response to environmental stress, and the pituitary and through it the endocrine system—a very imposing list. A great deal of the detail remains to be worked out, but I hope I have given enough background to make it plain that there is plenty of physiological basis for the idea that obesity, like the related anorexia nervosa, may be a psychosomatic disorder. It certainly needs a great deal more clinical study than it has had up to date or is implied in the catch-phrase that " all obesity is due to overeating ".

II

The Approach to the Patient

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Obesity is one of the four major addictions—machines, food, tobacco, and alcohol—which affect morbidity and mortality in this and similar countries, and are replacing the former scourges more than adequately. These addictions are, of course, perfectly well known to you. Few, I think, would suggest that tobacco consumption is not a form of addiction or would deny that the record of Medicine by way of personal example in giving up smoking and so preventing a large number of unnecessary deaths from lung carcinoma has been lamentable. We have known for a significant number of years that carcinoma of the lung is in some curious and close way related to the consumption of tobacco, but it required a courageous president of the Royal College of Physicians to let a formidable report go forward in order to start a substantial effort in preventive medicine which will require continuous support from each one of us. We all tend to go to cocktail parties, and to set an example to our lay friends by giving them hospitality from time to time, and we all know that alcoholism is increasing fairly rapidly in this country. These are unfortunate demonstrations that an affluent society is not necessarily in every way the better off for being affluent, and not the least is this true in respect of its alcohol consumption. Both tobacco and alcohol are very significant addictions in that they are interrelated so closely, and we will accept without more discussion that these are two addictions very relevant to the theme of the

causation and the treatment of obesity.

The other main addictions are to food and machines, and I take it that almost all of us are addicted to the motor car. I do not know whether I should ask if any member of the audience who is a teetotal, non-smoking, cyclist practitioner would care to stand (no response). No, I thought not. I am afraid that I drive many thousands of miles a year and I find that this has a very bad effect on the figure because the more I am behind in my time-table the more I tend to eat chocolate Turkish delight which I find very satisfactory for this purpose, not bulky and not making you go to sleep.

I have mentioned four addictions and you may think that this is a strong term. Lambert's definition of addiction is quite good: " The habitual use of any drug taken for the purpose of avoiding emotional strain in life, the habitual use of a drug to obtain a balance of the personality whenever it seems impossible to adjust the problems of existence without temporary relief." When I am behindhand with an article for a journal, my calorie intake goes up because the only way I can write under pressure is by eating. I admit this and I have great sympathy with my patients. The alternative definition is by Adams: " A state of bondage to a masterful drug, usually but not always of a narcotic class and manifested by craving, tolerance, intense comfort of a specialized character and on withdrawal a tendency to relapse. Its origin lies in the defect of the personality which may be of many kinds but is most commonly of the nature of an inability to grapple with reality."

These I think are reasonable definitions of what one is dealing with in many of these patients. It is quite clear that if a man doing heavy labouring work buys a motor-cycle or a moped or a scooter or a car and instead of utilizing his additional waking hours by digging a bit more garden finds time for a couple of extra pints of beer while his food intake remains the same, he will get fat. That sort of man is not hard to deal with, if you explain that he is taking a considerable risk of shortening his life in rather an uncomfortable way and then discuss with him the alternatives of doing substantially more physical work or cutting down his diet. That type of problem is not too bad, for he is rather a decent character compared with the business man or industrialist or executive who has a peculiar idea that the only way to promote business is by eating and drinking with people. It is interesting to note that the efficient firms do not seem to do this very much. Unfortunately the people who do this kind of thing are emotionally rather immature. They often come from a background where they are not trained to cope with money and power. They are often unable to deal with the perplexities and complexities of their business or industry caused by the rapidity of change in the present

world, and they often rely on all four of the major addictions.

That type of problem is very different from the kind of problem that faces the girl who has just had a baby and whose weight has gone up. I do not believe for a moment that Sheldon's group is either hormonally or in any other way physiologically influenced, and I do not accept that the evidence suggests this. Of course many mothers do put on weight. Many people put on weight after having their first and subsequent babies, and there may well be a sex discrimination. From the experimental point of view, it is most unfortunate if results of animal work are transferred to human experience. One of the first things to remember is that just handling an animal may vitiate an experiment. I have been interested recently in some work involving rabbits and some chemical aspects of this work which looked as if they were coming along nicely had to be abandoned for the very simple reason that handling the rabbits made an extraordinary difference to the results. There was a famous piece of work in New York, where rats kept upstairs in cages were given a balanced-formula diet and some of them were allowed to escape and live in the basement, having free access to the same formula diet if they chose to gnaw through the sacking containing it. These were pure-bred laboratory rats from the same strain, and when they were killed the interesting thing was that the " free-living " rats from the basement had endocrine organs double the weight of those upstairs in the cages.

This kind of consideration makes it extremely unlikely that one can ever transfer directly to human experience the results of animal work, although very often no advance is made without the guidance of animal work. Dr Kennedy pointed out the physiological pathways between the pituitary, hypothalamus, and reticular formation, and their relation to endocrine and other metabolic processes of the body. One of the things that intrigues me is whether sometimes in enormously obese people something has happened to the appetite-regulating cells, producing a result analogous with a peptic ulcer or ulcerative colitis. I think ulcerative colitis is a good analogy for it is always conditioned emotionally. It appears in a certain kind of personality in certain kinds of situations, and I wonder whether there are kinds of personalities in which some situations will have actual effects even on cells so deeply placed in the central nervous system, and so protected as the appetite-controlling cells.

I am the last person who would deny that a knowledge of physiology is important to the conduct of practice, but with all respect to the physiologists I would say that none of their experiments have anything to do with the average patient who is obese. They are, however, of fascinating importance if you wish to be an informed

doctor, to be able to treat every patient somewhat differently, and to understand the limits of ingenuity in coping with and understanding some problems.

I define competence in a psychiatrist as the ability to relieve a child of enuresis without seeing the child, simply by dealing with the parents' conflicts in important spheres of adjustment. Some of you may think that is outrageous. It certainly sorts the sheep from the goats, and I wonder whether one might not say that a competent psychiatrist is the one who can treat childhood obesity without seeing the child and without discussing obesity, simply by educating the parents in attitudes. I believe that childhood obesity is invariably a reflection of parental attitude, and it is quite useless trying to teach children without getting on good terms with the parents. Every patient with a problem requires individual attention. For example, it is extremely stupid to give a diet sheet which is printed and applies to everyone and which contains paragraphs like " take no alcohol " to a rather teetotal lady. It is offensive as well as stupid, and it is no use talking about the place of game in diet to the poor woman who has six children, whose husband is half out of work and whose obesity is simply due to the fact that the only solace in life is bits of bread and maragarine and cups of tea. So I would suggest that we keep the whole field in mind, but tailor our remarks to the individual.

Now, what does one tell one's patients? First, they are told to take *small* helpings, these being defined as *less* than the patient usually takes and *less* than he can manage. Sometimes one must make special points; for example, if the iodine supply in the local water is poor and the fish supply poor, the patient will tend to develop a simple goitre unless he gets fish, because there is no other source of iodine. You must remember things like that for special circumstances. The diet must be gone over in an individual way. It is no use going over it perfunctorily, because the patient's main complaint, or, often more precisely, the only part of the patient's health you can improve, is obesity. Time taken over a patient with obesity in a kind, sympathetic, and courteous way is probably more rewarding than time taken over any other clinical problem.

One should start off with positive statements, and not negative ones, so the list of prohibitions comes second. The patient is told not to eat any bread, potato, pudding, pastry, cake, sugar, sweets or macaroni. This of course is the part which immediately provokes the question: " But what shall I eat, doctor? " You have already told them what they are going to eat and that is why you put it first. You have to define " eat no bread." I am sorry about some of the other speakers, but even the high-quality bread grown from wheat produced in the most admirable circumstances comes under

my ban if the patient is to lose weight. So the patient is told to eat no bread substitutes at all, no brown bread, toast, Ryvita, or anything else he can think of, and his unlovely fat will be the substitute. One must always use the same basic arguments, but you will all agree that you speak to every patient in a different way. You use a different metaphor or a different simile for every patient, because once you get into a habit of not doing so you no longer deserve to be members of a College such as this, which at least is trying to undo the bad effects of trade unionism in Medicine. Fats must obviously be cut down, because of their high calorie value, and I think it is necessary sometimes in appropriate cases to mention avoidance of such rich fish as salmon and halibut or herring; but if in fact people are taking modest helpings of the permitted foods, they do not have to bother very much about detail.

There is far too much detail in dietetics, far too much measurement and far too little general principle. In practical general dietetics there is no place for fine detail. The other day I saw a poor old diabetic of thirty years' standing avoiding mustard because someone had told her that there was a little something or other in the mustard. It really makes one shudder for medical education. Emphasizing the principles is probably the most important thing.

The patient should understand that filling up with vegetables or salads which have little calorie value promotes appetite and makes dieting increasingly difficult to continue. If small meals are used for a few days, dieting will become easier. One should explain to the patient that dieting is going to be absolute hell for another fortnight; if the general kind of diet outlined can be followed for a fortnight, the battle is won. The aim then should be to reduce to the approximate ideal weight and then to maintain this level for six months by continuing to diet. In this period better eating habits will have taken hold and relapse is unusual, but it is equally important to emphasize the terror of the first few days, the relative comfort afterwards and the essential nature of persistence when the goal is achieved. I find in general that unless a patient has been fat in childhood and adolescence, if he can remember his weight at 20 and that sounds about right from the Metropolitan Life Office of New York ideal weight tables (they are general guides but about the best guides), one should tell the patient to aim at that weight and keep to it for six months.

There are two points which people are always talking about—salt and fluid. I do not think that it is very necessary to restrict salt unduly. The patient can have what salt he likes unless he has some condition such as heart failure which suggests a need to reduce salt intake. Fluid intake is rather important; the patient must have enough water to reduce the incidence of constipation which is so

troublesome to many people on a diet. They must have enough water and enough fruit and vegetables, but not too much. If a patient gets enough water he does not have too much trouble with constipation, but this is a practical issue which has to be watched, and it may in some people make the difference between ability to stick to the diet and inability to do so.

In 1951, your colleagues spent £400,000 of public money on one proprietary anti-appetite pill—a disgrace. But in America in 1959, $140,000,000 was spent on anti-obesity remedies and last year I think the figure was $100,000,000 for one of them—this is an equal disgrace. Nothing shows up the quality of medical education, and therefore of doctoring, in this country more than the profession's attitude to a thing like obesity. You cannot treat an obese patient unless you have some time. Until the profession generally insists on having time to talk to patients, the standard of medical care, and of general practice itself, will continue to fall. It is much more important to take time to talk to an obese patient than to take time over thinking what drug to use in a case of secondary carcinoma. It is equally important to use a hospital bed for an occasional one of these patients so that they can spread the gospel in their village or township. You cannot successfully treat an obese patient by exhortation or command. You must understand why they are obese, and understanding why people are obese involves knowing about their childhood and adolescence, their growing up and their present difficulties, their attitudes, their beliefs, and a large number of other things. If you cannot conduct your practice in that way you are going to get pretty unsatisfactory results in the treatment of obesity. I never take less than an hour over a private patient. Why should my outpatients have less? I find it extremely difficult to deal with any sort of patient in consultation in less than an hour, and the idea that the family doctor knows all that is going on and does not have to inquire is a myth, though some people are very good at guessing. They have a nice feeling that they know why Mary Smith is depressed, but the obvious is not always true and a great deal of very unwise jumping to conclusions goes on. Dr Kennedy says, quite properly, that he finds much psychiatry alarming. I find much of English psychiatry based on electroshock and pills worse than alarming; I find that it is catastrophic in its effects on English medical education and I think it is a body such as the College of General Practitioners which may redress the balance. I would end by saying that obesity as a public health problem is a problem of education of the public, starting with time for the individual doctor to talk to his patients and thus to comprehend their health difficulties.