What I Teach My Diabetic Patients

Panel Discussion

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MODERATOR PRISCILLA WHITE: It is obvious that, without new therapeutic discoveries, the better prognosis for the diabetic patient today depends upon his greater self-knowledge of this disorder. Therefore, the subject of our panel concerns the teaching of diabetic patients.

The panel members, coming as they do from all sections of the country, should give us the teaching goals of the entire United States. Their qualifications are well known to this audience. The teaching experience of this panel exceeds two centuries. From these experts, we should learn the subjects and the technics which they have found to be successful in maintaining their diabetic patients in the most nearly normal state. Beginning with our problems, as we meet them in the patients, let us question our panel.

Dr. Rippy, how do you indoctrinate the new diabetic, especially the adult, shocked with the diagnosis of a chronic disorder?

With your insight, how do you handle this problem?

DR. EDWIN L. RIPPY: At the onset, one might analyze the physician who is assuming the responsibility for this diabetic patient. What is his attitude?

There are five things which I think are absolutely necessary:

1. The physician must be well grounded in the fundamental concepts of good diabetic care. 2. He must believe in them firmly and definitely. 3. He should be tempermentally adaptable to the long-term relationship with his patients. 4. He should be able to develop technics of teaching. 5. He should have the patience to accept the perverse and obstinate personality of the diabetic.

If after this soul searching he finds himself with these qualifications, he is likely to be acceptable as the physician for the diabetic patient.

I wish I could remember the author of a simple little story to give him credit for it. It is the story of the middle-aged matron whose diabetes had just been diagnosed and who had been referred to a physician who specialized in this disorder. Very hopefully, she said to him, "I understand you specialize in the treatment of diabetes." He said, "Madam, I am afraid you have been misinformed; I do not do so." She was quite taken aback. But he added, "I simply specialize in teaching patients how to treat their own diabetes"—a very important moral.

Often, in talking with new diabetic patients I eventually reach the point where I ask, "There are several things you must learn. Do you know what they are?" Immediately, they answer, "Yes, two of them, diet and

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insulin." Then I reply, "Not first. Even more important than the regulation of diet and of insulin is the adjustment of your attitude. If I teach you about changing diet and insulin before I teach you to adjust your own attitude, it is just like giving you a high-powered automobile and putting you on the road without teaching you how to run it."

I think every good doctor has to be a bit of a showman. He must develop technics. There is no substitute for the long-term personalized relationship with the individual patient. One must become part of his life and must develop, in the beginning, trust and mutual confidence.

Although the story of diabetes, to me, is one of hope and promise, I am rather convinced that it is a bit of a mistake to teach the diabetic, at the onset, that he can live as usual. I have gotten away from that, because I think that creates a misconception.

I am a Baptist, and Dr. Joslin has taught me, without knowing it, that every man who takes care of diabetics must be an Evangelist! I do not think we should talk about complications as the Baptist minister would, but I think the patient should know the consequences of poor control.

I use three terms in talking to patients. I tell them, "I can give you three types of control. The first is symptomatic control—easy to do. I can give you a little insulin, and all of your symptoms will vanish. But that will not do the job for long. Or I can give you *survival* control; I can teach you just a little more, and you can do more. You can survive; but inevitably, you will probably develop the so-called precocious senility with loss of sight or limb. Therefore I would like to teach you what I call protective control; that is the real thing."

I also think the diabetic should be given hope and promise and should familiarize himself with the therapeutic progress of the last few years. I think he should be told that within his lifetime, particularly if he is within the younger decades, there will probably be great advances in the field of diabetic care. Who knows? Simpler methods of control, perhaps prevention and hope for cure.

In other words, the friendship with the patient, the facts, the promise, and the hope.

MODERATOR WHITE: Thank you, Dr. Rippy. What a fine start for your patients!

I think all members of the panel treat diabetic children. Dr. Guest, you treat diabetic children exclusively, so won't you tell us how you develop a healthy attitude in the child, and what is much more difficult, a healthy attitude in parents toward the child's diabetes?

DR. GEORGE M. GUEST: Thank you, Dr. White.

As Dr. White says, my experience is more limited than that of my colleagues, i.e., limited to an age period under 15 or 16 years.

Juvenile diabetes is relatively uncommon compared with the adult diabetic population. But it has an importance far out of proportion to its incidence because it requires a daily routine of self-management and because the diabetic child has much longer to live with this disease than the adult who develops it at 60 or so.

The indoctrination, as Dr. Rippy so ably stated, must be directed to developing a healthy attitude toward the disease, to help the child accept and live with it with minimal worry. I say to the child and to the parents that diabetes is an admitted nuisance. Of course, it is a nuisance to take insulin each day and to test the urine in order to regulate the insulin dosage. But, beyond that admitted nuisance, it must never be regarded as a handicap. The child is to engage in all of the activities of his nondiabetic friends. We teach the parents that they must not forbid games or activities for reasons related to diabetes and must avoid implications of invalidism.

The instructions to the parents and to the children should be simplified as far as possible but, of course, should not be oversimplified with sacrifice of necessary knowledge. In our clinic, I have aimed at simplification of instructions for both parents and the children, and the instructions which they read and follow are reduced to these four and one-half mimeographed pages. (See appendix in Holt and McIntosh *Pediatrics.*) Some diabetics will read a whole book but, in our clinic group, not many of them will. If we can reduce instruction to a minimum, it is desirable.

The desiderata for the diabetic child is to sustain good health, normal growth and development. One can limit diet in an adult, and, to avoid obesity in some, that is desirable. But you cannot limit food intake below normal requirements without handicapping growth in a child. Whatever the dietary regimen, the important point is that adequate insulin must be given at all times. The parents and the children themselves must practice eternal vigilance to adjust the daily dose of insulin as needed. They must accept the precept that acidosis or coma should never occur. They must be alert to the necessity of taking extra insulin during acute infections and of never carelessly omitting insulin. If they are alert in making their tests, especially for acetone, they possess the most important means of detecting impending ketoacidosis, and in the presence of glycosuria the most important sign indicating the necessity for more insulin.

In developing a healthy attitude toward the disease, I might tell a little story, something which happened in our clinic recently. An eight-year-old girl, who had

been diabetic since the age of eighteen months, had always accepted the diabetic routine without complaint. Suddenly, when she was in school, her mother said, "Dr. Guest, I think Sally, for the first time, seems to worry about being diabetic. I want you to talk to her." I did. I went through the usual discussion of what it meant; it was an admitted nuisance and so on. She listened to this for a while; then she said, "Well, I would rather have what I have than what Mary Jones has." I quickly gathered that this was a neighbor friend. I said, "What is the matter with Mary Jones?" Her reply was, "She has asthma and has it bad!" (Laughter)

MODERATOR WHITE: Thank you, Dr. Guest.

Dr. Holcomb, you have developed so many interesting technics in teaching, and you are so meticulous about diet instruction, won't you start the discussion of those two subjects, technics of teaching and diet instruction?

DR. BLAIR HOLCOMB: When we see a new patient who has developed diabetes recently, we hasten to tell him that he is going to live a long time with diabetes provided he controls it. The objectives for which he should aim are a comfortable, useful, and long life, and no diabetic achieves those objectives unless he is trained intensively and extensively.

Perhaps we have put more emphasis on the training of the patient than some people think is necessary. I have never seen patients who knew too much about taking care of themselves, and I would like to tell you in detail how we teach them.

We hold classes every morning from 9 to 11, every other afternoon between 2 and 3. Our morning classes are taught by a young woman who was selected because she understands how to deal with people. We have taught her what we want *her* to teach the patients. We believe that the over-all education of the patients should not be put in the hands of a dietitian but should be kept in the hands of the practicing physicians. We do not believe in physicians turning the education of the patients over to interns or residents. We think a physician rightly should take enough time to talk to his diabetic patients, not only individually but also in groups.

Our patients, both in and out of the hospital, meet between two and three o'clock Monday, Wednesday and Friday. As much as possible, our in-patients are in ambulatory units such as Dr. Joslin will describe. There is an esprit de corps which is accomplished by this grouping of diabetic patients. One never can achieve as much with patients isolated in different parts of the hospital. Our patients exercise together; they go to classes together; they walk to the diabetic dining room and eat together. It all becomes a social event. They teach each other; you cannot stop them from doing it. It helps the new patient who has been hospitalized for two days to take over voluntarily the instruction of the patient who has been admitted today.

I want to emphasize some things which I know Dr. Frederick Allen will subscribe to. I had a letter from Dr. Sherrill shortly before he died last year, in which he was bemoaning the fact that diabetic control today is not what it should be. I wish to emphasize the fact that we need a renaissance in the importance of diet. The diabetic is living on a subsidy, as it were, the subsidy being insulin; and, like industries and people who endure because of subsidies, the diabetic many times does as little as possible to maintain good control.

Another technic of training includes continued education through the years. It is fine to educate a patient intensively over a ten-day or two-week period, but it is still more important to keep that patient educated. For this reason, in 1928 I devised an informal diabetic bulletin. I never realized, when I started it as a monthly bulletin, that I was assuming a job which I still have. In this bulletin we try to keep the patient educated, tell him about new things which are proved and are good; we try to build and sustain morale. It has been a very valuable means, I think, of achieving long-time control; and I believe in long-time control.

In summary, I want to say one thing more, Dr. White, and that is this. We teach 87 per cent of our patients to calculate a diet. We do not use exchange diets. I have a suspicion—it is almost a conviction—that the popularity of exchange diets is due to a single fact, namely, that many physicians today do not themselves know food values. They do not even know how to calculate a diet. Therefore, they take the easy way out.

When you treat people with a lifetime problem, you must build discipline and attempt to build character from the start. You do not do it with loose dietetic control.

MODERATOR WHITE: Thank you, Dr. Holcomb.

I would like to ask Dr. Guest about technics which the pediatricians have developed. Most of us, in relation to diabetic diets, think in terms of two diets, the diabetic diet and the nondiabetic diet.

But the pediatricians have three diets: Diabetic diets which they do not prescribe; nondiabetic diets which they do not prescribe; and the normal diet which they do prescribe. When I quiz their children about this, their diet is what I call an excellent diabetic diet. I think this is wonderful technic. I am not being facetious; it is particularly important for diabetic children.

However, instead of asking you about that, Dr. Guest, since you are the chemist of our group, will you discuss briefly the technics for teaching various kinds of tests?

DR. GUEST: Dr. White, your first remarks were about

the normal diet. (Laughter)

I would like you to recall my regimen employing the normal diet. The best example of all was the nine-day-old baby who was breast-fed for 10 months. That baby is now eight and one-half years old and living by taking what we call a normal diet; the instructions regarding the diet were the same as those given for nondiabetic children *but better.* As most of you know, I follow what Dr. Holcomb will call loose dietary practices. Children eat largely because of appetite. They spill some sugar most of the time. They can sustain good health and can avoid the acute accidents of acidosis if they are never allowed to show ketonuria. My children are taught to avoid excessive ketonuria, and that means testing for acetone frequently.

Fortunately, new tests are remarkably helpful and simple. Either the Clinitest or the Galatest are accurate and much easier to use than the Benedict test. Some people prefer the Benedict solution still, but for the mother who is sending her child off to school in the morning, these simple tests are invaluable.

Both the Clinitest and Galatest are sensitive. There is a new test for sugar which was mentioned this morning, employing the specific glucose oxidase. This promises to be the simplest of all. If it is distributed as promised during the year, it is going to be remarkably convenient for all of our children and older diabetics.

I would like to say another thing about the testing. I try to teach diabetic children to conduct their own diabetes detection drive, suggesting that they periodically get urine samples from the members of their families and relatives after a big Sunday dinner or at some such convenient time and do their own relatives' tests. They will frequently diagnose a diabetic in their family and, as the years go on, they will find more.

DR. WHITE: Do you think patients should learn to do their own blood sugars? (Laughter)

DR. GUEST: I think that is to be hoped for. If this new blood sugar test reported in the morning program proves what was suggested, it may be possible for patients to test drops of blood drawn by skin puncture.

MODERATOR WHITE: In contrast to diet, where there is not so much patient prejudice, we all know that diabetic patients are prejudiced against insulin therapy. This must be broken down. As part of their psychological rejection they make many bizarre mistakes.

We must warn patients against these. They must be taught methods for sterilization, regulation, and the signs, symptoms and treatment of insulin reactions.

Dr. Gates, you have talked so helpfully about these problems, won't you start the discussion of teaching insulin therapy to patients with diabetes?

DR. EDWIN GATES: In the first place, I do not think one can succeed in teaching about insulin unless one gains the patients' confidence. It takes time. They must be allowed to ask questions. One cannot hurry; one cannot do all the teaching at the first visit.

I tell patients everything about insulin which may be of use to them. I tell them when it was discovered, in 1921, and something of the history of the discovery and of the miraculous change it created, that diabetics who would have died formerly live now, and that if they follow our instructions they may live as long as or longer than their nondiabetic neighbors.

I explain the various strengths of insulin to them. Errors arise when the pharmacist accidentally sells them unaccustomed strengths. Actually, this error is the patient's because he should check and find out what type of insulin and what strength he is purchasing. Accurate measurement is stressed. I think it is very important that they take an exact amount of insulin. In childhood, failure to be accurate may spell disaster.

I furnish the patient with an insulin syringe approved by the American Diabetes Association. I teach the patient never to get a syringe that can be used for two strengths of insulin. Occasionally I ask them to bring in their syringe for me to see. It is surprising to find that sometimes the patient is not using an insulin syringe. I emphasize that a U-40 syringe must be used with U-40 insulin. Ask your patients to bring in their insulin bottle once in a while. You will find occasionally that they have the wrong insulin. I advise that each diabetic have two syringes in case one breaks.

I teach my patients the proper care of their syringes and needles and make this as simple as possible. Boiling once a week is recommended, and the rest of the time the syringe and needle are kept in alcohol. I stress the importance of getting all of the alcohol out of the syringe because if this is not done local irritation at site of injection may occur.

I emphasize the importance of varying the site of the insulin injection. Most of our patients take their insulin in the thighs in two parallel lines, each injection about one inch apart so that insulin will not be repeated in one area for four weeks. I explain to the patient that repeated injections of insulin in the same place may lead to insulin atrophy.

Instructions are given to keep the bottle of insulin in use outside of the refrigerator. The loss of strength is so slow that it is not important. An extra bottle of insulin should always be kept in the refrigerator.

I place great emphasis on the fact that the patient must never discontinue his insulin without the physician's permission. This must be emphasized again and again

because it happens too often.

I also teach our more intelligent patients how to take insulin every three or four hours at home, according to their urinary sugar. This is only to be done when they have some minor infection and only with the advice of the physician. Using such rules, I have found it is not necessary to hospitalize all diabetics who show sugar and acetone when they have a minor illness.

The final point I would like to make is, that after one has taught patients all of this and much more, as one of the panelists has already mentioned, one must teach them all over again often later in that same year. One must repeat instructions because patients soon forget and disaster results.

MODERATOR WHITE: Thank you, Dr. Gates.

There are some questions I would like to ask members of the panel to answer individually and briefly.

I think all of us who lecture to lay groups are asked these two questions: What happens to the brain in an insulin reaction? Can diabetic patients die in insulin reactions?

Second, what does each one of you tell your patients about complications and, finally, the hope for the curability of diabetes? Dr. Holcomb, will you start?

DR. HOLCOMB: I was hoping you would ask me something else. I want to continue, however, Dr. White. I have to catch a train and I must leave in five minutes.

I said that we would teach 87 per cent of our patients to calculate diets; 13 per cent cannot be trained because they do not have enough education. But, of the 13 per cent, all but one-fourth of them are sent home with someone else trained adequately, leaving the one-fourth who have to use fixed diets. (I do not call these exchange diets.) We train grandchildren; we train the children of the older patients who are not able to be trained in classes.

I want to say a word about office education. If I had one patient with diabetes I would teach that patient whenever I had a chance to do so and if he remained still long enough. Soon, I would have two patients and you know what happens. Presently, you are known among the public and your colleagues as someone who will take time with patients, who will be interested in them, who will continue to be interested in them. This lifetime responsibility for the diabetic patient is really something to give each one of us the feeling of adequacy. It is a lifetime job.

As far as telling people about the dangers of brain damage and overemphasizing death from hypoglycemia, I simply tell patients this: "If you stay on your diet, if you know what you are doing, if you take your insulin properly, if you prevent insulin reactions by taking extra carbohydrate before the effect of additional physical activity has been felt, you do not need to worry about insulin reactions which will cause brain damage."

What was the other question, Dr. White?

MODERATOR WHITE: Complications and curability.

DR. HOLCOMB: What about complications? I tell patients this. We like to imitate the normal as closely as possible in our diabetic patients, and normal people do not get degenerative vascular lesions at a young age. Therefore, we know nothing else to do except to say: "Control your diabetes to the best of your ability; then, the chances of your getting complications will be greatly minimized."

DR. RIPPY: I think you can see that most of the panelists have different types of practice. Mine is an individual practice in an office. I am beginning to find that I like to control my diabetic patients as ambulatory office patients more often than not.

We have devised a little trick in the office and are using it in the hospitals now. It is a formal diet, a little slip on which we obligate the doctor to write the formula for the diet and to do one more thing which is all too often neglected, to put down how he wishes to have the three formal meals distributed and whether he wishes snacks. We indicate below, for his convenience, what we consider to be a snack. I think that if we can teach our doctors to distribute diets to fit the insulin used, insulin reactions can be minimized.

I have read about the sequelae of profound hypoglycemia. I must admit that I have seen it in one instance only, a child. I think we should avoid reactions because they are embarrassing or because they are disconcerting, but I doubt if we should mention too often the fear of brain damage and so forth. I am not too convinced that it happens often enough to be of great consequence.

As to complications, I think, as I said once before, I like to tell people that, "with this disorder you can live almost as long as you want to; you make your own choice. I am going to show you how to do it well. I will teach you the disciplines and then it is up to you. With my help you can live almost as long as you want to. If you live long enough, you may develop some complications. Put them off as long as you can because it is remarkable how many diabetics live normal, productive lives with all the complications they have."

I said before that they should know the penalty of poor control, but, again, I do not think we should emphasize it to the point of producing chronic anxiety.

MODERATOR WHITE: Our time is short. Thank you, Dr. Rippy.

Dr. Joslin, with your experience with more than 40,000 diabetics, won't you tell us about your new plan

for teaching diabetics?

DR. ELLIOTT P. JOSLIN: Before speaking about the plans for the Hospital Teaching Clinic, Dr. White, let us imagine for a moment that this audience is made up of diabetics and relatives of diabetics. What would I want to say to them first? You know, I would enjoy telling them that I am flying home tomorrow afternoon to go to an afternoon tea in honor of Mrs. John Dow who is celebrating her one hundredth birthday. Mrs. Dow is my oldest diabetic and has lived twice as long with her diabetes as she was expected to live without it when she first developed it.

Then, I would call the attention of this audience to the Quarter Century Victory Medal diabetics we now have who are perfect at the end of their 25 years of the disease, with certification from recognized ophthalmologists that they show no trouble in the eyes and from roentgenologists that there is no calcification in their arteries. In 1948, we had only one such, but now we have 58. I would like to add for the benefit of those here as well as for patients in my classes, that the reason for the excellent condition of these individuals is that they controlled their diabetes very, very carefully at the start.

All sorts of patients attend our classes and their mere presence counts far more than words. If a patient is led in blind, no remarks are necessary, although occasionally such a patient will wish to give advice to others. One can take advantage, however, of such methods of instruction which count far more than what a doctor would say. This last week I had two patients who were brothers. One of them controlled his diabetes well for 20 years and the other did not. They stood up there, and the one who had controlled his diabetes well obviously was far more free from complications than the other and the two brothers were willing to give the reason why. That did more good than anything else I said that day.

In general, the diabetic should be looked upon as belonging to a rather superior class. One can take for granted that they will heed advice against marrying another diabetic. Similarly, one can depend upon their love of their family to help to detect others who are potential or possible diabetics in their family, on the grounds that no one is more interested in their own family than are they. I like to put responsibility upon them, not only for protecting their descendants and for detecting diabetics in their family, but also for protecting others. They have for example a responsibility in driving automobiles.

The Agent of the Registrar of Motor Vehicles came to our diabetic class recently. I told him he could talk to the patients for 5 minutes, but they were so interested in what he said that they kept him for 30 minutes. Among other things, he told them that when they applied for a license if they did not put down the fact that they had diabetes they were liable to prosecution for perjury and a fine of $200. Furthermore, if they had an accident and it was known by the insurance company that they had not disclosed to the Registrar that they had diabetes, it was quite likely that the insurance company would refuse to accept responsibility and their home and their savings for a lifetime might be wiped right out.

The patients questioned him and he acknowledged that he did not know how many of those driving automobiles were diabetics or what their percentage of accidents was compared with nondiabetics. Of course, I remarked that my patients probably had fewer accidents than nondiabetics because they lived more carefully.

It certainly was worth while to bring up the question of safe driving in a way that the patients would realize the responsibility they had.

Then, too, I like to put upon the patients the responsibility for research. It is their diabetes and if they want better treatment and more discoveries, it is for them to provide for it. This they are more ready to do than is often thought. Within a few weeks I came into the classroom with a paper bag which Barbara gave me. Obviously it was a heavy bag and, when I opened it, there were 300 pennies, a penny for nearly every day in the year except Sundays and holidays. Think of it—there are two million diabetics in the country. If each would save a penny a day, think of the funds which would be available for research.

For our patients to be in good health after twenty years of diabetes they must have the opportunity for good treatment. That is why we are building the Hospital Teaching Clinic with the idea that we can bring back the younger and more hopeful diabetics who have a long future before them and at lessened expense tell them how they can care for themselves. These younger patients need encouragement and reiteration of treatment. In the Hospital Teaching Clinic they can save money because they will be ambulatory and will require far less nursing service. It is our hope that we can demonstrate the usefulness of this building to such an extent that hospitals all over the world will set aside a few beds to meet similar needs for the younger diabetics who need to be taught and urged and helped how to control the disease.

MODERATOR WHITE: Thank you, Dr. Joslin, and I thank all of you panel members for your interesting and important discussions, and thank you, audience, for staying with us. (Applause)