. However, proguanil is an antifole, like pyrimethamine, and resistance to both drugs does occur in parts of Africa.[13] Both drugs, unlike chloroquine, act slowly against established infections of malaria, and this may reflect their chemosuppressive potency. The adult doses are 100-200 mg proguanil daily and 25-50 mg pyrimethamine weekly. Chloroproguanil, 20 mg weekly, is a longer-acting derivative of proguanil but it is seldom used. Attacks of malaria do occur despite the regular ingestion of any of these drugs and comparative prospective studies (between chloroquine and proguanil) should be performed. Unofficially it is sometimes recommended that both should be taken—chloroquine weekly and proguanil daily.

In areas where falciparum malaria is resistant to treatment with chloroquine the most effective chemosuppressant[14] is the synergistic combination of pyrimethamine 25 mg and sulfadoxine 500 mg (Fansidar). This is a fairly well balanced combination because the elimination half-lives of pyrimethamine (about 100 hours) and sulfadoxine (about 200 hours) are similar. The drug is effective when given every one, two, or four weeks, but two tablets every two weeks is the standard adult dose. Long-acting sulphonamides can cause Stevens-Johnson syndrome, but no serious toxicity has occurred in several studies of Fansidar when used for up to 12 months for the chemosuppression of malaria.[15–18] For the first time the WHO has now[7] recommended Fansidar for the short and medium term prophylaxis in areas of chloroquine-resistant falciparum malaria.

After leaving the malarious area it is important for a traveller to continue drug prophylaxis for eight weeks to reduce the chance of an attack of the disease. Falciparum malaria is often fatal unless treated early. Travellers who feel sick should tell a doctor that they think they may have malaria. If the diagnosis is at all possible the doctor may then wish to contact a specialist unit such as the Hospital for Tropical Diseases in London, the Liverpool School of Tropical Medicine, the East Birmingham Hospital, or the City Hospital in Edinburgh.

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[2] *British Medical Journal*, 1972, **2**, 604.
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