many sessions are asked for this has a chance of success, though it may be blocked at any point in the negotiations for good reasons.

The third choice is to apply for a personal associate specialist post. You have to get the consultants to agree so that they may give your application written approval and support. Your application must go to the postgraduate dean or specialist in community medicine (medical staffing) at region. Your district health authority must know of your application since they may have to provide the finance one way or another, and they must feel that there is a proper place for your services and resources to help you with them. From the dean and community medicine specialist your application will go to the regional medical manpower committee. Full time trainees serve on this committee and they may try to persuade the committee not to accept the application. They often feel, with some justification, that if an associate specialist is appointed there will be little chance of expansion of the consultant establishment in that district in that subject. This then limits the chances of junior doctors obtaining career posts. If the application surmounts this regional hurdle it goes on to the central manpower committee. This is even more formidable for the same reasons. Nevertheless, if your only opportunity for a career post is as an associate specialist you will have to test the system. It is of little use trying to become an

associate specialist unless you have been a registrar in your subject for two years or more or its equivalent. The regulations are quite clear on this, and there would have to be very special circumstances for this to be circumvented.

The scene in manpower, grades of staff, and education is changing fast. Advice given here is applicable only to the present. The people in your region likely to know what is possible at any given time are the postgraduate dean, the regional adviser in general practice, and the specialist in community medicine (medical staffing). Local branches of the BMA may provide advice and the Medical Women's Federation has an adviser in every region who can often give help. Apart from the bureaucratic maze through which you have to thread your way, there are political factors of which you may be only dimly aware that may have to be taken into consideration. These policies may take a long time to come to fruition but so may your career. The future might bring you some unpleasant surprises unless you read it with some care. There are some people, such as those mentioned, whose job it is to keep an eye on the future so that they may be in a position to guide you.

In the next two articles I shall discuss what to do if you are an overseas doctor.

Medical History

Mastectomy in the 1880s

CHARLES FLETCHER

When we moved house last year the terrible business of clearing up resulted in some interesting discoveries for I was led to look through old correspondence. Among my father's letters I found one from his father, a chemist by profession, written to him when he was aged 13 from their home at 57 Gordon Square, London WC in March 1886. The letter runs as follows:

"My dearest Walter,

You must have been sadly grieved to hear of your dear mother's suffering—so sudden to us all. It was only on Tuesday I think she first mentioned the small lump in the breast at the place of the old operation. Fearing that this might indicate a return of the old enemy I took her to Mr Thornton, the surgeon who operated formerly. He said it was so—but that he would do nothing without consulting Sir James Paget. So a time was fixed on Friday afternoon and both doctors came to the house here. They examined dear mother and agreed that it was a return of the cancer and that an operation was necessary.

On Saturday morning we consulted Dr Kidd—he too agreed and gave your mother minute directions as to diet. The operation was fixed for 2.30 Tuesday—was this not quick? but a longer suspense would have been unbearable.

Oh, Walter dear, you have a brave mother, few could

Walter Fletcher, aged 13.

have gone as she did with a firm step into that terrible room and meet those three surgeons standing beside the terrible table which had been prepared close by the window, it was in Ruth's bedroom, the one next to ours. There is a good light there and the room is quiet being at the back of the house.

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Alfred and Sarah Fletcher.

Yes, she walked in, shook hands with the surgeons, allowed them to remove her dress and mounted the table all without faltering. I think probably many would have screamed or fainted—but she had committed herself to Him whom she knew would help her—she trusted in Him not only to uphold her in this time of trial, but also in all that could follow whether in life or death.

I walked upstairs with her supporting as well and as far as I could, but I had to leave her at the very time she needed most support. Then the unseen but ever present One upheld her and I am sure she would tell you that she

was very conscious of His support. One can scarcely understand such courage any other way. Surely we must trust Him for He has said 'I will never leave nor forsake thee.' Let us each see to it Walter that at all times we are so engaged that we can ask and expect His help.

The operation lasted 1½ hours and the wound made was, they say, as large as a man's hand over which all down to the muscle is cleared away, the skin being preserved for covering the wound again.

Let us hope that all diseased parts have been effectively removed and that there may be no return. Dear mother was, of course, unconscious for an hour or two after the operation and then woke to pain and distress. A constant sickness strained her all night and the bandaged arm and breast were full of pain. Yesterday was a trying day but during last night she had some sleep and today has been dozing. Dr Kidd called and saw her yesterday afternoon and now while I write, Thursday afternoon, Mr Thornton the surgeon is here to dress the poor breast changing the bandages. This is I fear painful and trying. On the whole though now all say that she is doing as well as we can expect: the strength keeps up and there is no fever. How different it would now be with mother had she not been strictly temperate and with her heart trusting in her Saviour knowing that come what might she was safe in Him.

Your fondly loving father,
Alfred E Fletcher"

My grandmother, who was about 46 at the time of the operation lived to the age of 88 without, so far as I know, any further recurrence of the cancer.

(Accepted 17 December 1982)

On a statistical and preventive basis, what benefits are likely to accrue in a young man if he takes one tablespoonful of bran each day?

Our knowledge of the role of dietary fibre and specifically of bran in maintaining health is still primitive and largely speculative,¹⁻³ so it is impossible to give a numerical answer to this question. Probably the main value of bran is in the colon, preventing stasis and straining at stool, limiting intraluminal pressures, and limiting bacterial metabolism. The diseases that could plausibly be prevented in this way include constipation, haemorrhoids, diverticular disease, and, perhaps, appendicitis. Provided that overnutrition is avoided, bran could also probably help to avert cancer of the colon and gall stones. There is a little evidence, too, that taking bran might reduce the risk of coronary heart disease. One tablespoonful may not be enough, however, for such action depends on the type of bran, the fibre content of the rest of the diet, and the genetic constitution of the individual. As a rough rule of thumb, the minimum "dose" of bran is that which keeps the stool soft and passed easily without straining. Many young men do not need bran at all to prevent constipation. The logic of the fibre hypothesis, however, is not that we should add fibre to our diet but that we should stop taking fibre away from it. In other words, sugar and starch should be eaten unrefined, with the natural fibre intact.—K W HEATON, reader in medicine, Bristol.

¹ Royal College of Physicians of London. *Medical aspects of dietary fibre*. Tunbridge Wells: Pitman Medical, 1980.

² Spiller GA, Kay RM (eds). *Medical aspects of dietary fiber*. New York: Plenum, 1980.

³ Vahouny GV, Kritchevsky D (eds). *Dietary fiber in health and disease*. New York: Plenum, 1982.

What is the calorie equivalent of a kilogram of human fatty tissue (not pure fat)? Looking at this another way, what k-cal deficit must a patient hoping to lose weight run up if he is to lose 1 kg in weight? Different textbooks give different figures.

The different values for the calorie equivalent of fatty tissue in relation to the estimated energy deficit required to produce a defined loss of body weight are due to different assumptions made to derive them.¹ Many of the older values in reports did not take into account the decrease in metabolic rate that accompanies weight loss. Based

on the analysis of biopsy samples of fatty tissues, Garrow² estimated the energy equivalent of fatty tissue to be 7550 kcal/kg. Glycogen, which is usually the first component to be lost on a weight reducing diet, has a calorie equivalent of 1000 kcal/kg because of the water associated with stored glycogen.—D A T SOUTHGATE, head, Division of Nutrition and Food Quality, Norwich.

¹ Garrow JS. *Treat obesity seriously*. Edinburgh: Churchill Livingstone, 1981.

² Garrow JS. *Energy balance and obesity in man*. Amsterdam: North-Holland Publishing Co, 1974.

Does treatment with high pressure oxygen help multiple sclerosis?

Hyperbaric oxygen therapy has been tried on patients with multiple sclerosis,¹ but no results of a controlled clinical trial have been published. The unpredictable nature of the disease, its prolonged course, tendency to remissions, and the occurrence of plaques without obvious signs or symptoms have made it difficult for doctors throughout the past century to assess any treatment, and since the cause of multiple sclerosis is not known a rational approach to its treatment is necessarily limited. Experimental allergic encephalomyelitis, a laboratory induced animal disease with some similarity to multiple sclerosis, can be modified by hyperbaric oxygen acting as immunosuppressant, and as there are consistent immunological abnormalities in multiple sclerosis,² including loss of circulating suppressor cells at the time of a relapse, then hyperbaric oxygen may play a part in that way. A recent speculation that multiple sclerosis may result from subacute fat embolism suggested that hyperbaric oxygen would be appropriate treatment.³ In the absence of properly controlled clinical trials hyperbaric oxygen therapy must be regarded as experimental, and it is not known whether it helps, hinders, or has any effect in the treatment of multiple sclerosis.—ALAN TURNER, registrar in neurology, London.

¹ Neubauer RA. Exposure of multiple sclerosis patients to hyperbaric oxygen at 1.5-2 ATA; a preliminary report. *J Fla Med Assoc* 1980;67:498-504.

² Weiner HL, Hauser SL. Neuroimmunology I. Immunoregulation in neurological disease. *Ann Neurol* 1982;11:437-49.

³ Warren J, Sacksteder MR, Thuning CA. Oxygen immunosuppression: modification of experimental allergic encephalomyelitis in rodents. *J Immunol* 1978;121:315-20.