Personal Paper

One way of coping with diabetes

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People sometimes ask me how I have coped with diabetes over the past 38 years. I hope it has been good sense as well as luck which has enabled me to keep a normal optic fundus, blood pressure, peripheral pulses, and renal function. I have had coronary problems but not much more than many contemporaries. Most important is that until the past few years I have worked, played, travelled, dined, and wine without serious limitation.

It all started just before my 30th birthday when I had an acute onset of thirst and polyuria (at 4 pm one Monday). After three days I tested my urine. As the Fehling's solution turned bright orange I dropped the tube: patients got diabetes, not doctors, I thought. But acceptance came quickly and I resolved not to let it hinder me in any way.

Insulin requirements

For about five years I was strict with my diet (250 g carbohydrate) and learnt how to estimate carbohydrate fairly closely. Robin Lawrence taught me that an approximately constant basic diet is enough and not to bother about occasional parties. (I always tell inquiring hostesses that I eat a normal diet.) A little extra insulin corrects any consequent hyperglycaemia. My daily insulin requirement reached about 50 units within a year and has stayed there, but with frequent large fluctuations. It often goes up to 75 or 80 units for a week or two and even to 120 units when I have 'flu or some other infection. Usually I can find no obvious cause for these fluctuations. I seem to be an extremely "brittle" diabetic.

I have always tested my urine three or four times daily and adjusted my insulin day by day. At first when I had to boil Fehling's solution over a spirit lamp it could be difficult—as in an aeroplane lavatory. Clinitest was a great boon: Diastix is even better, for I always keep a few strips in my pocket diary. Five years ago when my renal threshold went up from about 9 to over 14 mmol/l (160 to 250 mg/100 ml) urine testing lost much of its value. But I had then already started using Dextrostix. It is very simple with a little practice. A Clinitest pipette to transfer the drop of blood from finger to strip helps in accurate timing. I use a meter but usually only need to know whether the level is low, medium, or high, and this can be done by eye; indeed I usually guess the meter reading within $\pm 20\%$. I now use nearly 20 Dextrostix strips weekly.

At first I took long-acting insulin (protamine zinc), but I found this socially intolerable. It demands an evening meal at a fixed time which is often impracticable, especially after going to a theatre or in foreign countries where dinner may be very late. Twice-daily soluble insulin led to frequent late morning hypoglycaemia. At my wife's suggestion I started doing what the normal pancreas does and went over to three injections of soluble

insulin daily before my main meals, supplementing the evening dose with a little isophane to cover the next early morning. I take extra insulin supplements to control unusual hyperglycaemia.

So many injections are not the slightest trouble. With a sharp needle they are quite painless. I have "Fivepoint" syringe cases only slightly bigger than a large fountain pen. I gave up keeping my syringes in spirit long ago and must have given over 35 000 non-sterile injections without any infection. I clean the syringes out and boil them once or twice a year. I give most of my injections under the skin of my calves. For some strange reason (? risk to varicose veins) these are not given as injection sites in any book on diabetes but are the only areas where a man (or a woman wearing socks) can inject without undoing any clothes. I have injected in restaurants (under the table), trains (behind a newspaper), planes, and indeed anywhere. If I had to give up shaving or injecting I would give up shaving for it is much more trouble. I do feel a bit cross when people say they know I inject through my trousers. I suppose they don't notice the quick raising of the trouser leg.

Hypoglycaemia

My main problem has always been hypoglycaemia. At first I was nearly always aware of it by day and woke at night, because of the adrenaline response. But, particularly in the past 20 years, it gradually became more difficult. I may now feel normal and do ordinary tasks quite easily with blood sugar as low as 2.5 mmol/l (45 mg/100 ml). Sometimes diplopia, dysphasia, weariness, or inability to think may lead me to do a blood sugar. But I often become too muddled to know what is wrong, and I have had to thank my wife, my children, and many generations of housemen, registrars, and secretaries for spotting these low levels on many occasions. Before I retired 50% glucose was always available with syringe in a drawer in my desk. I became quite used to a quiet registrar's voice in outpatients (and elsewhere) saying, "I think, sir, a little extravenous glucose might help." Lucozade has been invaluable. I always have it available in the car, in the office, and at home. It is acceptably free from sugariness, it saves chewing and choking on dry glucose tablets, and it is rapidly absorbed. My wife finds it much easier to get me to drink this than to take any other form of sugar when I am severely hypoglycaemic and refuse to acknowledge it. I have made it a rule, which I now keep, even when semi-comatose, that if my wife—or anyone else—tells me to take sugar I do so however sure I may be that I'm not hypoglycaemic. They have only been wrong on rare occasions. I am very sensitive to exercise, but for some reason I find it difficult always to suck prophylactic sweets on country walks or when digging or mowing in the garden.

The main danger now is that I no longer wake when hypoglycaemic at night. Luckily my wife does, and she has often rescued me with Lucozade but on five or six occasions has had to ask a neighbouring doctor to come and give me intravenous glucose. She does not get enough practice to be sure of hitting a

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constricted vein herself and even glucagon is, in the small hours when it has seldom been used, a bit complicated. I can no longer safely sleep away from home by myself, although these nocturnal attacks have been much less frequent since I have regularly measured my blood sugar before going to bed. If it is below 8 mmol/l (144 mg/100 ml) I take a large nightcap. Driving, of course, could be risky, but I have always taken glucose before driving at high-risk periods (for instance, before meals) and now use Dextrostix which I keep in the car. I have only twice been aware of driving badly because of low blood sugar. My wife was with me on both occasions, and we changed places. Hypoglycaemia in a lecture can be embarrassing. I have occasionally used it to demonstrate the symptoms and signs of hypoglycaemia and the need for diabetics always to carry sugar. Another tiresome occasion was in 1961 when, having queued for an hour and a half in late morning, I had eaten all my sugar and nearly collapsed in Lenin's tomb and had to be helped to a taxi to get more sugar in my hotel. An eminent US cardiologist who was there said I ought never to travel abroad again. If I had taken any notice of that I would have missed many interesting trips.

I keep my average blood sugar low enough to risk fairly frequent hypoglycaemia because I believe good control reduces the risk of complications. There is also the unpleasantness of hyperglycaemia, which few doctors seem to know about. I feel desiccated, weary, and as if my skin is too tight for my body when my blood sugar rises over 15 mmol/l (270 mg/100 ml).

The psychological consequences of hypoglycaemia can be curious. In one attack, many years ago, I awoke at night with a feeling that I had an extremely important message for mankind. I wrote it down by torchlight, took sugar, and went to sleep. Next morning I found my message was "Let's all commit suicide as a protest and jump into a mass grave." Recovery

from coma on injection of intravenous glucose is unpleasant. I feel that I am being dragged back from a heavenly existence to a horrid and sordid world, and struggle against it. Recently hypoglycaemia has given me a feeling that Armageddon is near. Once I clutched my wife saying, "The world is coming to an end, and I want to hold on to you." "All right," she said, "but drink some Lucozade first," and the world was saved.

The physical symptoms are very diverse. The strangest was severe athetosis while attempting to carve the Sunday joint at lunch.

One difficulty I've had has been the ignorance of most of my contemporary medical colleagues about hypoglycaemia. Once, after a meeting of the Standing Medical Advisory Committee of DHSS I became severely hypoglycaemic and ataxic at lunch. I was urged by two or three colleagues to return to Hammersmith Hospital for diagnosis and treatment. Luckily I had eaten some lunch, and as they led me away I recovered sufficiently to tell them what was wrong and to take the glucose in my pocket sugar box. I have not infrequently been woken from a peaceful doze at a committee meeting by a colleague nudging me and saying, "I think you had better have some sugar." I usually oblige though I know I don't need it.

I am glad that on three occasions I have been able to demonstrate on TV that diabetics can live quite normally, and I have often been thanked for this reassurance. I have also met four diabetics who had diagnosed their own diabetes from watching these programmes. There must have been many more whom I haven't met.

Most of all I am grateful for the patient help I have had from my wife and from many colleagues without which I could not have survived 40 years of brittle diabetes in good general health and great enjoyment. I really do regard diabetes as a nuisance, not a disability.

Medicine and Books

An inconsistent approach

Relief of Pain in Clinical Practice. Sampson Lipton. (Pp 373; £18.) Blackwell Scientific Publications. 1979.

It may seem strange to many that the index to *Relief of Pain in Clinical Practice* does not even mention diamorphine or heroin. This attractive, easy to handle, and well-written book is remarkable for its inconsistencies: some chapters and sections are excellent, but some are poor and there are other surprising omissions. There is no section concerned primarily with the psychological aspects of pain, apart from a five-page chapter with the unlikely title of "operant conditioning." The book is weak on the drug treatment of pain and in the section on migraine, for example, seven pages are devoted to clinical features and pathogenesis; and yet, in the three pages on treatment, no clear differentiation is made between prophylaxis and the treatment of the acute attack. Muscle contraction, or tension headache; is covered in only a page and a half and post-traumatic headache dismissed in a page. Anyone wishing to learn how to treat headache would do better to buy one of the standard neurological texts. Such criticisms almost certainly reflect the personal experience of the author, and presumably it is for this reason that the common problem of pain in the neck due to atlantoaxial subluxation is not mentioned in the section dealing with rheumatoid arthritis.

On the other hand, some chapters are excellent. The section on postherpetic neuralgia is particularly good, and ably describes

the difficulties of treating this distressing condition. The book is at its best in those sections dealing with the specific techniques which are popularly used in pain clinics. These include a variety of methods of nerve block and the technique of electrical stimulation and acupuncture, which, somewhat surprisingly, occupies some 40 pages. If you wish to learn how to treat pain by the technique of nerve block in a variety of sites in the body, then the final chapter of the book gives a clear description of this. You will find the details not only described in the text but illustrated by several diagrams and appropriate radiographs.

As the author states in the preface, this book is designed for the specialist, and anyone wishing to start a pain clinic should certainly buy a copy. For this reason, it will be a useful addition to any hospital library. For the average clinician dealing with pain problems in clinical practice, there are too many omissions for me to recommend its purchase.

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A late landmark

Cardiac Receptors. [University of Leeds, 14-17 September 1976.] Ed R Hainsworth, C Kidd, and R J Linden. (Pp 517; £32.50.) Cambridge University Press. 1979.

These published proceedings of a symposium sponsored by the Commission on Cardiovascular Physiology of the International