

POUNDS AND INCHES

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Abridged by Dr Dunkley

Any *italicized* words or phrases are inserts by Dr Dunkley

FOREWORD

This book discusses a new interpretation of the nature of obesity, and ... describes[s] a method of treatment which has grown out of theoretical considerations based on clinical observation.

What I have to say is an essence of views distilled out of forty years of grappling with the fundamental problems of obesity, its causes, its symptoms, and its very nature. In these many years of specialized work thousands of cases have passed through my hands and were carefully studied. Every new theory, every new method, every promising lead was considered, experimentally screened and critically evaluated as soon as it became known. But invariably the results were disappointing and lacking in uniformity.

I felt that we were merely nibbling at the fringe of a great problem, as, indeed, do most serious students of [obesity]. We have grown pretty sure that the tendency to accumulate abnormal fat is a very definite metabolic disorder, much as is, for instance, diabetes. Yet the localization and the nature of this disorder remained a mystery [until now]...

In dealing with a disorder in which the patient must take an active part in the treatment, it is, I believe, essential that he or she have an understanding of what is being done and why. Only then can there be intelligent cooperation between physician and patient. In order to avoid writing two books, one for the physician and another for the patient - a prospect which would probably have resulted in no book at all - I have tried to meet the requirements of both in a single book....

To make the text more readable I shall be unashamedly authoritative and avoid all the hedging and tentativeness with which it is customary to express new scientific concepts grown out of clinical experience and not as yet confirmed by clear-cut laboratory experiments.

THE NATURE OF OBESITY

Obesity a Disorder

As a basis for our discussion we postulate that obesity in all its many forms is due to an abnormal functioning of some part of the body and that every ounce of abnormally accumulated fat is always the result of the same disorder of certain regulatory mechanisms. Persons suffering from this particular disorder will get fat regardless of whether they eat excessively, normally or less than normal. A person who is free of the disorder will never get fat, even if he frequently overeats...

Three Kinds of Fat

In the human body we can distinguish three kinds of fat. The first is the structural fat which fills the gaps between various organs, a sort of packing material [for example the fat around] the kidneys [or] hard fat under the bones of the feet, without which we would be unable to walk.

The second type of fat is a normal reserve of fuel upon which the body can freely draw when the nutritional income from the intestinal tract is insufficient to meet the demand. Such normal reserves are localized all over the body... Both these types of fat, structural and reserve, are normal, and even if the body stocks them to capacity this can never be called obesity.

But there is a third type of fat which is entirely abnormal... This abnormal fat is also a potential reserve of fuel, but unlike the normal reserves it is not available to the body in a nutritional emergency. It is, so to speak, locked away in a fixed deposit and is not kept in a current account^[2], as are the normal reserves.

When an obese patient tries to reduce by starving himself, he will first lose his normal fat reserves. When these are exhausted he begins to burn up structural fat, and only as a last resort will the body yield its abnormal reserves, though by that time the patient usually feels so weak and hungry that the diet is abandoned. It is just for this reason that obese patients complain that when they diet they lose the wrong fat. They feel famished and tired and their face becomes drawn and haggard, but their belly, hips, thighs and upper arms show little improvement. The fat they have come to detest stays on and the fat they need to cover their bones gets less and less. Their skin wrinkles and they look old and miserable. And that is one of the most frustrating and depressing experiences a human being can have.

Insert by Dr Dunkley – In an effort to make the article more user friendly I skip the many theories that were tried and discarded as possible causes of obesity. The entire article is available for perusal if desired.

The Diencephalon or Hypothalamus

...Buried deep down in the massive human brain there is a part which we have in common with all vertebrate animals the so-called diencephalon. It is a very primitive part of the brain... from which the central nervous system controls all the automatic animal functions of the body, such as breathing, the heart beat, digestion, sleep, sex, the urinary system, the autonomous or vegetative nervous system and via the pituitary the whole interplay of the endocrine glands.

It was therefore not unreasonable to suppose that the complex operation of storing and issuing fuel to the body might also be controlled by the diencephalon. It has long been known that the content of sugar - another form of fuel - in the blood depends on a certain nervous center in the diencephalon. When this center is destroyed in laboratory animals, they develop a condition rather similar to human stable diabetes. It has also long been known that the destruction of another diencephalic center produces a voracious appetite and a rapid gain in weight in animals which never get fat spontaneously.

The Fat-bank

Assuming that in man such a center controlling the movement of fat does exist, its function would have to be much like that of a bank. When the body assimilates from the intestinal tract more fuel than it needs at the moment, this surplus is deposited in what may be compared with a current account. Out of this account it can always be withdrawn as required. All normal fat reserves are in such a current account, and it is probable that a diencephalic center manages the deposits and withdrawals.

When now, for reasons which will be discussed later, the deposits grow rapidly while small withdrawals become more frequent, a point may be reached which goes beyond the diencephalon's banking capacity. Just as a banker might suggest to a wealthy client that instead of accumulating a large and unmanageable current account he should invest his surplus capital, the body appears to establish a fixed deposit into which all surplus funds go but from which they can no longer be withdrawn by the procedure used in a current account. In this way the diencephalic "fat-bank" frees itself from all work which goes beyond its normal banking capacity. The onset of obesity dates from the moment the diencephalon adopts this labor-saving ruse. Once a fixed deposit has been established the normal fat reserves are held at a minimum, while every available surplus is locked away in the fixed deposit and is therefore taken out of normal circulation.

THE TREATMENT OF OBESITY

If obesity is always due to one very specific diencephalic deficiency, it follows that the only way to cure it is to correct this deficiency. ... While we did possess a number of drugs whose point of action was believed to be in the

diencephalon, none of them had the slightest effect on the fat-center. There was not even a pointer showing a direction in which pharmacological research could move to find a drug that had such a specific action...

A Curious Observation

Mulling over this depressing situation, I remembered a rather curious observation made many years ago in India... Froehlich had described cases of extreme obesity and sexual underdevelopment in youths suffering from a new growth of the anterior pituitary lobe, producing what then became known as Froehlich's disease. ... These are the so-called "fat boys" with long, slender hands, breasts any flat-chested maiden would be proud to possess, large hips, buttocks and thighs with striation, knock-knees and underdeveloped genitals, often with undescended testicles. It also became known that in these cases the sex organs could be developed by giving the patients injections of a substance extracted from the urine of pregnant women, it having been shown that when this substance was injected into sexually immature rats it made them precociously mature. The amount of substance which produced this effect in one rat was called one International Unit, and the purified extract was accordingly called "Human Chorionic Gonadotrophin" whereby chorionic signifies that it is produced in the placenta and gonadotropin that its action is sex gland directed.

The... observation that concerns us here, [is] when such patients were given small daily doses they seemed to lose their ravenous appetite though they neither gained nor lost weight. Strangely enough however, their shape did change. Though they were not restricted in diet, there was a distinct decrease in the circumference of their hips.

Fat on the Move

Remembering this, it occurred to me that the change in shape could only be explained by a movement of fat away from abnormal deposits on the hips, and if that were so there was just a chance that while such fat was in transition it might be available to the body as fuel. This was easy to find out, as in that case, fat on the move would be able to replace food. It should then be possible to keep a "fat boy" on a severely restricted diet without a feeling of hunger, in spite of a rapid loss of weight. When I tried this in typical cases of Froehlich's syndrome, I found that as long as such patients were given small daily doses of HCG they could comfortably go about their usual occupations on a diet of only 500 Calories daily and lose an average of about one pound per day. It was also perfectly evident that only abnormal fat was being consumed, as there were no signs of any depletion of normal fat. Their skin remained fresh and turgid, and gradually their figures became entirely normal, nor did the daily administration of HCG appear to have any side-effects other than beneficial.

From this point it was a small step to try the same method in all other forms of obesity. It took a few hundred cases to establish beyond reasonable doubt that the mechanism operates in exactly the same way and seemingly without exception in every case of obesity. I found that, though most patients were treated in the outpatients department, gross dietary errors rarely occurred. On the contrary, most patients complained that the two meals of 250 Calories each were more than they could manage, as they continually had a feeling of just having had a large meal.

Pregnancy and Obesity

Once this trail was opened, further observations seemed to fall into line. It is, for instance, well known that during pregnancy an obese woman... can drastically reduce her diet without feeling hunger or discomfort and lose weight without in any way harming the child in her womb. It is also surprising to what extent a woman can suffer from pregnancy-vomiting without coming to any real harm.

...Pregnancy seems to be the only normal human condition in which the diencephalic fat-banking capacity is unlimited. It is only during pregnancy that fixed fat deposits can be transferred back into the normal current account and freely drawn upon to make up for any nutritional deficit. During pregnancy, every ounce of reserve fat is placed at the disposal of the growing fetus... There is considerable evidence to suggest that it is the HCG produced in large quantities in the placenta which brings about this diencephalic change.

Though we may be able to increase the diencephalic fat banking capacity by injecting HCG, this does not in itself affect the weight, just as transferring monetary funds from a fixed deposit into a current account does not make a man any poorer; to become poorer it is also necessary that he freely spends the money which thus becomes available. In pregnancy the needs of the growing embryo take care of this to some extent, but in the treatment of obesity...a very severe dietary restriction [is required] for the duration of treatment.

Only when the fat which is in transit under the effect of HCG is actually consumed can more fat be withdrawn from the fixed deposits. In pregnancy it would be most undesirable if the fetus were offered ample food only when there is a high influx from the intestinal tract. Ideal nutritional conditions for the fetus can only be achieved when the mother's blood is continually saturated with food, regardless of whether she eats or not, as otherwise a period of starvation might hamper the steady growth of the embryo. It seems that HCG brings about this continual saturation of the blood, which is the reason why obese patients under treatment with HCG never feel hungry in spite of their drastically reduced food intake.

The Nature of Human Chorionic Gonadotropin

HCG is never found in the human body except during pregnancy and in those rare cases in which a residue of placental tissue continues to grow in the womb in what is known as a chorionic epithelioma. It is never found in the male. The human type of chorionic gonadotrophin is found only during the pregnancy of women... It is produced in enormous quantities, so that during certain phases of her pregnancy a woman may excrete as much as one million International Units per day in her urine - enough to render a million infantile rats precociously mature.

As often happens in medicine, much confusion has been caused by giving HCG its name before its true mode of action was understood. It... was entirely overlooked that it has no stimulating effect whatsoever on normally developed and normally functioning sex-glands. No amount of HCG is ever able to increase a normal sex function; it can only improve an abnormal one and in the young hasten the onset of puberty. ...HCG acts exclusively at a diencephalic level...

HCG no Sex Hormone

It cannot be sufficiently emphasized that HCG is not sex-hormone, that its action is identical in men [&] women...it never virilizes a woman or feminizes a man. It neither makes men grow breasts nor does it interfere with their virility, though where this was deficient it may improve it. It never makes women grow a beard or develop a gruff voice. I have stressed this point only for the sake of my lay readers, because, it is our daily experience that when patients hear the word hormone they immediately jump to the conclusion that this must have something to do with the sex- sphere. They are not accustomed as we are, to think thyroid, insulin, cortisone, adrenalin etc, as hormones.

Importance and Potency of HCG

Owing to the fact that HCG has no direct action on any endocrine gland, its enormous importance in pregnancy has been overlooked and its potency underestimated. Though a pregnant woman can produce as much as one million units per day, we find that the injection of only 125 units per day is ample to reduce weight at the rate of roughly one pound per day...

Complicating Disorders

Insert by Dr Dunkley – Again in an effort to make the article more user friendly I skip the complicating disorders for brevity. The entire article is available for perusal if desired.

TECHNIQUE:

Warnings

I must warn the lay reader that what follows is mainly for the treating physician and most certainly not a do-it-yourself primer. Many of the expressions used mean something entirely different to a qualified doctor than that which their common use implies, and only a physician can correctly interpret the symptoms which may arise during treatment. Any patient who thinks he can reduce by taking a few “shots” and eating less is not only sure to be disappointed but may be heading for serious trouble. The benefit the patient can derive from reading this part of the book is a fuller realization of how very important it is for him to follow to the letter his physician's instructions...

The Duration of Treatment

Patients who need to lose 15 pounds (7 kg.) or less require 26 days treatment with 23 daily injections. The extra three days are needed because all patients must continue the 500-Calorie diet for three days after the last injection. This is a very essential part of the treatment, because if they start eating normally as long as there is even a trace of HCG in their body they put on weight alarmingly at the end of the treatment. After three days when all the HCG has been eliminated this does not happen, because the blood is then no longer saturated with food and can thus accommodate an extra influx from the intestines without increasing its volume by retaining water.

We never give a treatment lasting less than 26 days, even in patients needing to lose only 5 pounds. It seems that even in the mildest cases of obesity the diencephalon requires about three weeks rest from the maximal exertion to which it has been previously subjected in order to regain fully its normal fat-banking capacity. Clinically this expresses itself, in the fact that, when in these mild cases, treatment is stopped as soon as the weight is normal, which may be achieved in a week, it is much more easily regained than after a full course of 23 injections.

As soon as such patients have lost all their abnormal superfluous fat, they at once begin to feel ravenously hungry in spite of continued injections. This is because HCG only puts abnormal fat into circulation and cannot... liberate normal fat deposits... As soon as their statistically normal weight is reached, these patients are put on 800-1000 Calories for the rest of the treatment. The diet is... continued for three days after the 23rd injection. Only then are the patients free to eat anything they please except sugar and starches for the next three weeks.

...When a patient has more than 15 pounds to lose the treatment takes longer but the maximum we give in a single course is 40 injections, nor do we as a rule allow, patients to lose more than 34 lbs. (15 Kg.) at a time. The treatment is stopped when either 34 lbs. have been lost or 40 injections have been given. The only exception we make is in the case of grotesquely obese patients who may be allowed to lose an additional 5-6 lbs. if this occurs before the 40 injections are up.

Immunity to HCG

The reason for limiting a course to 40 injections is that by then some patients may begin to show signs of HCG immunity. ...After 40 daily injections it takes about six weeks before this so called immunity is lost and HCG again becomes fully effective. Usually after about 40 injections patients may feel the onset of immunity as hunger which was previously absent.

...Patients who need only 23 injections may be injected daily, including Sundays, as they never develop immunity. In those that take 40 injections the onset of immunity can be delayed if they are given only six injections a week, leaving out Sundays or any other day they choose, provided that it is always the same day. On the days on which they do not receive the injections they usually feel a slight sensation of hunger. At first we thought that this might be purely psychological, but we found that when normal saline is injected without the patient's knowledge the same phenomenon occurs.

Menstruation

During menstruation no injections are given, but the diet is continued and causes no hardship; yet as soon as the menstruation is over, the patients become extremely hungry unless the injections are resumed at once....

Further Courses

Patients requiring the loss of more than 34 lbs. must have a second or even more courses. A second course can be started after an interval of not less than six weeks, though the pause can be more than six weeks. When a third, fourth or even fifth course is necessary, the interval between courses should be made progressively longer. Between a second and third course eight weeks should elapse, between a third and fourth course twelve weeks, between a fourth and fifth course twenty weeks and between a fifth and sixth course six months. In this way it is possible to bring about a weight reduction of 100 lbs. if required... In general, men do slightly better than women and often reach a somewhat higher average daily loss.

Conditions that must be accepted before treatment

...It is impressed upon [the patient] that he will have to follow the prescribed diet to the letter and that after the first three days this will cost him no effort, as he will feel no hunger... If these conditions are not acceptable the case is refused, as any compromise or half measure is bound to prove utterly disappointing to patient and physician alike and is a waste of time and energy...

...One cannot keep a patient comfortably on 500 Calories unless his normal fat reserves are reasonably well stocked. It is for this reason also that every case... must eat to capacity of the most fattening food they can get down until they have had the third injection. It is a fundamental mistake to put a patient on 500 Calories as soon as the injections are started, as it seems to take about three injections before abnormally deposited fat begins to circulate and thus become available. ..Highly concentrated foods such as milk chocolate, pastries with whipped cream sugar, fried meats (particularly pork), eggs and bacon, mayonnaise, bread with thick butter and jam, etc [may all be consumed the first three days of injections]...

We distinguish between the first three injections, which we call “non-effective” as far as the loss of weight is concerned, and the subsequent injections given while the patient is dieting, which we call “effective”. The average loss of weight is calculated on the number of effective injections and from the weight reached on the day of the third injection which may be well above what it was two days earlier when the first injection was given...

Starting Treatment

In menstruating women, the best time to start treatment is immediately after a period. ...Patients who require more than the minimum of 23 injections [should]...skip one day a week in order to postpone immunity to HCG. [However, do not skip a day within the first week].

The Diet

...Here in Italy patients are given the following diet sheet.

Breakfast:	Tea or coffee in any quantity without sugar. Only one tablespoonful of milk allowed in 24 hours. Saccharin or Stevia may be used.
Lunch:	100 grams of veal, beef, chicken breast, fresh white fish, lobster, crab, or shrimp. All visible fat must be carefully removed before cooking, and the meat must be weighed raw. It must be boiled or grilled without additional fat. Salmon, eel, tuna, herring, dried or pickled fish are not allowed. The chicken breast must be removed from the bird. One type of vegetable only to be chosen from the following: spinach, chard, chicory, beet-greens, green salad, tomatoes, celery, fennel, onions, red radishes, cucumbers, asparagus, cabbage. One breadstick (grissino) or one Melba toast. An apple, orange, or a handful of strawberries or one-half grapefruit.

Dinner:	The same four choices as lunch (above.)

The juice of one lemon daily is allowed for all purposes. Salt, pepper, vinegar, mustard powder, garlic, sweet basil, parsley, thyme, majoram, etc., may be used for seasoning, but no oil, butter or dressing. Tea, coffee, plain water, or mineral water are the only drinks allowed, but they may be taken in any quantity and at all times. ... The patient should drink [a minimum of] 2 liters of these fluids per day...

The fruit or the breadstick may be eaten between meals instead of with lunch or dinner, but not more than the four items listed for lunch and dinner may be eaten at one meal.

No...cosmetics other than lipstick, eyebrow pencil and powder may be used without special permission. (*In the past, many cosmetics contained fat products. Now most makeup is free of such products. All mineral based makeup is great.*)

...The 100 grams of meat must be scrupulously weighed raw after all visible fat has been removed. To do this accurately the patient must have a letter-scale, as kitchen scales are not sufficiently accurate and the butcher should certainly not be relied upon. ...Patients...can omit anything they wish.

There is no objection to breaking up the two meals. For instance having a breadstick and an apple for breakfast or an orange before going to bed, provided they are deducted from the regular meals. The whole daily ration of two breadsticks or two fruits may not be eaten at the same time, nor can any item saved from the previous day be added on the following day. ...It is also worth pointing out that any attempt to observe this diet without HCG will lead to trouble in two to three days...

...There is no restriction on the size of one apple. Some people do not realize that a tangerine is not an orange and that chicken breast does not mean the breast of any other fowl, nor does it mean a wing or drumstick... It must be made very clear to the patient that he is living to a far greater extent on the fat which he is losing than on what he eats.

Many patients ask why eggs are not allowed. The contents of two good sized eggs are roughly equivalent to 100 grams of meat, but unfortunately the yolk contains a large amount of fat, which is undesirable. Very occasionally we allow egg - boiled, poached or raw - to patients who develop an aversion to meat, but in this case they must add the white of three eggs to the one they eat whole. In countries where cottage cheese made from skimmed milk is available 100 grams may occasionally be used instead of the meat, but no other cheeses are allowed.

Vegetarians

Strict vegetarians such as orthodox Hindus present a special problem, because milk and curds are the only animal protein they will eat. To supply them with sufficient protein of animal origin they must drink 500 cc. of skimmed milk per day, though part of this ration can be taken as curds. As far as fruit, vegetables and starch are concerned, their diet is the same as that of non-vegetarians; they cannot be allowed their usual intake of vegetable proteins from leguminous plants such as beans or from wheat or nuts, nor can they have their customary rice. In spite of these severe restrictions, their average loss is about half that of non-vegetarians, presumably owing to the sugar content of the milk.

Faulty Dieting

Few patients will take one's word for it that the slightest deviation from the diet has under HCG disastrous results as far as the weight is concerned. This extreme sensitivity has the advantage that the smallest error is immediately detectable at the daily weighing but most patients have to [have] the experience before they will believe it...

Vitamins and Anemia

Sooner or later most patients express a fear that they may be running out of vitamins or that the restricted diet may make them anemic. ... Actually, a low blood count not due to any serious disorder of the blood forming tissues improves during treatment, and we have never encountered a significant protein deficiency nor signs of a lack of vitamins in patients who are dieting regularly...

Fluctuations in weight loss

After the fourth or fifth day of dieting the daily loss of weight begins to decrease to one pound or somewhat less per day, and there is a smaller urinary output. Men often continue to lose regularly at that rate, but women are more irregular in spite of faultless dieting. There may be no drop at all for two or three days and then a sudden loss which reestablishes the normal average. These fluctuations are entirely due to variations in the retention and elimination of water, which are more marked in women than in men.

...Patients who have previously regularly used diuretics as a method of reducing, lose fat during the first two or three weeks of treatment which shows in their measurements, but the scale may show little or no loss because they are replacing the normal water content of their body which has been dehydrated. Diuretics should never be used...

Interruptions of Weight Loss

We distinguish four types of interruption in the regular daily loss. The first is the one...in which the weight stays stationary for a day or two, and this occurs, particularly towards the end of a course, in almost every case.

The Plateau

The second type of interruption we call a "plateau". A plateau lasts 4-6 days and frequently occurs during the second half of a full course, particularly in patients that have been doing well and who's overall average of nearly a pound per effective injection has been maintained. Those who are losing more than the average all have a plateau sooner or later. A plateau always corrects, itself, but many patients who have become accustomed to a regular daily loss get unnecessarily worried and begin to fret...

In such cases we consider it permissible, for purely psychological reasons, to break up the plateau. This can be done [with] a so-called "apple day". An apple-day begins at lunch and continues until just before lunch of the following day. The patients are given six large apples and are told to eat one whenever they feel the desire though six apples is the maximum allowed. During an apple-day no other food or liquids except plain water are allowed... [Do not undergo an apple day] unless the weight has been stationary for at least four days without any dietary error having been committed.

Reaching a Former Level

The third type of interruption in the regular loss of weight may last much longer - ten days to two weeks. Fortunately, it is rare and only occurs in very advanced cases, and then hardly ever during the first course of treatment. It is seen only in those patients who during some period of their lives have maintained a certain fixed degree of obesity for ten years or more and have then at some time rapidly increased beyond that weight. When then in the course of treatment the former level is reached, it may take two weeks of no loss, in spite of HCG and diet, before further reduction is normally resumed.

Menstrual Interruption

The fourth type of interruption is the one which often occurs a few days before and during the menstrual period... It must also be mentioned that when a woman becomes pregnant during treatment - and this is by no means uncommon - she at once ceases to lose weight... If in such cases, menstruation is delayed, we stop injecting and [perform a pregnancy] test five days later. No pregnancy test should be carried out earlier than five days after the last injection, as otherwise the HCG may give a false positive result. Oral contraceptives may be used during treatment.

Dietary Errors

Any interruption of the normal loss of weight which does not fit perfectly into one of those categories is always due to some possibly very minor dietary error. Similarly, any gain of more than 100 grams is invariably the result of some transgression or mistake, unless it happens on or about the day of ovulation or during the three days preceding the onset of menstruation, in which case it is ignored...

Salt and Reducing (Dieting by water loss)

... We make no restriction in the use of salt and insist that the patients drink large quantities of water throughout the treatment. We are out to reduce abnormal fat and are not in the least interested in such illusory weight losses as can be achieved by depriving the body of salt and [water]. Though we allow the free use of salt, the daily amount taken should be roughly the same [as before injections began]...

Cosmetics

When no dietary error is elicited we turn to cosmetics. Most women find it hard to believe that fats, oils, creams and ointments applied to the skin are absorbed and interfere with weight reduction by HCG just as if they had been eaten... We do permit the use of lipstick, powder and such lotions as are entirely free of fatty substances... Sun-tan oil is prohibited. (*All mineral make-ups are permitted.*)

Other Reasons for a Gain

Apart from diet and cosmetics there can be a few other reasons for a small rise in weight. Some patients unwittingly take chewing gum, [mints], vitamin pills, cough syrups etc., without realizing that the sugar or fats they contain may interfere with a regular loss of weight. ... The only self-medication we allow is aspirin for a headache, though headaches almost invariably disappear after a week of treatment, particularly if of the migraine type. (*Ibuprofen & Tylenol are permitted. Nor do we stop any prescription medications.*)

... We encourage swimming and sun bathing during treatment, but it should be remembered that a severe sunburn always produces a temporary rise in weight, evidently due to water retention. The same may be seen when a patient gets a common cold during treatment. Finally, the weight can temporarily increase - paradoxical though this may sound - after an exceptional physical exertion of long duration leading to a feeling of exhaustion. ... Though the extra muscular effort involved does consume some additional Calories, this appears to be offset by the retention of water which the tired circulation cannot at once eliminate...

Unforeseen Interruptions of Treatment

If an interruption of treatment (*injections*) lasting more than four days is necessary, the patient must increase his diet to at least 800 Calories by adding meat, eggs, cheese, and milk to his diet after the third day, as otherwise he will find himself so hungry and weak that he is unable to go about his usual occupation. If the interval lasts less than two weeks the patient can directly resume injections and the 500-Calorie diet, but if the interruption lasts longer he must again eat normally until he has had his third injection.

When a patient knows beforehand that he will have to travel and be absent for more than four days, it is always better to stop injections three days before he is due to leave so that he can have the three days of strict dieting which are necessary after the last injection at home. This saves him from the almost impossible task of having to arrange the 500 Calorie diet while en route, and he can thus enjoy a much greater dietary freedom from the day of his departure. Interruptions occurring before 20 effective injections have been given are most undesirable, because with less than that number of injections some weight is liable to be regained. After the 20th injection an unavoidable interruption is merely a loss of time...

Massage

I never allow any kind of massage during treatment. It is entirely unnecessary and merely disturbs a very delicate process which is going on in the tissues. Few indeed are the masseurs and masseuses who can resist the temptation to knead and hammer abnormal fat deposits. In the course of rapid reduction it is sometimes possible to pick up a fold of skin which has not yet had time to adjust itself, as it always does under HCG, to the changed figure. This fold contains its normal subcutaneous fat and may be almost an inch thick. It is one of the main objects of the HCG treatment to keep that fat there. Patients and their masseurs do not always understand this and give this fat a working-over. I have seen such patients who were as black and blue as if they had received a sound thrashing...

Blood Sugar

Towards the end of a course or when a patient has nearly reached his normal weight it occasionally happens that the blood sugar drops below normal, and we have even seen this in patients who had an abnormally high blood sugar before treatment. Such an attack of hypoglycemia is almost identical with the one seen in diabetics who have taken too much insulin. The attack comes on suddenly; there is the same feeling of light-headedness, weakness in the knees, trembling, and unmotivated sweating; but under HCG, hypoglycemia does not produce any feeling of hunger. All these symptoms are almost instantly relieved by taking two heaped teaspoons of sugar (*juice of any variety would be preferable*).

...Once such an attack has been relieved with sugar we have never seen it recur on the immediately subsequent days, and only very rarely does a patient have two such attacks separated by several days during a course of treatment...

The Ratio of Pounds to Inches

An interesting feature of the HCG method is that, regardless of how fat a patient is, the greatest circumference -- abdomen or hips as the case may be is reduced at a constant rate which is extraordinarily close to 1 cm. per kilogram of weight lost (*1 inch per 5 pounds*). At the beginning of treatment the change in measurements is somewhat greater than this, but at the end of a course it is almost invariably found that the girth is as many centimeters less as the number of kilograms by which the weight has been reduced. I have never seen this clear cut relationship in patients that try to reduce by dieting only.

Preparing the Solution

Human chorionic gonadotrophin comes on the market as a highly soluble powder...and any brand made by a reliable pharmaceutical company is probably as good as any other. ...The powder is sealed in ampoules or in rubber-capped bottles in varying amounts which are stated in International Units. In this form HCG is stable; however, only such preparations should be used that have the date of manufacture and the date of [expiration] clearly stated on the label or package. A suitable solvent is always supplied in a separate ampoule in the same package.

Once HCG is in solution it is far less stable. It may be kept at room-temperature for two to three days, but if the solution must be kept longer it should always be refrigerated... 125 I.U. is the standard dose for all cases and...should never be exceeded. This small amount is awkward to handle accurately (it requires an insulin syringe)...

Injecting

HCG produces little or no tissue-reaction, it is completely painless and in the many thousands of injections we have given we have never seen an inflammatory or suppurative reaction at the site of the injection.

One should avoid leaving a vacuum in the bottle after preparing the solution or after withdrawal of the amount required for the injections as otherwise alcohol used for sterilizing a frequently perforated rubber cap might be drawn into the solution. When sharp needles are used, it sometimes happens that a little bit of rubber is punched

out of the rubber cap and can be seen as a small black speck floating in the solution. As these bits of rubber are heavier than the solution they rapidly settle out, and it is thus easy to avoid drawing them into the syringe.

We use very fine needles that are two inches long and inject deep intra-gluteally (*in the gluteus muscle*) in the outer upper quadrant of the buttocks. The injection should if possible not be given into the superficial fat layers... It is also important that the daily injection should be given at intervals as close to 24 hours as possible. Any attempt to economize in time by giving larger doses at longer intervals is doomed to produce less satisfactory results.

There are hardly any contraindications to the HCG method (*including infection, surgery or superficial blood clots*)...

Fibroids

While uterine fibroids seem to be in no way affected by HCG in the doses we use...

Gallstones

Small stones in the gall bladder may, in patients who have recently had typical colics {flare-ups}, cause more frequent colics under treatment with HCG. This may be due to the almost complete absence of fat from the diet, which prevents the normal emptying of the gall bladder...

The Heart

Disorders of the heart are not as a rule contraindications...

Coronary Occlusion

In obese patients who have recently survived a coronary occlusion, we adopt the following procedure in collaboration with the cardiologist. We wait until no further electrocardiographic changes have occurred for a period of three months. Routine treatment is then started...

In the thousands of cases we have treated we have not once seen any sort of coronary incident occur during or shortly after treatment. The same applies to cerebral vascular accidents. Nor have we ever seen a case of thrombosis of any sort develop during treatment, even though a high blood pressure is rapidly lowered. In this respect, too, the HCG treatment resembles pregnancy...

Asthma

In cases of bronchial asthma and hay fever we have occasionally resorted to cortisone during treatment and find that triamcinolone is the least likely to interfere with the loss of weight, but many asthmatics improve with HCG alone...

Concluding a Course

When the three days of dieting after the last injection are over, the patients are told that they may now eat anything they please, except sugar and starch provided they faithfully observe one simple rule. This rule is that they must have their own portable bathroom-scale always at hand, particularly while traveling. They must without fail weigh themselves every morning as they get out of bed, having first emptied their bladder. If they are in the habit of having breakfast in bed, they must weigh before breakfast.

It takes about 3 weeks before the weight reached at the end of the treatment becomes stable, i.e. does not show violent fluctuations after an occasional excess. During this period patients must realize that the so-called carbohydrates, that is sugar, rice, bread, potatoes, pastries, etc, are by far the most dangerous. If no carbohydrates

whatsoever are eaten, fats can be indulged in somewhat more liberally and even small quantities of alcohol, such as a glass of wine with meals, does no harm, but as soon as fats and starch are combined things are very liable to get out of hand. This has to be observed very carefully during the first 3 weeks after the treatment is ended otherwise disappointments are almost sure to occur.

Skipping a Meal

As long as their weight stays within two pounds of the weight reached on the day of the last injection, patients should take no notice of any increase but the moment the scale goes beyond two pounds, even if this is only a few ounces, they must on that same day entirely skip breakfast and lunch but take plenty to drink. In the evening they must eat a huge steak with only an apple or a raw tomato. Of course this rule applies only to the morning weight. Ex-obese patients should never check their weight during the day, as there may be wide fluctuations and these are merely alarming and confusing.

It is of utmost importance that the meal is skipped on the same day as the scale registers an increase of more than two pounds and that missing the meals is not postponed until the following day. If a meal is skipped on the day in which a gain is registered in the morning this brings about an immediate drop of often over a pound. But if the skipping of the meal - and skipping means literally skipping, not just having a light meal - is postponed the phenomenon does not occur and several days of strict dieting may be necessary to correct the situation.

Most patients hardly ever need to skip a meal. If they have eaten a heavy lunch they feel no desire to eat their dinner, and in this case no increase takes place. If they keep their weight at the point reached at the end of the treatment, even a heavy dinner does not bring about an increase of two pounds on the next morning and does not therefore call for any special measures. Most patients are surprised how small their appetite has become and yet how much they can eat without gaining weight. They no longer suffer from an abnormal appetite and feel satisfied with much less food than before. In fact, they are usually disappointed that they cannot manage their first normal meal, which they have been planning for weeks.

Losing more Weight

An ex-patient should never gain more than two pounds without immediately correcting this, but it is equally undesirable that more than two lbs. be lost after treatment, because a greater loss is always achieved at the expense of normal fat. Any normal fat that is lost is invariably regained as soon as more food is taken, and it often happens that this rebound overshoots the upper two lbs. limit.

Trouble After Treatment

Two difficulties may be encountered in the immediate post-treatment period. When a patient has consumed all his abnormal fat or, when after a full course, the injection has temporarily lost its efficacy... When abnormal fat is no longer being put into circulation either because it has been consumed or because immunity has set in, this is always felt by the patient as sudden, intolerable and constant hunger. In this sense, the HCG method is completely self-limiting. With HCG it is impossible to reduce a patient, however enthusiastic, beyond his normal weight. As soon as no more abnormal fat is being issued, the body starts consuming normal fat, and this is always regained as soon as ordinary feeding is resumed. ...In a few days a tearful patient is back in the consulting room, convinced that her case is a failure. All that is happening is that the essential fat lost at the end of the treatment, owing to the patient's reluctance to report a much greater hunger, is being replaced...

Beware of Over-enthusiasm

The other trouble which is frequently encountered immediately after treatment is again due to over-enthusiasm. ...They try more or less to continue the 500-Calorie diet on which they felt so well during treatment and make only minor variations, such as replacing the meat with an egg, cheese, or a glass of milk. To their horror they find that in spite of this bravura, their weight goes up...

Protein deficiency

Here too, the explanation is quite simple. During treatment the patient has been only just above the verge of protein deficiency and has had the advantage of protein being fed back into his system from the breakdown of fatty tissue. Once the treatment is over there is no more HCG in the body and this process no longer takes place. Unless an adequate amount of protein is eaten as soon as the treatment is over, protein deficiency is bound to develop, and this inevitably causes the marked retention of water known as hunger- edema. The treatment is very simple. The patient is told to eat two eggs for breakfast and a huge steak for lunch and dinner followed by a large helping of chese...

Relapses

As a general rule one can say that 60%-70% of our cases experience little or no difficulty in holding their weight permanently. [Weigh yourself regularly] because after a course of HCG as much as 10 lbs. can be regained without any noticeable change in the fit of the clothes. The reason for this is that after treatment newly acquired fat is at first evenly distributed and does not show the former preference for certain parts of the body.

Pregnancy or the menopause may annul the effect of a previous treatment. Women who take treatment during the one year after the last menstruation - that is at the onset of the menopause - do just as well as others, but among them the relapse rate is higher until the menopause is fully established. The period of one year after the last menstruation applies only to women who are not being treated with [hormone replacement therapy]...

Late teenage girls who suffer from attacks of compulsive eating have by far the worst record of all as far as relapses are concerned.

Patients who have once taken the treatment never seem to hesitate to come back for another short course as soon as they notice that their weight is once again getting out of hand. ... The patient already, knows that he will feel comfortable throughout.

Plan of a Normal Course

125 I.U. of HCG daily (except during menstruation) until 40 injections have been given.

Until 3rd injection forced feeding.

After 3rd injection, 500 Calorie diet to be continued until 72 hours after the last injection.

For the following 3 weeks, all foods allowed except starch and sugar in any form (careful with very sweet fruit).

After 3 weeks, very gradually add starch in small quantities, always controlled by morning weighing.

CONCLUSION

The HCG + diet method can bring relief to every case of obesity, but the method is not simple. It is very time consuming and requires perfect cooperation between physician and patient. Each case must be handled individually, and the physician must have time to answer questions, allay fears and remove misunderstandings. ... When something goes wrong he must at once investigate until he finds the reason for any gain that may have occurred...

The method involves a highly complex bodily mechanism, and even though our theory may be wrong the physician must make himself some sort of picture of what is actually happening...

I must beg those trying the method for the first time to adhere very strictly to the technique and the interpretations here outlined and thus treat a few hundred cases before embarking on experiments of their own, and until then

refrain from introducing innovations, however thrilling they may seem. In a new method, innovations or departures from the original technique can only be usefully evaluated against a substantial background of experience with what is at the moment the orthodox procedure.

I have tried to cover all the problems that come to my mind. Yet a bewildering array of new questions keeps arising, and my interpretations are still fluid. In particular, I have never had an opportunity of conducting the laboratory investigations which are so necessary for a theoretical understanding of clinical observations, and I can only hope that those more fortunately placed will in time be able to fill this gap...

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