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PRESENTER:
MARK PORTER

PORTER
Hello. In today's programme I'll be investigating the growing problem of obesity. A condition which now vies with smoking as the biggest single preventable cause of ill health in the UK. Over half of all British adults and one in three teenagers is carrying too much weight. And if the nation's waistline continues to expand at the current rate as many as one in three of us will be seriously overweight or clinical obese by 2010, making Britain the fattest nation in Europe. Indeed among all the countries in the developed world only the Americans weigh in heavier.

I'll be finding out how the latest generation of slimming drugs work and how they can best be used and in whom. And what happens when someone remains dangerously overweight, even after trying a combination of diet, exercise and slimming pills. We meet a woman who felt that having her stomach stapled was her only hope.

CLIP
In April of this year I was diagnosed as diabetic and that really put the sort of crowning glory on it, that something really had to be done. I realised this surgery would actually help with things like that - with high blood pressure and diabetes. And basically I want my life back, I don't feel that I'm living the life that other people live.

PORTER
But first, back to basics. Why has the number of obese people in Britain tripled over the last 20 years? Where are we going wrong? Dr Susan Jebb is a scientist at the Medical Research Council and one of the UK's foremost authorities in the field of nutrition and health.

JEBB
Today food's available 24 hour 7 at minimal cost and takes seconds to prepare. And that's coincided with us expending less energy - we need fewer calories than ever before because we drive to work, spend the day at the computer and then reward ourselves for such a hard day by flopping in front of the television all evening. I'm afraid obesity's an almost inevitable consequence of eating too much and doing too little.

PORTER
But the problem seems to have been particularly bad in the last 20 or 30 years, is there good evidence that we're actually burning considerably less calories a day than we were say in the '50s and '60s?

JEBB
Without a doubt. People's lives are quite, quite different. There are virtually no manual occupations left anymore and even those that we think of as quite heavy labouring - people working building the roads for example - are now massively assisted by machinery. We just don't walk anywhere - even short journeys we all tend to jump in the car.

PORTER
Are some people more likely to gain weight than others, due to some particular make up in their metabolism or is it just simply a matter of energy balance?

JEBB
In the end it does all come down to calories in versus calories out. But what we increasingly recognise is that some people are genetically much more susceptible to becoming obese but that that susceptibility might work in quite interesting ways. For example, some people might feel the sensation of hunger much more acutely than others and therefore are driven to go in search of food. And that's going to put them in the long term at greater risk of gaining too much weight.

PORTER
So how does that stack up with the oft quoted excuse - that doctor I eat like a church mouse and I just seem to pile on the pounds while a friend of mine can eat anything they like and they remain stick thin?

JEBB
I'm afraid when we really put those sort of claims to the test they just don't hold up. People unfortunately find it very difficult to really know exactly how much they've eaten, or indeed exactly how many calories they've burnt off. We all have this innate tendency to underestimate what we eat but to overestimate how much exercise we do. If we bring people into our research unit to study this in great detail what we've shown is that if you overfeed both lean or overweight people by exactly the same amount of calories they both gain weight at exactly the same rate. And conversely if you underfeed them by the same number of calories they lose weight at the same rate. After many, many years of research what we've been forced to conclude is that metabolism, for the most part, is very, very predictable. What matters is about individual behaviour and that's what seems to determine whether people gain weight easily or not.

PORTER
What about recent trendy diets - I'm thinking of things like the Atkins and the low GI diet - do they have any science behind them?

JEBB
Any diet will work if it helps you to cut calories and if you actually look at the calorie content of most of the diet plans in these bestselling books they generally come out at around 1200 or 1500 calories. The key issue really relates to adherence - can you stick with this eating plan? In the long run it has to be the kind of food which the rest of your family can eat, which you can stick with even when you're eating out. It has to fit in with your life.

PORTER
One of the things I notice as a doctor is you go to a patient's house you often see on the sideboard 10 different diet books and the patient always says well that diet didn't work for me and that diet didn't work for me and of course the common denominator in all of this is them and maybe it's them that's failing and not the diet.

JEBB
I think that's absolutely right. Diets work but people tend to fail. They fail just because they find it very difficult to keep up their adherence to what are often quite rigid diet plans over a long period of time. In fact if you look at most bestselling diets they have a lot of very, very common themes. Most of them will tell you to cut down on things like biscuits, cakes, chocolate, confectionery, soft drinks - the kind of foods which are very energy dense, they contain a lot of calories but have very few additional nutrients. To be honest if most people cut down on those foods they'd lose weight fairly successfully.

PORTER
Dr Susan Jebb.

My guest today is Dr Ian Campbell, president of the National Obesity Forum. Ian, why should we worry about the growing rates of obesity?

CAMPBELL
Quite simply because of the disease that results from it. It not only causes great social inequalities - it affects how people are able to gain employment and look after themselves - but it causes a massive amount of Type II diabetes, of heart disease, high blood pressure and raised cholesterol levels.

PORTER
Let's quantify those risks. First of all, we talk about people being overweight and obese, what's the difference?

CAMPBELL
Well we use what's called the body mass index to try and define this and basically you take your weight in kilograms and divide it by your height in metres squared and that comes up with a number which if it's above 25 you're overweight, if it's above 30 you're clinically obese. But perhaps a better way of doing it is to do a waist measurement and if your waist is more than 35 inches in a woman or more than 40 inches in a man that equates the same disease risk as being clinically obese.

PORTER
And how significant is that disease risk - I mean let's look at diabetes - there's a strong correlation between being overweight and developing what we call maturity onset or type II diabetes, how strong is that link?

CAMPBELL
Well by the time you've just start encroaching on the overweight category your risk of type II diabetes is doubled. By the time you get to the clinically obese range it's 12 fold and if you get to the very morbidly obese body mass index of 40, in women that's 90 times the risk of a normal weight woman.

PORTER
So if you've got a body mass index of 30 a typical woman would be what - roughly two to three stone overweight, would that put you in that ...?

CAMPBELL
Yeah as a guide a woman would be two stone, carrying two stone of extra weight, in a man it would be about two and a half stones.

PORTER
Right, so that's significant. What about heart disease and stroke - obviously they're linked to diabetes in turn - but an absolute risk, if you're obese how much more likely are you to have the heart attack or a stroke?

CAMPBELL
Again it's generally speaking, your risk of having heart disease if you're clinically obese is four fold.

PORTER
And like all risk factors they tend not to be additive, so if you're a smoker as well and you have high blood pressure your risk increases much more presumably?

CAMPBELL
That's right weight carries increased risk but if you smoke, if you're physically inactive, if you've a family history - all these different things, increase the risk even further.

PORTER
It seems to occur there in that interview that obesity is principally a matter of overindulgence, for whatever reason, and there's lots of reasons why people overindulge, and/or inactivity as well. So why do we need medical intervention?

CAMPBELL
Well in reality what we see in medical practice is that even when you try and adjust food intake and increase energy expenditure many people just don't lose weight. And the reasons for that are many, it may be because of inaccurate reporting but it's also because people are trying their hardest but the pressures which led them to be overweight in the first place are still there. In other words they may want to eat a more healthy diet but advertisements to eat unhealthy food or constraints on their time to prepare it are still there. And so they tend to carry on with those habits even though they're constantly fighting against them. And because of the disease risk that results there is an obligation on the doctor to take the matter seriously and encourage weight loss, which sometimes means weight loss medication can be helpful.

PORTER
We're looking at it largely from a medical perspective but what about from the other side of the desk, I mean you and I are both GPs, but how do the people who are sitting there who are overweight feel, do we know much about their own impression about their health risks, do they underestimate them, do they overestimate them, are they concerned about being overweight?

CAMPBELL
Many people are not concerned and in my own practice occasionally you raise the subject with someone and they'll say quite candidly - doc, I'm not bothered - and so be it, allow them to carry on. My job's to inform them, they don't choose to take that advice, it's okay. But when they do become concerned in women it often starts fairly early in adult life and it's partly cosmetic but partly towards future health. With men it's usually imminent health risk, in other words they've been told they've got high blood pressure and they've just had their first heart attack - tell me anything I can do doctor to reduce the risk - then they're interested in tackling their weight. But you can use that motivation just to feel better, to be more energetic, as a motivating factor to encourage them towards health related weight loss.

PORTER
Well one area that's changed in the NHS comparatively recently is the provision of a new generation of slimming drugs. There are currently two licensed drugs approved for use within the NHS by NICE - the National Institute of Clinical Excellence - Orlistat and Sibutramine. Orlistat, brand name Xenical, works by blocking the absorption of fat in the gut. Basically a third of the fat contained in your average meal travels through you undigested. While Sibutramine, brand name Reductil, works on the brain to diminish appetite by encouraging a feeling that you've eaten enough. But when to use them and in whom. Nick Finer is a consultant in obesity medicine at Addenbrookes Hospital, Cambridge.

FINER
We have no good trials which have directly compared the two drugs we have at the moment - Orlistat and Sibutramine - head to head. What really dictates which one we choose is probably the side effect profile and the fact that Sibutramine can't be given with a number of other drugs, things like antidepressants in particular. So if you like the judgements that we choose are based on rather soft grounds, rather than on a firm evidence base. Both drugs produce about a 10% weight loss, usually a maximum of about six months. And certainly the trials that have gone on now for three, four years show very good weight loss maintenance.

PORTER
What about side effects?

FINER
The main side effect of Orlistat really comes from the fact that it blocks some of the fat being absorbed. If you have a high amount of fat in your diet you will have a large amount of fat which is unabsorbed and your intestinal system is not designed to hold back large amounts of fat. So putting it simply if you have a very high fat intake on Orlistat you will get diarrhoea and tummy cramps. People have to reduce their fat intake. In terms of Sibutramine because it is a centrally acting drug - it works on the central nervous system - which to me is logical because we know that's where body weight is controlled, it has some short term side effects of dry mouth, in fact the reverse of Orlistat - constipation. There has been a concern it may raise blood pressure in some patients. Now this has actually been very actively looked at and has really not been very well confirmed in further studies.

PORTER
Who's eligible for treatment with these drugs, given that half the UK population is overweight, we always have to restrict the use somewhat, are there a set of firm criteria that we follow in the NHS?

FINER
Well the NHS criteria are laid down by NICE and they have said that they should be used in patients who have a body mass index of more than 27 or in the case of Orlistat more than 28. That these patients should be being treated with lifestyle treatments. What is quite interesting is that where these guidelines come from again it's from very early clinical trials, the way they were designed, and the way that clinical trials are designed doesn't always reflect clinical practice. So you have the odd situation that because the clinical trials in Sibutramine looked at patients who had failed to lose weight before they were started on the drug, that's what NICE says it should be used for. By contrast Orlistat in the clinical trials was used for patients who had lost some weight in the run in, so NICE say that should be used for people who have lost some weight during the run in.

PORTER
Let me put it another way then, if you were sitting in a GP's surgery and a patient walked in and said look I'm having problems shifting some weight, doctor, I'm a couple of stone overweight, putting my BMI at 28 let's say, can I have some pills - how would you respond to that?

FINER
Well my response to patients who are asking for pills is really to first of all make sure that they are talking about managing their weight and they're overweight as a health issue and that they are considering this in the long term. Secondly, that they are prepared and probably already have engaged in changes reducing the fat intake in their diet, taking more exercise and trying to modify their diet to a healthier one. The third thing then is to very clearly point out to patients that the figures suggest about a third of patients will get a good response, a third of patients a modest response and a third of people will not respond to these drugs. So they have to attend for regular assessment. Lastly, I think it's very important that we concentrate on patients who are, if you like, most likely to gain and those are patients who've got other diseases or complications, such as abnormal cholesterol levels, or who have got other risk factors for diabetes and heart disease.

PORTER
Nick, what about developments in the pipeline?

FINER

The next drug that I think is likely to become available is a drug called Rimonabant or Acomplia is the trade name. And this is a drug that works on a physiological system that has only really very recently been sort of identified and worked out and it's called the endocannabinoid system. It's been known for a long time that people who smoke marijuana get increased hunger, known as the "munchies" and really this led to the investigation of whether a drug that blocked these endocannabinoid receptors might work in the other way. And the endocannabinoid system now appears to be a really very important system for handling stress and anxiety and seems to be overactivated in people who are overweight or obese. And by using a drug that blocks the endocannabinoid system it can reduce the desire to eat and food intake.

PORTER
Dr Nick Finer.

You're listening to Case Notes. I'm Mark Porter and my guest is obesity expert Ian Campbell.

Ian, Nick referred there to those slimming drugs being thought of like high blood pressure medicines, I suspect he was referring to the fact that the latest thinking is that they may, like high blood pressure medicines, have to be taken lifelong, how do you fell about that?

CAMPBELL
Well obesity is a lifelong problem, certainly we don't know how to cure it, all we can really hope to do is to control it. And if someone needed medication in the first place there is a high chance that when you stop that medication weight regain occurs. So although the current two medications Subitramine and Orlistat were initially just licensed for 12 months or two years, we now recognise that it's safe in the long term. And so if you want to get the ongoing health benefits of weight loss, for some people who still can't control their weight long term, there may well be a role for long term drug use in weight management.

PORTER
You say that they're licensed for 12 months yet in practise what's actually happening, what are the people at the forefront doing, are they consuming it beyond there?

CAMPBELL
Well I think people often find ways of circumventing - Orlistat in fact is now licensed long term, you can use it for much longer than that, indefinite period if it's still having an effect. Subitramine is still 12 months but of course people come of it, a little bit of weight regain occur and the physician may choose to put them back on.

PORTER
Do we ever use the two together?

CAMPBELL
I've known it to be done but not in an NHS context. Certainly in Australia I've heard about it but you don't get a doubling of the effect - you really will only get one or two pounds of extra weight loss, no more.

PORTER
What about criticisms which have come actually often from inside the profession, GPs, this creeping medicalisation of obesity risks perhaps wrenching too much responsibility from the patient, if we start talking about obesity as an illness, which we do because of all the associated risk factors, that the nightmare scenario - the overweight patient comes in, says, I'm "ill", in inverted commas, what are you going to do about it doctor - when really what we want to be talking is what are we going to do about it?

CAMPBELL
Sure I think there's a temptation from all of us to pass the blame to someone else. The problem is that being overweight has long been regarded as a self-inflicted problem, it's the patient's fault and why should we as doctors be trying to help them. In reality though there are so many powerful influences, physiological as well as environmental, leading people into that position in the first place, it's often beyond their own immediate control. And because it does cause life threatening and life shortening disease it has severe medical implications. So it does fall in as a medical issue, it does require on occasion a medical intervention.

PORTER
Boots have been piloting a scheme which I think has gone national in the last week or so where you can actually - you can dispense - they can dispense Xenocal, the slimming drug, without a prescription, I think it costs about £10 a week for people to go privately. Is that a sensible way forward?

CAMPBELL
I think there's always been a demand for using weight loss drugs with the NHS and I think what's encouraging about the Boots project is they're at least doing this with a very strictly controlled ethical programme behind it, run by pharmacists, using strict guidelines and treating those people under the same categorisation as they would do in clinical practice. So it's there if people want to use it, it's not necessarily something I would encourage them to do but there's demand there and I think it is being done safely and probably effectively.

PORTER
What other areas would you like to see improved - I mean what sort of things are the forum campaigning on?

CAMPBELL
Well the National Obesity Forum first and foremost wanted to make weight management part of medical care and I think we're working towards achieving that. But equally we're trying to prevent the problem in the first place. So as well as treatment we're looking at preventative issues and that really involves working with government, with the food industry, anyone who shapes our environment to try and make the whole environment within which we live less conducive towards being overweight in the first place.

PORTER
Okay, we've talked about pills but what happens when diet, exercise and pills don't work, what next? We sent Lesley Hilton to the Nuffield Hospital in Leeds to find out.

ACTUALITY
See how the operation goes, see how I pick up and sort of look at it in a fortnight's time and just think well can I go and spend a whole day there.

What I'd do is expect that you're going to be - you'll not feel like getting back to work for a month, six weeks or so ...

HILTON
Margaret Coates is 54 and weighs nearly 20 stone. Her size is causing health and mobility problems. She's just about to go into the operating theatre to have a gastric bypass operation to help to control her weight. So what brought her to this stage?

COATES
Partly the fact that I know that I can't control this and this makes me very angry and disappointed with myself. I've sort of reached a stage now in my life where I know I've

tried every diet and I really, really have struggled. And in April of this year I was diagnosed as diabetic and that really put the sort of crowning glory on it, that something really had to be done. I realised this surgery would actually help with things like that - with high blood pressure and diabetes. And basically I want my life back because I don't feel that I'm living the life that other people live.

ACTUALITY
The first part of the operation will involve measuring a length of small bowel to take up towards the stomach.

HILTON
A gastric bypass is one of a range of restrictive procedures that are used in surgery to help the morbidly obese. It involves creating a very small stomach, about the size of a golf ball, by stapling off a small pouch of the existing stomach. To allow food to get through the gut the bowel is divided further down and joined up to this new mini-stomach. The result is that the patient feels very full very quickly. Margaret is having hers down by keyhole surgery but it's still a major operation. Overweight people have a higher risk of developing complications and around 1 in 20 people who have the operation fail to lose the required weight. Simon Dexter, Margaret's surgeon at the Nuffield Hospital in Leeds, explains who's eligible for such drastic surgery.

DEXTER
The main criterion is their weight as measured by the body mass index. In other words that's patients who are probably carrying about twice the weight they should be, in body mass index terms the cut off is a BMI of 40. If patients are a little less than that and have disease related to their weight, such as diabetes, possibly blood pressure problems, and so forth then they're eligible for surgery with a BMI of 35 plus. And this is classed as morbidly obese.

HILTON
Most patients have the operation done privately at a cost of around £10,000. Was it an easy decision for Margaret to make?

COATES
No, no it certainly hasn't been an easy decision. You know it's not one of those things that I thought oh great, this is the easy answer, let's go for it. I've realised through the research that I've done that the hard work really is going to begin once the operation's over and that it's going to be very necessary to work hard at it. But I've decided that really there's no alternative and that's the only way that I can go forward.

WHISTON
I don't smoke, I don't drink but I enjoy eating, so that was my comfort, if I had a problem I'd go to food, if I was bored I'd go to the biscuit tin. And it becomes a habit, quite often you don't even realise that you're eating three biscuits and not one biscuit - it just becomes a habit, you don't even enjoy the food particularly.

HILTON
Eileen Whiston weighed 24 stone when she had a gastric bypass last year, after dieting and drugs had failed to help her. She's now down to 16 stone and is happy with that.

WHISTON
I've got a friend who's 10 years older than me and always had a weight problem and I went to visit her and she's so unfit and so unhappy with her life because she can't go out, she can't go shopping. I looked at her and I thought if I don't do something now that will be me in 10 years time, so I realised I'd got to do something today and quite permanent.

HILTON
Eileen used to have high blood pressure, it's now back to a normal level. The joint problems and lack of energy she felt before the operation have now gone. Simon Dexter explains the benefits.

DEXTER
In terms of pure weight loss we see results of, for all the procedures, from maybe 50-75% of the excess weight loss people are carrying, which takes them down to certainly a healthy weight and in some cases a near normal weight. The other aspect of surgery is not just the success in terms of weight loss but the success in terms of treating the conditions which come with obesity. And it's in this area I think the most impact is made. For example, the obese diabetic can expect to have complete remission of the diabetes at 85% for a bypass and even greater than that - 90% range - for some of the more aggressive [indistinct word] operations.

HILTON
Immediately after a gastric bypass the patient has to learn a whole new way of eating. Eileen's new smaller stomach took some getting used to.

WHISTON
Quantity initially. But you literally can't have anything solid for a full week and then you have to build up like a tomato soup or thin porridge because you stomach cannot take any volume of food for the first three months really. And you have to slowly introduce food back again. Semi-solid food. So that in itself teaches you a little bit of control because a few weeks until you shouldn't you are sick, it is not a pleasant thing - you are sick and you're uncomfortable and it's painful. So that is a deterrent to eat those foods again. So I found that pasta used to make me poorly and I don't want pasta now. So it had an effect that way, that long term you don't want the foods that made you ill.

PORTER
Eileen Whiston who lost eight stone after having that surgery, talking to Lesley Hilton.

Ian, Lesley's report was recorded at a private hospital, how available is that type of surgery on the NHS?

CAMPBELL
It's not readily available at all, I think in 1999 we had 200 procedures in the country in a year, it was about 500 last year, but that compares to France where it's about 17,000 a year and in the US 90,000 cases a year.

PORTER
And we talked about Britain being one of the heaviest nations in Europe but the whole of Europe has a problem - the French, I mean are obviously doing an awful lot of operations, I mean they've got a problem with weight too.

CAMPBELL
Oh I think no matter what country you look at the problem has been increasing - Finland had a major problem which they've largely reversed, in Spain where we think they have a healthy Mediterranean diet, they have a major government sponsored programme looking at obesity in children, Malta's, in fact, got the highest rates of obesity among children across Europe.

PORTER
We talked there about one type of surgery, Lesley was looking at - talking to two people who had gastric bypasses done but there are other techniques available.

CAMPBELL

Yes there are. The other two is elastic banding, which involves putting a band around the top part of the stomach to reduce it in size. Another one's a gastric stimulation device that uses an electrical current to decrease your appetite.

PORTER
And they're presumably just as effective?

CAMPBELL
Not quite, almost, they tend to help you lose about 30% of your excess body weight over a two year period compared to bypass surgery which is about 50%.

PORTER
And what happens to these people once they've had the surgery done - they've lost the weight, they've got down to a weight that's acceptable for all concerned? I mean in the case of the lap banding, the band around the stomach, can that be removed or is it left in forever?

CAMPBELL
It could be but of course the weight would regain so generally speaking you maintain it there. And that really does impact on their ability to enjoy social eating for the rest of their life.

PORTER
Because they're limited in the amount that they can eat each time that they go?

CAMPBELL
And the quantity of food they can eat and also the type of food, for example, eating a chicken salad when you've got this gastric band in is not going to be possible, you need to eat much more mashed up food.

PORTER
So how do you think we're coping in the NHS as a whole, I mean we're presumably under providing that sort of surgery, are we providing enough money for slimming drugs, do we have enough slimming experts like Nick Finer, do we have enough experts like you?

CAMPBELL
We don't but we're moving in the right direction. I think that gradually GPs are now accepting that this a problem with which they should help patients. NICE recommended the use of medication and surgery several years ago but we've yet to see significant improvements in that but it is moving in the right direction and I think it's something which government are aware of and are making changes so that doctors and nurses will be more willing to do it.

PORTER
But if you're very, very overweight - a BMI of 40 plus - and you go along to your GP and ask to be referred to a surgeon who does this sort of operation or even an expert like you that might refer on to a surgeon like that, what are the chances that somebody will have somebody like that in their locality - they're slim probably aren't they - excuse the pun?

CAMPBELL
Yeah very slim and in the Midlands where I work there's very little provision and it doesn't matter where in the country you live there is not enough obesity surgery available because it's expensive and the skills aren't necessarily there.

PORTER

That's all we have time for. Dr Ian Campbell, thank you very much. Next week's programme explores a common complaint which goes by the acronym TATT - TATT - tired all the time. I'll be looking at what can be done to help people with unexplained fatigue. And I'll be talking to one of the UK's leading specialists about the latest thinking on ME.