

42. Peter

(1) Tell me about your background.

I'm sixty two. I've lived in Sheffield - I was born in Sheffield - and lived here for most of my young life. My father was first a lecturer and later a professor at the university. My mother never had a salaried job after she married. She didn't have a national insurance number until well after her sixty-fifth birthday, when the tax authorities gave her two at once, which was a bit difficult for her. I was educated at a grammar school in Sheffield, and was lucky enough to win a place at Oxford and read a degree there at the beginning of the sixties. I worked for the steel industry in Sheffield for nine or ten years, then moved away from Sheffield, with my wife, down to the Cotswolds, and worked in a number of short term jobs, and then eventually settled in a job in management consultancy, which is how I earn my living to this day.

Are your childhood memories those of being quite well off?

Yes, comfortably off. My father was a university professor from the year I was eight onwards, and achieved fairly senior position in the university, being pro-vice chancellor for a time, and being asked in his fifties to take on the wardenship of one of the largest halls of residence, when the university decided that it was important that the halls should have wardens who were senior members of the university rather than junior. We lived a comfortable life. My parents had a car, though my mother didn't - although she learnt to drive in her fifties - never had a car of her own, and would simply use the family car, and drop my father at his office in the university before using the car for the day.

Did you have any brothers and sisters?

Yes. My mother conceived four times in total, and I would have been the third child. I had one elder brother, who survived, who was five years older than me. Another brother between us died in an accident when he was less than two years old. Then I was born, and finally my mother gave birth to a stillborn daughter a year or two after I was born. My older brother was diagnosed as diabetic when he was eight, roughly at the end of the war in 1945. We were living in Epsom then - my father had been appointed to a job in London for five years. And my parents found themselves being put on the books of Dr RD Lawrence, who was one of the great diabetic treatment specialists at that time. He was one of the founders of the British Diabetic Association, along with HG Wells and one or two other people, and played an important part in the development of Diabetes UK, and is, you know, a great name. I think my own... the diagnosis of me as diabetic was made much easier for my parents, because they already had a diabetic son. And by the time I developed diabetes, he was - let me think - he was sixteen and had been diabetic for half his life. They found it very easy to spot the symptoms very early, and they found a lot of the problems that people have with getting used to the idea of having a diabetic child on insulin, they found a lot of these much easier to deal with, because they'd got so much experience of it already.

(2) And what did your parents learn from RD Lawrence?

I think Lawrence was, in many ways, well ahead of his time, which was one of the secrets of his success. Quite a lot of the things they learnt from Lawrence were things that probably didn't really get formulated as part of the theory of how to cope with diabetes until some time later. Most of all, they learnt early on that a diabetic really cannot leave it to professional experts to control his diabetes for him. The diabetic has to know how to run his own life from hour to hour and day to day, and the role of the specialist is to provide the specialist knowledge, and the diagnostic tests that are necessary, in the context of the diabetic using his own head most of all. I've always thought of it as being rather like... the process of trying to achieve the balance between food and exercise and insulin is not unlike the possible ways of controlling a space shot to the moon. You could, if you'd like to, arrange to use the latest possible technology to work out exactly what engines should be used and how they should be fired, and shoot the thing at the moon and knowing that you will get there. But it's much better to shoot the thing off in a general way aiming at the moon, and then to be in a position to do mid-course corrections when you want to. And diabetes is all about the mid-course corrections. It's not about the very carefully calculated firing procedures, which get you all the way to the moon without needing to touch the tiller. And Lawrence was very clear indeed that the only hope for a diabetic was to be in charge of his own life. And this made a lot of the things that I was taught to do by my parents from an early age - things that they were quite clear were important, because Lawrence made it clear that they were important - I think I was very fortunate to have that grounding. And looking back - it's difficult, because early interactions with the diabetic specialist every few months as a boy, I wasn't perhaps listening as carefully as I should have done to everything the doctor said to my mother, while I sat there and fidgeted - but I got a feeling that my parents felt, at the end of my teens, that they had learnt more from Lawrence in the first place, and that they'd learnt rather less from the diabetic specialist in whose care I was put. I was actually diagnosed as diabetic on my mother's birthday in 1954, about two months before my twelfth birthday. And a sign of how early the diagnosis was can be gathered from the fact that my first dose of insulin, to last me twenty four hours, was four units of Lente insulin, which was the latest sort of insulin then invented. Over the next two years, my need for insulin rose steadily and fast, as my pancreas obviously gave up producing its own insulin - not in a sudden way, but over a period of probably a couple of years - which is an interesting insight, really. The idea that diabetes is something that you only notice when it's already quite serious definitely didn't apply in my case. The other interesting thing about my case is that, like an awful lot of diabetics, the diagnosis that my insulin production was beginning to suffer was made a few weeks after I'd had a week off school with some sort of 'flu-like illness. Not part of an epidemic, but simply being at home in bed with a high temperature, and this appears to be a common part of the experience for a lot of diabetics when they first develop it as children. If it were possible to vaccinate against that particular virus, it would certainly be worth

doing, I think.

(3) Was the diagnosis made by a GP or by a hospital?

No, the initial guess was my parents, who were fairly confident. They went to the GP, who was a fairly close friend of theirs, and she immediately referred them to the senior diabetic specialist in, what was then, a hospital in central Sheffield. I was admitted to hospital for diagnostic tests, and a glucose tolerance test indicated that I certainly was developing diabetic symptoms, or was developing diabetes, and the first injection of insulin followed. I was put in a large ward of three dozen people, and perhaps - you were asking about my parents' prosperity - my parents were in a position to be able to afford to pay for a private room for me; a side ward at the end of the main ward. I was there for nearly a fortnight, I think - not sure why it would take so long, but it did. And for most of that fortnight made everyone's life an absolute misery, by racing round the ward in a wheelchair, which was not being used by anyone else, and generally being tied down as far as possible by the nurses, who gave me all sorts of tasks to carry out, simply because it was the best way of keeping me entertained. I served tea and coffee to every patient in bed. No nurse had to go and fetch a bottle or a bedpan at any point in my fortnight. And I was sent to bed early at the end of each day, usually fairly tired out. The only other thing I can remember, at that point, is being required to cycle a certain distance every day on a cycling machine in the basement of the hospital, and seeing a film called *On Moonlight Bay* with Doris Day in it, which I'm sure was completely unsuitable for a boy of eleven and three quarters, but it was the only film on offer that particular Saturday evening.

So, this was not a children's ward?

No, it wasn't. I don't know - I was discussing this with my wife the other day - I don't know why, but my parents already realised enough that it was more important to have me in the care of somebody who understood diabetes than to have me in the children's hospital. And I don't think the children's hospital started getting any hand in the treating of young diabetics in Sheffield until some years after I was diagnosed. I was expected to be able to cope in an adult hospital, and definitely required to cope without making too much noise or causing too much trouble. Looking back, over the years, I think I managed to grow up just fast enough to avoid getting thrown out of the hospital for childish behaviour, but it was a close run thing,

(4) sometimes, in the early years.

Apart from having to do this cycling every day, can you remember what other training you got?

I think probably the notion that training was something that was anybody's responsibility rather fell apart - didn't really exist then. It was very much more a case of nurses being required to share their knowledge with the patients as far as possible, and the doctors obviously doing likewise. And it was made very

much easier for both parties by my parents' ability to give the impression they understood what was going on, without giving the impression they were cocky about it. And I think that meant that, on the whole, the doctors and the nurses both felt that they didn't have to worry too much - they could leave my parents to sort out how I was going to live my life. I remember being absolutely terrified when, at the end of this fortnight, I - and after a fortnight on insulin, pretty well - I went home, and my mother said "right, yes, you're going back to school on Monday", and "we've arranged this and this about coping with your diabetic diet - not giving you sweet puddings for lunch", and "you'll be okay". And I thought to myself "I do hope I am okay. How on earth am I going to manage?". And I found that, in fact, I was okay, and that particular hurdle was got over without too much difficulty. But certainly, at the end of that first fortnight, I was very well aware that there were an awful lot of things that I didn't fully understand. I didn't know all the things I needed to know in order to obey the rules about diet, which were much more tightly formulated then than they are now. I was absolutely terrified, until I found out that I could actually cope with the life I had been leading, modified suitably.

(5) Who taught you to do injections - a nurse or your parents?

I'm sorry to say I can't remember. It's so long ago that I have... but effectively, it's bound to have been a nurse, because my parents wouldn't normally have come to visit me in hospital that early in the day. At that time, I was having one injection a day, immediately before my breakfast, and so I can assume it must have been staff nurse Bush. I shall always remember staff nurse Bush. She was fairly bow-legged for a girl in her twenties in the 1950s. She obviously had been very badly nourished as a child or something. She was very self-conscious about her bow-legs, but she was a lovely lady, and I learnt a lot from her, I think. I don't remember it being terribly difficult to learn how to do injections. The sight of my brother doing it for the previous eight years had been enough to give me the idea that it was something one could learn to do, and given that I was going to learn to do it, I got on and learnt it. But maybe that's just me rewriting history for myself - it would be difficult to feel bad about it, I guess.

What were the syringes like?

What were the...?

Syringes like?

They were nice hygienic pieces of equipment. They ought to be - they were kept in proper surgical spirit, in a metal container that was typically six inches long and over half an inch in diameter, and unscrewed and screwed up when you wanted to take the lid off, so that the spirit wouldn't leak out. The main syringe was glass with stainless steel fittings and a stainless steel needle, and the finest needle you could get in the National Health Service, at the time, was a seventeen gauge. The current disposable needles are twenty six gauge, and I can't remember what these are in millimetres, but the bigger the gauge number, the finer the diameter of the needle concerned. The story was of tube makers, in

those days, claiming to make the world's finest tube, and then the competitor would put another tube inside it and send it back. And I'm sure you could get a modern hypodermic disposable needle - twenty six gauge needle - I'm sure you could get it through the centre of a seventeen gauge needle. I have suffered, over the years, from quite a lot of fat atrophy. When I first developed diabetes, I used my legs for injections. I did my best to move up and down the leg every day, but the fat got eaten away quite heavily, and you can still see sort of gaps in the fat on my thighs. Two factors in this: one, I'm sure, is the diameter of the needles I was using, and the other, of course, is that at that stage I was using insulin made from the pancreases of cows. Virtually every cow that was slaughtered in Britain, at that time, had its pancreas removed and frozen and sent to an insulin manufacturer for processing. And cow's insulin had tremendous local reactions at the point of injection, which is one of the main reasons why pig's insulin was such an improvement, when it arrived from Denmark a few years after I started. The syringes, as I say, were large. They also were expected to last for a very long time. I should doubt very much whether I used more than half a dozen syringes in the first seven or eight years of my diabetic life.

(6) What were you taught in hospital about testing sugar levels?

I'm glad to say I developed diabetes after the introduction of Clinitest tablets. When my brother had first developed diabetes, my parents had been required to instruct him in using Benedict's solution to test for sugar, and shall always remember my father using a test-tube, which he would heat on the hot plate of the cooker with the relevant mixture of urine and water and Benedict's solution, and standing there and watching it go one colour or another. And if he left it on the cooker a little too long, the solution would boil too strongly and some would leap out onto the rest of the cooker. My mother would go absolutely spare. By the time all this had... By the time I developed diabetes, all this had rather disappeared, because it was... the Clinitest system was available instead. You took out this nice little kit. You stood the test-tube up in the lid, so that it wasn't going to fall over. You put into it five drops of urine and ten drops of water - I think it was that, perhaps it was ten of urine and five of water, I can't remember now - then you opened the Clinitest bottle, took out one tablet, making sure you didn't do more than sort of keep it on the palm of your hand very quickly, because you didn't want any water that might be on your hand to start the process. You dropped it into the test-tube, and the water and the urine together triggered the necessary reaction which took place. It generated enough heat to cause the mixture to boil, and cause the physical changes - the chemical changes - that made the colour of the process change. If it was completely free of sugar, the resulting colour would be blue, and the tablets were a sort of speckled blue colour anyway. I think there was copper sulphate in them, but I'm not sure where I get that from. If there was sugar present it would be somewhere on a coloured scale from a greeny-blue, through a fairly solid green, to an orangey-green. And then at two percent of sugar in the urine it would achieve a bright orange. If you managed to get your urine to carry more than two percent of sugar, the bright orange would become rather darker

and brown, and it was really time to worry. But a two percent score was easily enough obtained; getting further than that was difficult. I imagine the kidneys give up trying to get rid of sugar if there's too much of it. With hindsight, it was altogether well organised. It was the result of somebody thinking very carefully how to make urine more easily testable. There were major disadvantages. I think the biggest

- (7) disadvantage was that, the way in which the kidneys get sugar out of the blood into the urine does depend on a lot of things, including how much water there is in your system. The thirst that comes with the high blood sugar doesn't always lead you actually to drink, and I think if you're not actually drinking, some of the sugar can get retained in the blood longer than it ought to. And there was the diabetic journal used to wax on, from time to time, about the fact that some people had kidneys which acted rather as a dam, and which would not sieve out sugar as efficiently as they should do. With the hindsight that I've got now, I wouldn't be at all surprised if long-term diabetics might, in fact, find it much less easy to get rid of sugar in this way, but it was a guide. The biggest single problem was, if your urine had no sugar in it, that did not mean... well, it meant that your insulin was acting effectively enough, or you were having enough exercise and you weren't eating too much food, but, on the other hand, you could get a perfectly normal blue result and be on the verge of a hypo. And there was absolutely no way in which the test could tell you that. It could only test for high sugar. It couldn't test for low sugar in any way, because if you had a low blood sugar, your urine wouldn't contain very much sugar, and that would be all you could learn. The other thing, of course, is it's perfectly possible to have sugar in your urine, and at the same time to have blood sugar which is actually going down dangerously. And knowing that meant that one never relied on the urine sugar results too carefully.

You said that when you came out of hospital you were nervous that you didn't know everything you needed to know about diet. Can you remember what you were taught about diet in hospital?

I wasn't taught all that much in hospital. I think the hospital dieticians may have been one half a step ahead of where my parents were. Dr Lawrence always talked about things he called portions, and a portion was enough food to produce ten grams of carbohydrate, and you could have a half portion. And I remember, from before developing diabetes, that one portion of potato was a potato the size of a hen's egg. I remember my mother being terrified by the thought that you only needed a very small weight indeed of currants or sultanas to qualify for a portion. And at that stage, because nobody really understood it, there was absolutely no suggestion that some... ten grams of carbohydrate in some foods were much more harmful than ten grams of carbohydrate in others. I think my mother probably realised

- (8) this. She certainly knew well enough that you shouldn't eat a very con-

centrated lunch, consisting mainly of things with very high carbohydrate content, and no fibre or other contents. You know, lunch composed entirely of shortbread biscuits, for example, would have the danger that it would almost certainly work through your body very quickly and well before the next meal, and your blood sugar would be on the way down again. She was aware of that. I suppose you could say that, if you like, she knew something about the glycaemic index concept for herself, forty or fifty years ahead of her time. But the dieticians made no distinction. And, for example, I knew that if I actually helped myself to a handful of sultanas out of the relevant jar in the kitchen, it didn't appear to lead to my having a high blood sugar. I now know why that is so. At the time, I thought "well, fancy that - it doesn't happen for me", and thought no more about it. The dieticians in the hospital had decided, for the sake of ease - or for some reason or other - to call Dr Lawrence's portions black lines, and a black line was ten grams of carbohydrate in one form or another. They'd also developed a statement on the diet sheet my mother was given, which talked about the number of red lines I ought to consume - a red line being a mixture of so many grams of protein and so many grams of fat. And to this day, I'm not sure whether the red lines she was being asked to control as well were a matter of making sure that diabetics didn't die of under nourishment, because they were just controlling their black lines and not eating enough protein, or whether, in fact, this was an early sign of a belief that it was possible to eat too much protein and fat as well. I rather think it was the former. I think they were aiming to deal with under nourishment among Sheffield's diabetic classes, and certainly I think my mother's interest in red lines was never terribly strong. My father's view of it was that it... the methods they'd used before had worked all right with my brother, and it wasn't going to be really worthwhile trying to invent new controls as well. So, in a sense, it was very much easier for me to simply conform to the family's view of the diabetic diet, which was, in any case, not out of line, and to forget about these red lines altogether. And I don't remember hearing much about red lines, so they may have been a local invention rather than a national one.

Did you find it hard to adjust to a strict diet?

Yes, I think it wasn't easy. I think the hardest piece of adjustment was really getting as good as I could about avoiding sugar, in its various forms, which was very much more a matter of the fact that if you eat a lot of sugar, it disturbs your insulin balance and can leave you burnt out an hour or two later, when it shouldn't. I broke all the rules I could when I was a teenager. Looking back, I'm ashamed of how much I broke some of them. I think I was fortunate that, since I was only breaking them for my own pleasure, some of the things I cheated on were actually not as harmful as they might have been. I mean, to this day, if I need to eat something quickly to counteract a low blood sugar, I'm very likely to go for a Bounty bar, which has a nice core of coconut and a chocolate casing round it. And I used to eat these when I was a schoolboy, knowing that I was

doing wrong, knowing that I was taking in sugar that wasn't going to do me any good. But actually, I wouldn't be at all surprised if the glycaemic index of a Bounty bar isn't too bad. And, you know, it contains enough sugar to deal with a low blood sugar, if you've got it, but it doesn't actually build as high a blood sugar afterwards as it might. And that was purely a matter of personal preference. And I have to admit, it was milk chocolate Bounty bars only, until fairly recent times, when I discovered the plain chocolate Bounty bar, which is even nicer - not to worry!

(9) What was it like going back to school after you came out of hospital?

Fairly difficult. I think I'd missed a week of school less than a month before, and then a fortnight of school actually in hospital being balanced off. And the academic pressures on me were very considerable indeed - I had to catch up pretty quickly. The actual process of coming to terms with diabetes in the context of school, I can't remember any real difficulties. It all seemed to make reasonably good sense. I didn't have my first hypo at school for quite some time. It was March when I went back to school... no, early April when I went back to school, Easter holidays intervened fairly quickly, and I think I didn't have my first hypo at school until some time after the beginning of the summer term. Ended up unconscious - with a rather angry form master wondering what he had to do and getting organised - and the brief that had been given to the school secretary in the office being dug out and acted upon and so forth; and it all worked out fairly badly. It was my first experience of having a hypo which actually went too far, and I can't remember very much about it, except that it was, I suppose, one of about half a dozen hypos in the rest of my time at school - which was quite a number of years - in which I actually ended up unconscious. And most of these were in the first half of my time at school, before I was sixteen, rather than after. Getting people to know that I was diabetic is a subject that I've always rather tried to avoid doing too much of. I don't like drawing myself to other people's attention saying "I'm a diabetic - look at me", and so I tended not to wax on about being diabetic more than I had to. The school, on the other hand, took certain steps to make sure that most of the staff - all the staff who taught me and most of the others who would have contact with me - understood what diabetes was and what to watch out for, which was the school doing very much on its own initiative. It took the information my parents gave it, and made sure that this information was freely available. The other thing I do remember is that, because of being diabetic, it was decided that I would be put on a very, very short list of people who would not be caned if they committed offences deserving caning. Nobody told me that I was on such a list. And I can remember, on about three occasions, being sent to

(10) fetch the cane, which was step one of the elaborate formal procedure the school had for caning, which restricted the number of strokes to a maximum of four, and only in really indictable offence cases, a requirement that the caning should be witnessed by another master, and that the victim should go to fetch the cane from the staff room and take the cane, and the slip



that came with it, duly completed and signed by both staff, take them back to the staff room. And if your form master was the person who opened the staff room door when you went to get the cane, you were in trouble twice over. And the three times I was sent for the cane - after becoming diabetic - in each case, I was allowed to go right through the process. And only when I'd arrived back with the slip and the cane, and been made to wait outside the classroom until the master had reached the point at which he could come out and... only then did I find out that I wasn't going to get caned. And the third time I thought to myself "this is a bit odd - they always do that"! I was very lucky - I've never experienced corporal punishment in school, and I certainly deserved it on three occasions, if not more. That was one of the steps the school took, though: the idea that, because they'd been informed of a situation - it was highly professional school. It was the best school in Sheffield at the time and I was proud of being a pupil there - and, you know, they dealt with it exactly as they should have done. The other thing was that I... for the whole of the rest of my time at school, the school kitchen arranged a special alternative pudding course for me, to replace the plum duff, or whatever stodge was being served up for the rest of the children. They perhaps were a little dangerous in how they did this. They didn't use sugar, but I got some fairly delectable choices presented to me. And I had to - in order to pick this up each day - I would join the queue at the servery, and then make my way into the kitchen behind the servery to pick up my pudding, and emerge carrying it. This was a highly public sort of thing. Every boy in the school pretty well knew that I went to collect a special pudding, and most of them seemed to know that it was because of being diabetic. I also developed a very close relationship with all the cooks in the kitchen, because they saw me as this special young boy. And, you know, if I winked carefully at one of them as she was serving up a vegetable I was particularly keen on, she would make sure I got a decent sized helping and this sort of thing. I think that's one of the terrible things about diabetic children: they do get an awful

- (11) lot of adults fussing over them. They can easily get the idea that they're somebody very special. And I think there are probably studies done by people on whether diabetics are actually psychologically the same as other people - life-time diabetics who've been on insulin since being young. I was once interviewed in the Warneford Hospital in Oxford, by - which is the local mental hospital - by a lady doing some sort of research into diabetes. To this day I don't know what her conclusions were, but, you know, the fact of an interesting sub-group, whose psychology may not be the same as other people's, because their experiences have been different, was certainly something that existed twenty years ago, and there may be something in it.

Were there any other boys in the school with diabetes?

No, the school, I think, saw its next diabetic pupil a year or two after I left

it. That's an interesting figure, because, I think, nowadays, a school with eight hundred pupils will probably have more than one juvenile diabetic at once. I believe, of course, one of the factors is that juvenile diabetes is more common among people of Asian origin, and, in the fifties, there weren't very many Asians in Sheffield, and not enough to have any significant effect. But, I think juvenile diabetes, as a whole, was less common then, and, of course, because diabetes is an inherited tendency - juvenile diabetes is an inherited tendency - it stands to reason: I developed diabetes less than... just about thirty years after the first insulin was administered to human beings, and so the gene pool didn't have as much diabetes in it as it would have had in the last twenty years, reading back from now. Worth mentioning, the early diabetes: the first person in Sheffield to receive insulin was a man - who later was a leader of several companies in Sheffield - called Sir Stuart Goodwin. He was a man who gave a great deal of the money he accumulated in his lifetime for charitable purposes, of one sort or another. And it's of some interest that, having been injected with insulin for the first time, probably weeks ahead of anyone else in this part of Britain, he survived the vagaries of being an insulin dependent diabetic for the rest of his life, and died in his eighties, after having made a major contribution to public life in Sheffield.

- (12) It came as rather a surprise to me, when I was probably certainly not much older than twenty, to discover that diabetes seemed to carry a range of complications that led to early death. Yes, it was my late teens I discovered this. I had it brought home when I first applied for a life insurance. But the first I knew of it was when a chap, who had been treasurer of the local branch of the Diabetic Association, died in his late thirties of heart attack, and my mother said to me "yes, I'm sorry to say it's one of the side effects of diabetes". This hadn't got to me before that, and it came as rather a surprise. The comfort is that although you do see a lot of diabetics who are troubled with all sorts of life-threatening complications from diabetes, you do also hear of diabetics who live well into their eighties and beyond. And I think it's an interesting topic this, and it's one where I hope I'm on the right side of the equation here. It does appear to be more a matter of luck than of anything else, whether or not you're going to suffer from diabetic complications. The statisticians have made quite clear that one of the things that helps you avoid diabetic complications is having had a reasonably good control of your blood sugar levels - that if you don't control your blood sugar levels, complications come thick and fast. People who don't control their blood sugars reasonably well tend to have more complications, even if they're lucky. The people who are most lucky of all, of the ones who have this 'missing in luck' factor, and also take reasonable care of controlling their diabetes. I'm very lucky, in this respect, myself; exceedingly lucky. When I first arrived at the John Radcliffe Hospital in - no, sorry, it was the Radcliffe Infirmary, then, in Oxford - early in my thirties, to sign on as a patient there, I was seen by a young registrar called Jim Black, who later was the author of the diabetic cookbook, and led a

major movement towards a new look at diet for diabetics. And Jim Black measured me in every respect and took a history from me, and finally got out his ophthalmoscope and looked in my eyes, and then called over a couple of medical students, and said “look in this man’s eyes and tell me how long you think he’s been diabetic”. And their reply - after doing a not as good a

- (13) investigation of my eyes as he’d done - their reply was “is he diabetic?”. Because then, as now - and I’m talking of fifty years on insulin - there are no signs of any failures in the retina that are normally associated with diabetes, and which normally affect people after a very much shorter time than fifty years. I find myself, also, as a patient of the kidney department in the local hospital here, for reasons which are totally unconnected with my diabetes. I’m suffering from a kidney condition called membranous nephropathy, which has a reasonably mixed outcome, but which is definitely seen as not being in any way the result of my diabetes. And the kidney specialist there, many of whose patients are diabetic patients with complications, they say to me that if they find that somebody’s eyes are completely clear of diabetic problems, then their kidneys, likewise, will be clear of kidney problems. So, for some reason, I’ve been lucky enough to avoid the worst of the diabetic complications, and this is after fifty years on insulin. It’s after fifty years, when I’ve done my best to control my blood sugar for my own sake, but haven’t always been able to do it particularly well. I’m sure there are other diabetics whose blood sugar profiles are the same as mine, and who have been much less fortunate. And it’s a very interesting question, and I think if some researcher can focus on that particular issue - of what it is that makes some diabetics with very ordinary diabetic histories so much luckier than others, in terms of complications - the research project could lead to real discoveries; be worth doing.

Can you talk about managing diabetes as a teenager?

Yes, I’m not sure whether my life as a teenager was particularly typical. I was at a fairly hard-working school and was expected to work quite hard, and therefore didn’t, I think, test out the opportunities of life as much as I might have done if I’d had a different sort of childhood. I’ve never been particularly great exerciser. I don’t think that my particular body is very good at gaining anything from exercise. Over-exercising has only ever been uncomfortable for me. It’s never taken me through any sort of barrier, to a new feeling of excitement or invigoration, and I’ve never found myself getting fitter as a result of exercising.

- (14) And what was your health like as a teenager?

Well, given that I wasn’t a very energetic teenager, generally I think my health was quite good. I didn’t have a lot of reasons for being off school, and completed my education without any further big long interruptions. I’ve got here a picture of the first form, when I was eleven or twelve, probably just about at the time when I was diagnosed diabetic. I’m standing on the back row near the right hand

end, and I'm the second tallest boy in a class of eleven and twelve year olds. The following year's picture, which I haven't got, had me having been outstripped in height by a good half dozen of my people of the same age, and having really, in effect, stopped growing when I first developed diabetes. And that remained until well into the following year, when, after this long cessation of growing, I suddenly started growing again, and reached my present height of six foot three some time after most of the other boys in the class had stopped growing. That goes along with having had my voice break at the age of fifteen and a half, when, at the time when I was a boy, the average age for voices breaking was thirteen or nearly fourteen. And I'm sure that the effects of diabetes, as a teenager, included the late maturing process as well. So, in a sense, my underlying health and fitness were not terribly good, and there was a definite cessation of the growing process, which meant that I was pretty weedy altogether when I was moving out of the third form into the fourth form, and then, as I say, this late spurt started, which took me up to a reasonable height without difficulty.

(15) During your teens, did you drink or smoke or do any other teenage activities?

Well, I did quite a lot of teenage activities. I never drank very heavily - probably, more than anything else, 'cause I'm not at all keen on the idea of being drunk and risking the complications that can cause. I've never ever in my life been more than a bit merry. And I did less than my share of underage drinking - didn't really get a taste for alcohol of any sort until I went to college, and then never drank heavily. I smoked heavily from an early age, I guess. My elder brother had - I'm sure my parents were completely wrong about this, and would have done otherwise if they'd thought about it - because he couldn't eat sweets, my mother allowed my elder brother to smoke at home, probably from the age of thirteen onwards, which was bad news. She never allowed me to smoke at home in the same way, until I left school and took to smoking a pipe. But I'd been one of the squad of young people who would smoke on the way home from school, despite the school's requirement that we should not do so in school uniform, which, since we'd stopped wearing caps, merely meant taking one's school tie off at the beginning of the walk down the last road homewards. And I think the main reason why I took to smoking a pipe when I left school was because I realised that, without the requirements of the school that I shouldn't smoke at school, I would probably become a twenty a day man in no time if I stuck to cigarettes. I smoked a pipe from then until my mid thirties, when, under pressure from my wife who had given up six months before, I finally managed to get it all together and give up smoking. Within a year of that, she even started smoking again, but I managed to stay off the weed and haven't smoked since.

Did you have any girlfriends in your teens?

Yes, quite a string of girlfriends - one or two slightly longer term, one or two fairly short-term. On the whole, I think most of them didn't really get terribly involved in my diabetes. I think it was rather less public then than it became later. And in the modern environment, I'm doing four blood tests a day and

four injections of insulin a day, and necessarily I'm with people when most of these take place. In those days, I did a urine test from time to time, but the injections were morning and evening only, and so it wasn't as much public as it has become since. I think most of my girlfriends had to come to terms with the possibility of hypos. My mother would, whenever she could, brief them on exactly what to watch out for and so on, and, I suppose, most of them had one reason or another to actually see me having a hypo, although for most of that time of my life I was able to spot the hypo and deal with it, without actually becoming unconscious. I don't think being diabetic made me more attractive to anybody, and might even have been one of the factors bringing some friendships to an end fairly quickly; I don't know.

(16) What did you do after you left school?

Well, I left school shortly before Christmas, in an academic year which I'd been very much the oldest boy in the school, having decided to try yet once more to get a place at university. I was awarded a place in November and left school fairly quickly, and had several months to fill before actually going to college in the following October. I spent those months working as a temporary clerical apprentice, for seven pounds eighteen shillings and four pence ha'penny a week, for a steel company on the border between Sheffield and Rotherham. Most of the steel producing capacity has gone, and it's now the home of an enormous museum, which is well worth a visit, for anyone who's listening. I worked in a work study department, initially simply carrying out various tasks requiring my skills and abilities, and gradually learning the basic techniques of work study and beginning to do several fairly useful small scale projects there. I then left school, had a summer holiday, which was very pleasant, and went off to university in October 1961 as an undergraduate. I don't suppose my first experience of employment was particularly typical, but it was of interest to me. I'd certainly decided that steel making was a nice way of being employed. There's a magic about the sight of liquid metal, which stays with people for the rest of their lives, I think. And it's very sad that there's far less steel made in the Sheffield area, now, than there used to be; indeed, far less made in Britain than there used to be. At the end of my first year in university, I got a job for six weeks in the same steel works as a temporary student, which meant I was downgraded to a pay rate of seven pounds a week, because temporary students weren't seen as being worth as much as temporary clerical apprentices. And then, the following summer, I realised that I could have earned more money, more quickly, in another way, and I worked for two weeks only, during the annual shutdown of the steel works, as a temporary coppersmith's mate. This involved twelve hours work per day for seven days a week for the fourteen days of the shutdown, during which time, three other students and I accompanied the four coppersmiths all over the steel works, while they carried out the tasks that a coppersmith does, and engaged in a certain amount of sitting about, waiting for something to happen. During which time, we discovered that one of the other three students had just succeeded in selling what sounds - even by today's scale - a very modernistic piece of art for an enormous price, which meant that the hundred pounds he and we were

each going to earn in the fortnight, was dwarfed by the sum he was going to get for this little artistic production, which he'd knocked up with a hammer, nails and some paints one evening, a few months before.

(17) When you went away from home to university, what was it like not having your mother there?

I think, on the whole, I had been very well prepared for going away from home for the first time properly. My parents had always taken the view that the diabetic has to be his own doctor, certainly day to day and week to week, and they'd done their level best to make sure that I had everything I needed to be able to look after myself. So, going away from home to university, there were many other adjustments that were at least as difficult as any adjustment I had to do on the diabetic front. You asked about my mother. I think it's fair to say that in talking about my parents' involvement in my life, I've sometimes referred to my mother more than to my father. The obvious reason for this is because my mother was simply the one who worried. She worried about me all the time. I think, on the whole, she really only got rid of the worries when she finally saw me married off, although she also was able to get rid of the worries, most of the time, when I was away at college or otherwise in the hands of other people. She worried far more than she should have done, and I think in that respect, she's just the same as everybody else. I feel very sorry for a mother who has a diabetic child. It's a constant worry. I think, probably, most mothers worry even more than they should, although heaven knows, there are enough things to worry about. I think most people feel that hypos can lead to long periods with the brain having its supply of sugar interrupted and brain damage and possibly worse. And to be honest, you don't very often read of people who actually have died as a result of hypos, and you don't very often read of people whose life has been substantially changed by the effect of hypos. And I've got a feeling that the body may actually be rather better at protecting itself in that situation than a lot of us are led to believe. I don't know whether the actual effects of continued and repeated hypos has been properly worked out by research into what actually happens to people, and maybe there are an awful lot of mothers who are worrying more about hypos than they ought to.

Did you have many hypos when you were at university?

Not really at university - relatively few. I was already, then, getting to the stage where I could spot a hypo coming a long way ahead. I do remember, however, in my

(18) second year at college, having a hypo while driving a car, during which I had a very slight impact with a car - which stopped in front of me at traffic lights - whilst still conscious, and was virtually just drifting away when the police were called and I was apprehended. I was arrested by a nice policeman, who took very careful notes of what I had to say to him. And I found myself in court, eventually, on a charge of driving without due care and attention, which pleased me greatly, because the alternative

charge would have been driving under the influence of drink or drugs. And the statement I gave him at the time was mainly designed to persuade him that, although the drugs I was on had caused my condition, they weren't drugs of the sort that the charge would have been based on. I was banned from driving for a month and fined fifteen pounds, I think, by magistrates, whose main purpose, I think, was to keep me off the road until the end of term. And a solicitor, who's just retired, earned his share of the fees by making an excellent plea in mitigation, which probably saved me from anything worse. I learnt a great deal then, and I've never ever had any other problem while driving, as a result of always being aware of the need for care in that respect.

Did you have any evidence from a doctor in court?

No, because I pleaded guilty, because the charge was a fairly straightforward one. The court hearing was really just a matter of the policeman giving his account of the incident, my solicitor producing his brilliant plea in mitigation, and the magistrates coming to a decision about what to do. And, you know, I'd brought it on myself, and I can't say anything but that I was very well treated, considering. It could so easily have been far, far more disastrous, and I'm glad to say nobody was hurt, and even the damage I caused was relatively slight.

How did you manage your diet while you were at university?

By the normal processes I had learnt, of making sure I didn't stray too far without making sure I'd had a proper meal, making sure, if there was any doubt about it, that there would be an appropriate form of carbohydrate for me to focus on in the meal, which was easy when I was eating in college, because, you know, normal mass catering - you don't get very far if you don't give young healthy undergraduates their supply of potatoes, rice, or whatever it might be. So, I didn't have

- (19) a great deal of difficulty. I discovered Chinese food immediately before I went to university, and I found myself able to cope nicely in the rather undocumented world of what you get when you eat a Chinese meal - learning the importance of a good bowl of rice as part of the make-up of it, and learning that sweet and sour is not a good idea, because of the concentration of sugar in it. And, on the whole, I think I've spent my life, as far as possible, eating what was given to me, and not fussing about it. The only question I ever ask is to make sure - if there's any doubt about it at all - that there will be enough carbohydrate for me to counteract the insulin dosage I would normally have. And in the modern world, not eating puddings isn't particularly odd anyway, so I don't have any real difficulty.

How much contact did you have with the medical profession while you were a student?

Relatively little. I tended to go to the diabetes clinic when at home during

vacations, rather than at university. I was required by my college to register with a local doctor when I got there. In the course of my time there, I think I only consulted him after breaking my nose, when going to sleep as I was walking around the quadrangle late at night. When I went to see him, he looked me up and down and said “well, yes, you’ve broken your nose”, and I said “well, what are you going to do about it?”. He said “I don’t do anything about it. I’m afraid you just come to terms with it. If you find yourself unable to breathe, we can engage in expensive and difficult and dangerous surgery, but if you don’t find yourself unable to breathe, then carry on living”. He had played rugger for the college thirty years before, and had a nose that looked positively misshapen, so I don’t think I was contacting the right professional if I wanted anything other than a simple rough diagnosis.

(20) What did you do after university?

I visited America, where my late elder brother was a stockbroker on Wall Street. Spent three weeks there, and travelled from - pretty well - from New England down to South Carolina and back, as well as spending a lot of time in New York, where he lived. And then returned to England to start as a graduate apprentice with, what was then, Britain’s largest steel company. We made an eighth of the country’s steel in the various plants we had around the north of England, and the company formed the backbone of BSC when steel was nationalised later on. I had been awarded a graduate apprenticeship, which effectively meant that, for a year, I spent my time in a mixture of lectures and in classrooms for a week or two at a time, and working attachments in various parts of the country - where I would get a chance to look at various different parts of the steel works and various different parts of the country - before finally being appointed to a job in one of them at the end of the time. The beginning of those working attachments was a period of four weeks, right at the beginning of the graduate apprenticeship. And during those four weeks I was required to spend my time working on shifts as a labourer in a steel melting shop - in my case in Workington in West Cumberland - getting up at six o’clock in the morn... or getting up in time for the six o’clock shift in the morning, or working from two pm to ten pm, or working on the night shift from ten till six. I had a tremendous time, and worked very carefully on one of the country’s acid Bessemer converter furnaces. There weren’t very many Bessemer converters in those days, and the furnace on which I worked is now in a museum in Sheffield, having been taken there when the melting shop concerned was closed down. I’ve only visited it once, but it gave me an interesting mixture of feelings, to see this enormous old converter sitting there with people looking at it as an interesting architectural industrial monument.

How did you manage shift work as a diabetic?

I only really did that spell of shift work, and the answer is it was much the same as anything else. You have to be able to cope with the disturbances of life by understanding what each disturbance could do to you, and making sure you’re properly protected. I’m proudest of my ability to fly across time zones



on long journeys by air. I have, in my time, flown from between New York and London several times, and have also flown between Britain and Texas, Britain and Los Angeles. In each case, one tries to be... one needs to make sure that the airline is capable of feeding one at the times when one wants it, rather than when it suits them, and one has to be able to cope with the possible lengthening or shortening of the intervals between successive injections. It's easier, now, on a four injections a day basis than it was in the days when I was on two a day. And I've always been rather proud of the fact that I don't appear to suffer too badly from jetlag, because a body whose internal clock is largely controlled by the regular doses of insulin doesn't have the problems of an adaptation when compared with the body that's actually looking at whether the sun's risen or not. If my body thinks it's night time, it treats it like night time. It makes it easier rather than harder, I think.

(21) Did you tell people at work that you were diabetic?

I haven't always made a point of telling people at work that I'm diabetic, because of the desire not to get into "I'm a diabetic - look at me". I do, however... I've learnt very young that it's a good thing to make sure that somebody knows I'm diabetic, and I usually can spot very quickly the person who I ought to tell. It's probably a lady, because ladies take this sort of thing much more responsibly than gentlemen do. If she's the boss's secretary, so much the better, because it'll get thrown into her lap anyway if anything goes wrong. And I've tried to... I think one of the reasons for being shy about it when I was younger was that, on the whole, a lot of people hadn't heard about diabetes. I, not very long ago, I heard Professor Matthews, in Oxford, speaking to a lay audience about diabetes, and saying to them that... explaining to them why he appears in one of the Morse novels in his own right, as Professor Matthews, with a very accurate description of him written by Colin Dexter. And he explained that Colin Dexter was one of his patients, and had done this out of the goodness of his heart, and that Morse was a diabetic. He then started his proper speech to the group he was addressing by saying "hands up anyone who doesn't know somebody who's diabetic", and only a very few hands went up. And he said to them "well, you ought to know somebody, because I've just been talking about Colin Dexter". But, in fact, the question was obviously taken by most people as "do you know somebody among your family and friends who's diabetic?", and in the modern world, most people do. Very often, people have a relation who's diabetic, but those who don't have a relation who's diabetic usually know of somebody whose life's been affected by it. And that makes it easier for me to say to people "I'm a diabetic on insulin". They've read enough, they've heard enough to be able to take that, and any other sentence I want to say, without, at the time, treating me as though I've got some new form of disease that they've never heard of or understood.

(22) When you met your wife, how did she react to your having diabetes?

We met very shortly before I took my final exams. I don't think she knew anybody who was diabetic, and it came as a bit of a surprise to her. Like so

many other people, she found it to be something she had to take on board, and she managed very well. I think her mother was rather more concerned than she, because of what she had heard about diabetes. And her mother actually went so far as to consult a doctor, and then to persuade us to go and see the doctor, so that he could talk to us together about it, and then presumably provide feedback for my prospective mother-in-law. And I think, probably, the thing that she worried most of all about was that I'd mentioned, almost in passing, the fact that I'd heard that there was some chance that diabetics might be relatively infertile, and the thought of not having grandchildren had obviously upset her quite a bit, and she wanted to know more about this. The doctor she consulted was a reasonably prestigious one with a good reputation, and he was able to advise her that that was unlikely to be a great problem, and that, on the whole, she needn't worry. He also advised her, as was appropriate at that stage, that it looked as though the chances were quite reasonable that our children wouldn't include a diabetic among their numbers. As it happens, it didn't turn out that way. I have two daughters, both now in their thirties, and my younger daughter, after a period during which she had been, shall we say, generously built rather than underweight, was diagnosed at the beginning of her thirties as possibly suffering from diabetes. And the tests showed that she was indeed suffering from diabetes, which was held to be adult-onset diabetes, and was treated without insulin for a period of over a year, during which, the relative lack of control got worse, and it became clear that she was actually a genuinely insulin dependent diabetic. It's not just a case of diabetes, which is so badly controlled, that insulin is the easiest way of bringing it back under control. Her pancreas had spent that year going out of condition, and it was stopping working. I'm glad to say that she's adapted to diabetes very well. She's, again, had even more

- (23) than I have of the example of another diabetic in her family going before and blazing the trail. She understood, right from the start, the importance of the various things that a diabetic can do to help themselves. And particularly since she got onto insulin, and the insulin took control of her condition, she's been able to keep a reasonably stable life. She became pregnant shortly after my wife died - the beginning of 2003 - and was immediately put in the hands of her diabetic specialist and the maternity department at the local hospital working in tandem, seeing both of them whenever she went for a pre-natal appointment. They gave her very strict guidelines on how to control her diabetes to a much tighter requirements than everyday diabetes requires, so as to make sure that the foetus doesn't get too much sugar in the mother's blood, and rub its hands - metaphorically - and say "right, goody, let's take some of this" and produce an enormous baby. And my grandson, Ivor, was born a couple of weeks early, weighing six stone thirteen - six pounds thirteen, sorry - which is absolutely bang on for a normal baby. And for a baby with a diabetic mother is a very considerable achievement, because it means that his size development over the whole period, which was being monitored regularly by ultrasonic tests, had kept properly under control, because she had been able to control

her diabetic condition to these very tight requirements laid down by the specialists. We were very pleased about that altogether.

For the historical record, have you noticed any difference in her approach to diabetes from your early approach?

Yes, I've steered fairly clear of requiring her to answer to me in this respect at all. She was very worried when they finally said "right, let's put you on insulin". She was very worried about whether or not she was going to be able to cope. She was effectively sent home from the hospital one Friday with a supply of insulin and instructions to start injecting it. And I think she'd had a bit of a lesson on how to do it with distilled water, but that's as far as it went. And in order to help her, I spent that weekend with her at her house - with her and her husband at her house - helping her through the processes of coming to terms with how it all worked, and whether or not she could manage. And I really tried very hard not to

(24) lay down how I thought she should do things, because it's much more important that she learns to do it for herself, and that she takes the advice of her doctors, rather than of a hoary old diabetic with different requirements. But she's very laid back about it; she manages very nicely. She's much more able to cope with disturbances to her daily routine than I am, and I think she's learnt how to cope with them by actually letting them happen and adjusting to them on the hoof. I tend... occasionally I'm prepared to take a meal very much earlier than I should or very much later than I should, and time the insulin to go with it. She very often doesn't get home from work until very late. Although it's planned, it means that very often, if she wants to eat with her husband, they won't eat until ten pm, and is able to cope with this without difficulty, even if it means adjusting the timing and quantity of her insulin, and eating a little bit of food without an injection and then more later, and this sort of thing. She manages very well and it doesn't disturb her; she's in touch with it. She also has the comfort of being able to diagnose her own hypos when they happen without difficulty. I switched to human insulin some time, I think, in the seventies, when it first became available - if it was the seventies; it was about then. Had a few hiccups in the early stages, because, if a doctor prescribed insulin of a certain sort, there was a period of about nine months when the pharmaceutical wholesalers would send down a batch of insulin, regardless of whether it used the word human on the packet or not. And this meant that you were quite likely to get switched back from human to ordinary pig's insulin, and then switched again to human insulin after a month or two. And I had a certain amount of difficulty with this. But the thing that everybody said about human insulin was that it worked better than pig's insulin, because it was biologically more closely tailored, and that it made it much less easy to detect a hypo coming on. And I have to say that I never found this. I found that the traditional signs of a hypo worked just as well for me. I've always found the best sign

of all being the fact that I find it difficult, when my blood sugar's getting low, to do relatively simple things of the brain like mental arithmetic. I'm reasonably good at mental arithmetic normally, but if my blood sugar's low, I become a lot less good at it, and this is an easy guide for me. And I have to say, I don't think human insulin made a lot of difference to me in that respect. In that respect, as with others, I may have been lucky.

(25) Has the way your insulin has been supplied changed over the years?

Yes, indeed. In the early days - in the fifties - I actually obtained my insulin from the pharmacist at the hospital, where I attended an outpatients' clinic. It was prescribed for me by the doctor I was seeing, and I would go home with my supply of insulin and other equipment. When health service prescription charges came in, I was required to put a shilling in a machine and out came a stamp to stamp onto the prescription before I handed it to the pharmacist. The stamp said "prescription fee paid", and you paid one prescription fee per prescription, rather than per item on the prescription. The fee, I think, disappeared after a change of government. And by the time it came back - which was the first time that diabetics found themselves not being charged prescription charges - by the time it came back, the general tradition or general system had been developed, whereby the hospital might advise on your drug intake, but the prescription process had to be done by your GP. And, on the whole, hospital pharmacies found themselves much less busy when they were only prescribing drugs for patients who were actually in hospital. The real irritation with... I mean, it's worth saying that diabetes is exceptionally expensive for the Health Service, not least because of the number of people in other departments, for example the kidney departments, whose presence there as patients arises simply from the complications of their diabetes. On that basis, an increase in the number of diabetics in the country is a major disaster. Having said that, the Health Service has, at times, been remarkably unhelpful to diabetics. I've mentioned the damage caused to my flesh by injections with, what I can only call, coarse bore needles when I was a teenager. The ultimate insult was the period immediately before disposable syringes were first supplied to diabetics, when the Diabetic Association managed to make the point to the government that if drug addicts were going to be given disposable syringes for free, it wasn't just inappropriate, it was an actual insult to Britain's diabetics to make them pay for their own disposable syringes. And the fact that they were persuaded to change their minds and diabetics were given free disposable syringes, has led me, like an awful lot of other diabetics, to be much more parsimonious with my use of disposable syringes. My daughter throws the syringe away after a couple of uses. I get a prescription for a hundred, and normally expect to make them last well over twelve months, and tend only to change the disposable needles on my insulin pen when the cartridge of insulin that I'm injecting has finally run out.

(26) Another change there's been, of course, is that the Health Service has tended to ration or to control the issue of prescribed drugs to diabetics, in a way which seems to me to be very much a second order level of economy. A

diabetic is going to use a certain amount of insulin and other requirements during a year, and I can't see that it's necessarily very clever to change the amount of time for which one prescription can be issued downwards. In the old days, one was able to get at least three months' supply of any particular item on a single prescription. And I used - like a lot of diabetics - I used to go and see my doctor about four times a year, and collect a complete batch of everything in sight, the appropriate quantities for everything, and I would only waste the doctor's time for three or four minutes, at most, in doing this. And if he wanted to take another minute looking at the state of my health generally, he would do. As things stand now, the doctor has to prescribe not more than two months worth of any particular item. There is pressure, I gather, in some areas - although I've never experienced it - for diabetics to use less test strips for blood tests than they ought to use, because every test strip costs a significant amount of money. And the less tests a diabetic does, the less money is spent under that heading. The problem is that the less tests a diabetic does, the less control he has over his diabetic condition, and that's bad news. Likewise, maybe the country only needs to have an average of say four to six weeks worth of insulin in the hands of every diabetic, but if there were a fire in the insulin factories - of the sort that prevented the supply of Branston pickle a few months ago - would we actually all be able to cope and all be able to get enough insulin to meet the needs within that period of six weeks? It's a good thing to have quite a lot of insulin available in the hands of the people who are going to need it.

Has that been a fear at the back of your mind, that one day there might not be a supply of insulin?

No, I think not. I think it would be a significant emergency that would require urgent steps if that were to happen. It has, however, been a thought at the back of my mind at all times that it would be necessary to make sure that my own supply of insulin was relatively large. And I'm afraid, at any moment in time, I tend to be absolutely sure that I've got more than six weeks worth, rather than less.

(27) Can you talk about what your diabetic control has been like in middle age?

Yes, in middle age, from sort of my... until after my... well, till some way into my forties, I did relatively little actual testing as part of the control process. The only option available at the beginning of that time was the Clinitest tablets for testing urine, which were never terribly convenient. You did really need somewhere you could carry out a minor laboratory exercise, and under the modern Health and Safety at Work Act, they'd probably be illegal to do it in an office anyway. And I think also the fact that at that stage in my life, I could come up with a reasonably good guess as to what my blood sugar was. I would have a doctor take a blood sample for eventual determination on my blood sugar, and I'd be able to make a prediction of what the score would be, which

would quite often be surprisingly accurate. I should say that when I started as a diabetic, the blood testing process was incredibly long-winded. I would arrive at the diabetic clinic. A specially sterile needle would be used to dig a hole in the end of a finger, and blood would be squeezed out of it into a very small test-tube, probably to, you know, half an inch deep in this small test-tube. It would then be corked up and sent off to the laboratory, and the blood sugar content would be available less than twenty four hours later. And this was the very latest technology, and absolutely useless as far as being able to make a quick correction to one's insulin dosage in order to meet one's needs. I had to have something better than that, and, as I say, the Clinitest process wasn't incredibly reliable, and tended to give you a view of your history over the last few hours, rather than your present state. And I went through most of my twenties and thirties, and into my forties, relying mainly on my own appreciation of how my blood sugar was. I felt the symptoms of high blood sugar quite easily. My bladder told me that it was filling up faster than usual, and I would feel less good with a high blood sugar than I normally do, and I could recognise a hypo coming on, and gauge where I was on the scale between the two. And the decision to start blood testing didn't really hit me until I was over forty, when a period of... a very bad dose of something - a year when the 'flu vaccination, that I've always been able to get, turned out not to be the right 'flu vaccination for the 'flu that was going round my part of the world - led to me being stuck in

- (28) bed with the 'flu, which made me totally unable to eat. And I'd done then, what I should have... what I'd always understood I should do if unable to eat, which was to halve the dosage of insulin I was using. And this actually led me to have a dangerously high blood sugar, at a time when I was feeling too ill to be able to take notice of it. And when visited by the GP, who was called in by my wife, I found myself being sent to the nearest hospital - not by an ambulance, but in a police paddy wagon, because the ambulance drivers were on strike that weekend - and being admitted straight into hospital, and brought round from considerable dehydration and a very high blood sugar - far higher than I've probably ever had before or since. And at that time, it was brought to my notice that my main objections to the urine testing system could be completely overcome by making use of the then still relatively recent introduction of portable blood test kits. And I got my first BM test kit, which took over a minute to produce a result, but did - heaven knows how accurate it was - but did at least give you an estimate of your blood sugar. And I started to use this, and developed a system for keeping track of my blood sugar, which I've used ever since. At that stage, I was still using two injections a day of mixed short acting and long acting insulin, and the control I got was not as brilliant as it could have been. I didn't move to my present regime of four injections of insulin per day - one before each meal, and one long acting insulin before I go to bed - I didn't move to that until the early nineties, when my condition needed a look at, and the recommendation was that I should switch to this as a means of better control. Compared

with my youth, the modern environment is much better. I have blood test results in twelve seconds, I can make sensible decisions about the insulin dosage I'm going to have, in the context of the blood sugar results and what I expect to be eating and doing in the next few hours. I can use a cartridge pen, which is so quick compared with other methods for getting an injection in. The biggest delay is when I'm about to go to bed, having to upturn it in order to make sure that the insulin is properly mixed during the day. I sort of draw the cartridge up and stick it in, and it's all done in a few seconds. The needle I use is a twenty six gauge one, which is so thin my body doesn't notice it going into the folds of fat on my tum. Compared with the hassle of being a diabetic in the old days - and making sure one has a supply of surgical spirit to keep one's syringe and needle in, of dealing with the Clinitest system, of everything like that - the modern world is much, much better, and I wouldn't dream of the good old days in any respect.

- (29) Over the many years that you've had diabetes, have you noticed any changes in the way medical staff treat patients?

I think the biggest single change is that they used to treat me like a small boy and now they treat me like an old grandpa. I think that's entirely appropriate. I think when you consider how much trouble a diabetic can be, diabetics get very nicely treated by the medical staff they meet. I think... I do find, nowadays, that some of the young medics I meet are actually using the opportunity to find out more about their craft by asking me questions about the way I've gone through things in the past. I think there is no doubt about it, that the diabetics in Britain are very fortunate, in that we do have... the Health Service has to recognise us as a major area for treatment. They can't afford to sweep us under the carpet and forget about us, and so they do take it seriously. I think the initiatives on setting standards for the treatment of diabetes really are perhaps not as necessary as they might have been, because there's always been so much co-operation and so forth going on anyway. And I think it's an interesting reflection that nobody in their right mind would consider asking for private patient treatment as a diabetic, because of doubts about what the Health Service offers them. The Health Service, on the whole, hospitalises diabetics even less now than it used to, because there's less need to hospitalise diabetics. And I think, in exchange, they give us a very, very good service as outpatients and so forth. I think, in some ways, it's a bit taxing. I've always taken the view that it's better for me to consult a diabetes centre in a major hospital about my diabetes than to sign up with the diabetes clinic that my GP might be using for quite a lot of his ordinary patients. I don't know whether my firm belief that this is what suits me best is necessarily a belief that I feel should apply to everybody. If I was right, then there ought to be big diabetes centres every few miles in big cities, and not have individual GP practices trying to deal with their few dozen diabetics individually. But I'm not sure that I've got it right. I do feel, however, that the great thing about the modern treatment, compared with the old treatment, is that diabetes is obviously much more visible to the average

health professional. I do remember hearing cases, when I was a boy, of GPs who had children, who were obviously suffering from something, and after several weeks of consultation by the parents found themselves having it suggested to them that perhaps the child might be diabetic. I remember one friend, when I was a school boy, being diagnosed as being diabetic by his best friend, who was a diabetic, and who said let me test your urine with my Clinitest set. The doctor concerned was horrified to discover that this had happened, and that the result was a very clear indication. The thought that the child might be diabetic hadn't crossed the doctor's mind. That's the way the health service was in the 1950s, I guess.

(30) Can you describe a typical day in your life now, in 2005?

Yes, I'm sixty two and I'm still working. I'm a self-employed management consultant, which means I don't have a regular job to go to. At the moment, and for the last three months... well, two months and for the next month and a half, I'm actually commuting daily by train from Sheffield to Durham, doing a relatively interesting - to me - job, in the IT department of a major water undertaking up there. And I leave the house at twenty to seven in the morning, and get home at seven thirty in the evening. And I wouldn't dream of doing a job like that for twelve months on end, but for a few months it's possible, and it pays well. When that finishes, I shall probably get a short break, and then hopefully find somebody else who wants to buy my abilities for a few weeks or months. I don't take enough exercise - everybody says I don't take enough exercise. I'm well built, but not unduly overweight, I like to think. I, having been widowed nearly two years ago, I married for the second time a few months ago. I married one of my very oldest friends - a girl who was a close friend of my first wife's and my own for many years. My first wife was godmother to my stepson. And, in many ways, I think she's taken on quite a lot in taking on the job of being a wife of a diabetic. I think it isn't only the mothers of diabetics who have a lot to cope with. I think there are... for every diabetic you find, you'll find there's a spouse who's carrying part of the load, and coping with a lot of the problems that diabetes can bring. It's difficult, I think, to consider what it would be like being a diabetic absolutely on one's own. I was on my own for over a year, after my first wife died, and when I say 'on my own', I think the important thing is that you need to be sharing a house with somebody if you're a diabetic and want to be absolutely sure that you're going to be able to cope with anything that your condition may send you. And I'm glad that my new wife is perfectly happy to take it on. I think she's found it to be, in some ways, much more demanding than she thought, but also much less worrying than she thought, and I think she's managing all right. I'm certainly the best served out of the whole aspect of it.

(31) In what ways do you think your life might have been different if you hadn't been diabetic?

That's an interesting question, isn't it? It's not one I've ever really thought about very much, perhaps because of being relatively young when I developed



diabetes. I do remember when my mother was psyching me up to go back to school for the first time after my diagnosis, I remember asking her a question, to which I think I knew the answer, but I wanted to confirmation - "is there any possibility that this is going to come to an end?", and her saying "no, I'm afraid I think you'll be injecting insulin for the rest of your life". And I think she found answering that question much harder than I found it listening to the answer. I think I knew what the answer was, so it wasn't upsetting. She found it really absolutely tore her apart to have to tell a boy that he was going to have all these things to cope with for the rest of his life. But, in a very real sense, I accepted it then, and I've had it ever since. If I hadn't been diabetic, there are very few occupations that I might have wanted to take on that I could have taken on, but can't now. I don't think I wanted to be a heavy goods vehicle driver or an airline pilot, and diabetics have broken ground in a great many areas where I wouldn't have dreamt of trying to take it on anyway. It would have been interesting to be able to eat sweets whenever I wanted to, but all that would have done... but I don't think it would have done me any good at all, and my teeth would have suffered. So, it's probably just as well.

What message would you have for someone newly diagnosed with diabetes now?

And possibly for their mum as well, I guess. I think it's possible you may get a view of what the future's going to be like, which can be dreadfully pessimistic, and I'd want to say that it doesn't have to be as bad as all that. It's important to understand that most of the things people are advising you to do, they're advising you to do for your own benefit, and that therefore you must try to trust most of the advice you get, if it's not inconsistent with other advice. I think probably I'd say, don't ever get downhearted, and definitely make sure you do learn how to control it for yourself, and carry on making use of that knowledge all the time. It's not something you can turn off like a tap. You're diabetic twenty four hours a day, and you're lucky if you get the chance to forget that for two hours on end. The advice for a mother is, for Pete's sake, don't worry about it too much; it's not as bad as all that. There are far, far more diseases that can affect one's life very much more than diabetes must. Going back to Dr Lawrence, Dr Lawrence was very keen on making sure that all his patients, and their parents, knew that diabetes wasn't the end of a normal life. It didn't mean they were unhealthy. They didn't have to carry a portable set of scales around and weigh everything they ate, and control it down to the last half ounce. And he was very keen to make sure that his patients were self-sufficient, and as little of a load as they possibly could be on those around them. And that, I think, is the objective that all diabetics would want other newly diagnosed diabetics to meet as well.