

***S. WEIR
MITCHELL***

***FAT
AND
BLOOD***



S. Weir Mitchell

Fat and Blood

**An Essay on the Treatment of Certain Forms of
Neurasthenia and Hysteria**

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PREFACE TO THE EIGHTH EDITION.

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The continued favor which this book has enjoyed in Europe as well as in this country has rendered me doubly desirous to make it a thorough and clear statement of the treatment of the kind of cases which it discusses as carried out in my practice to-day.

In the endeavor to do this, the present edition, like the last two, has been carefully revised by my son, Dr. John K. Mitchell, and there is no chapter, and scarcely a page, where some alteration or addition has not been made, besides those of the sixth and seventh editions, as the result of added years of experience. Especially in the chapters on the means of treatment some details have been thought worth adding to help the statement so often repeated in the book that success will depend on the care with which details are carried out. The chapter on massage, rewritten for the last edition, has been once more revised and somewhat extended, in order to make it an accurate as well as a scientific, if brief, statement of the best method which use and observation have taught us. A chapter on the handling of several diseases not described in former editions has been added by the editor.

S. WEIR MITCHELL.

SEPTEMBER, 1899.



CHAPTER I.

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INTRODUCTORY.

For some years I have been using with success, in private and in hospital practice, certain methods of renewing the vitality of feeble people by a combination of entire rest and excessive feeding, made possible by passive exercise obtained through the steady use of massage and electricity.

The cases thus treated have been chiefly women of a class well known to every physician—nervous women, who, as a rule, are thin and lack blood. Most of them have been such as had passed through many hands and been treated in turn for gastric, spinal, or uterine troubles, but who remained at the end as at the beginning, invalids, unable to attend to the duties of life, and sources alike of discomfort to themselves and anxiety to others.

In 1875 I published in "Séguin's Series of American Clinical Lectures," Vol. I., No. iv., a brief sketch of this treatment, under the heading of "Rest in the Treatment of Nervous Disease," but the scope afforded me was too brief for the details on a knowledge of which depends success in the use of rest, I have been often since reminded of this by the many letters I have received asking for explanations of the minutiae of treatment; and this must be my apology for bringing into these pages a great many particulars which are no doubt well enough known to the more accomplished physician.

In the preface to the second edition I said that as yet there had been hardly time for a competent verdict on the methods I had described. Since making this statement,

many of our profession in America have published cases of the use of my treatment. It has also been thoroughly discussed by the medical section of the British Medical Association, and warmly endorsed by William Playfair, of London, Ross of Manchester, Coghill, and others; while a translation of my book into French by Dr. Oscar Jennings, with an introduction by Professor Ball, and a reproduction in German, with a preface by Professor von Leyden, have placed it satisfactorily before the profession in France and Germany.

As regards the question of originality I did not and do not now much concern myself. This alone I care to know, that by the method in question cases are cured which once were not; and as to the novelty of the matter it would be needless to say more, were it not that the charge of lack of that quality is sometimes taken as an imputation on a man's good faith.

But to sustain so grave an implication the author must have somewhere laid claim to originality and said in what respect he considered himself to have done a totally new thing. The following passage from the first edition of this book explains what was my own position:

"I do not wish," I wrote, "to be thought of as putting forth anything very remarkable or original in my treatment by rest, systematic feeding, and passive exercise. All of these have been used by physicians; but, as a rule, one or more are used without the others, and the plan which I have found so valuable, of combining these means, does not seem to be generally understood. As it involves some novelty, and as I do not find it described elsewhere, I shall, I think, be doing a service to my profession by relating my experience."

The following quotation from Dr. William Playfair's essay^[1] says all that I would care to add:

"The claims of Dr. Weir Mitchell to originality in the introduction of this system of treatment, which I have recently heard contested in more than one quarter, it is not my province to defend. I feel bound, however, to say that, having carefully studied what has been written on the subject, I can nowhere find anything in the least approaching to the regular, systematic, and thorough attack on the disease here discussed.

"Certain parts of the treatment have been separately advised, and more or less successfully practised, as, for example, massage and electricity, without isolation; or isolation and judicious moral management alone. It is, in fact, the old story with regard to all new things: there is no discovery, from the steam-engine down to chloroform, which cannot be shown to have been partially foreseen, and yet the claims of Watt and Simpson to originality remain practically uncontested. And so, if I may be permitted to compare small things with great, will it be with this. The whole matter was admirably summed up by Dr. Ross, of Manchester, in his remarks in the discussion I introduced at the meeting of the British Medical Association at Worcester, which I conceive to express the precise state of the case: 'Although Dr. Mitchell's treatment was not new in the sense that its separate recommendations were made for the first time, it was new in the sense that these recommendations were for the first time combined so as to form a complete scheme of treatment.'"

As regards the acceptance of this method of treatment I have to-day no complaint to make. It runs, indeed, the risk of being employed in cases which do not need it and by persons who are not competent, and of being thus in a measure brought into disrepute. As concerns one of its essentials—massage—this is especially to be feared. It is a remedy with capacity to hurt as well as to help, and should never be used without the advice of a physician, nor persistently kept up without medical observation of its temporary and more permanent effects.

CHAPTER II.

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GAIN OR LOSS OF WEIGHT CLINICALLY CONSIDERED.

The gentlemen who have done me the honor to follow my clinical service at the State Infirmary for Diseases of the Nervous System^[2] are well aware how much care is there given to learn whether or not the patient is losing or has lost flesh, is by habit thin or fat. This question is one of the utmost moment in every point of view, and deserves a larger share of attention than it receives. In this hospital it is the custom to weigh our cases when they enter and at intervals. The mere loss of fat is probably of small moment in itself when the amount of restorative food is sufficient for every-day expenditure, and when the organs are in condition to keep up the supply of fat which we not only require for constant use but probably need to change continually. The steady or rapid lessening of the deposits of hydro-carbons stored away in the areolæ of the tissues is of

importance, as indicating their excessive use or a failure of supply; and when either condition is to be suspected it becomes our duty to learn the reasons for this striking symptom. Loss of flesh has also a collateral value of great import, because it is almost an invariable rule that rapid thinning is accompanied soon or late with more or less anæmia, and it is uncommon to see a person steadily gaining fat after any pathological reduction of weight without a corresponding gain in amount and quality of blood. We too rarely reflect that the blood thins with the decrease of the tissues and enriches as they increase.

Before entering into this question further, I shall ask attention to some points connected with the normal fat of the human body; and, taking for granted, here and elsewhere, that my readers are well enough aware of the physiological value and uses of the adipose tissues, I shall continue to look at the matter chiefly from a clinical point of view.

When in any individual the weight varies rapidly or slowly, it is nearly always due, for the most part, to a change in the amount of adipose tissue stored away in the meshes of the areolar tissue. Almost any grave change for the worse in health is at once betrayed in most people by a diminution of fat, and this is readily seen in the altered forms of the face, which, because it is the always visible and in outline the most irregular part of the body, shows first and most plainly the loss or gain of tissue. Fatty matter is therefore that constituent of the body which goes and comes most easily. Why there is in nearly every one a normal limit to its accumulation we cannot say, nor yet why this limit should vary as life goes on. Even in health the weight of men, and still more of women, is by no means constant, but, as a rule, when we are holding our own with that share of stored-up fat which belongs to the individual we are usually in a

condition of nutritive prosperity, and when after any strain or trial which has lessened weight we are slowly repairing mischief and laying by fat we are equally in a state of health. The loss of fat which is not due to change of diet or to exercise, especially its rapid or steady loss, nearly always goes along with conditions which impoverish the blood, and, on the other hand, the gain of fat up to a certain point seems to go hand in hand with a rise in all other essentials of health, and notably with an improvement in the color and amount of the red corpuscles.

The quantity of fat which is healthy for the individual varies with the sex, the climate, the habits, the season, the time of life, the race, and the breed. Quetelet^[3] has shown that before puberty the weight of the male is for equal ages above that of the female, but that towards puberty the proportional weight of the female, due chiefly to gain in fat, increases, so that at twelve the two sexes are alike in this respect. During the child-bearing time there is an absolute lessening on the part of the female, but after this time the weight of the woman increases, and the maximum is attained at about the age of fifty.

Dr. Henry I. Bowditch^[4] reaches somewhat similar conclusions, and shows from much more numerous measurements of Boston children that growing boys are heavier in proportion to their height than girls until they reach fifty-eight inches, which is attained about the fourteenth year. Then the girl passes the boy in weight, which Dr. Bowditch thinks is due to the accumulation of adipose tissue at puberty. After two or three years more the male again acquires and retains superiority in weight and height.

Yet as life advances there are peculiarities which belong to individuals and to families. One group thins as life goes on

past forty; another group as surely takes on flesh; and the same traits are often inherited, and are to be regarded when the question of fattening becomes of clinical or diagnostic moment. Men, as a rule, preserve their nutritive status more equably than women. Every physician must have been struck with this. In fact, many women lose or acquire large amounts of adipose matter without any corresponding loss or gain in vigor, and this fact perhaps is related in some way to the enormous outside demands made by their peculiar physiological processes. Such gain in weight is a common accompaniment of child-bearing, while nursing in some women involves considerable gain in flesh, and in a larger number enormous falling away, and its cessation as speedy a renewal of fat. I have also found that in many women who are not perfectly well there is a notable loss of weight at every menstrual period, and a marked gain between these times.

I was disappointed not to find this matter dealt with fully in Mrs. Jacobi's able essay on menstruation, nor can I discover elsewhere any observations in regard to loss or gain of weight at menstrual periods in the healthy woman.

How much influence the seasons have, is not as yet well understood, but in our own climate, with its great extremes, there are some interesting facts in this connection. The upper classes are with us in summer placed in the best conditions for increase in flesh, not only because it is their season of least work, mental and physical, but also because they are then for the most part living in the country under circumstances favorable to appetite, to exercise, and to freedom from care. Owing to these fortunate facts, members of the class in question are apt to gain weight in summer, although many such persons, as I know, follow the more general rule and lose weight. But if we deal with the mass of men who are hard worked, physically, and unable to

leave the towns, we shall probably find that they nearly always lose weight in hot weather. Some support is given to this idea by the following very curious facts. Very many years ago I was engaged for certain purposes in determining the weight, height, and girth of all the members of our city police force. The examination was made in April and repeated in the beginning of October. Every care was taken to avoid errors, but to my surprise I found that a large majority of the men had lost weight during the summer. The sum total of loss was enormous. As I have mislaid some of the sheets, I am unable to give it accurately, but I found that three out of every five had lessened in weight. It would be interesting to know if such a change occurs in convicts confined in penitentiaries.

I am acquainted with some persons who lose weight in winter, and with more who fail in flesh in the spring, which is our season of greatest depression in health—the season when with us choreas are apt to originate^[5] or to recur, and when habitual epileptic fits become more frequent in such as are the victims of that disease.

Climate has a good deal to do with a tendency to take on fat, and I think the first thing which strikes an American in England is the number of inordinately fat middle-aged people, and especially of fat women.

This excess of flesh we usually associate in idea with slothfulness, but English women exercise more than ours, and live in a land where few days forbid it, so that probably such a tendency to obesity is due chiefly to climatic causes. To these latter also we may no doubt ascribe the habits of the English as to food. They are larger feeders than we, and both sexes consume strong beer in a manner which would in this country be destructive of health. These habits aid, I suspect, in producing the more general fatness in middle and later life, and those enormous occasional growths which

so amaze an American when first he sets foot in London. But, whatever be the cause, it is probable that members of the prosperous classes of English, over forty, would outweigh the average American of equal height of that period, and this must make, I should think, some difference in their relative liability to certain forms of disease, because the overweight of our trans-Atlantic cousins is plainly due to excess of fat.

I have sought in vain for English tables giving the weight of men and women of various heights at like ages. The material for such a study of men in America is given in Gould's researches published by the United States Sanitary Commission, and in Baxter's admirable report,^[6] but is lacking for women. A comparison of these points as between English and Americans of both sexes would be of great interest.

I doubt whether in this country as notable a growth in bulk as multitudes of English attain would be either healthy or desirable in point of comfort, owing to the distress which stout people feel in our hot summer weather. Certainly "Banting" is with us a rarely-needed process, and, as a rule, we have much more frequent occasion to fatten than to thin our patients. The climatic peculiarities which have changed our voices, sharpened our features, and made small the American hand and foot, have also made us, in middle and advanced life, a thinner and more sallow race, and, possibly, adapted us better to the region in which we live. The same changes in form are in like manner showing themselves in the English race in Australia.^[7]

Some gain in flesh as life goes on is a frequent thing here as elsewhere, and usually has no unwholesome meaning. Occasionally we see people past the age of sixty suddenly taking on fat and becoming at once unwieldy and feeble,

the fat collecting in masses about the belly and around the joints. Such an increase is sometimes accompanied with fatty degeneration of the heart and muscles, and with a certain watery flabbiness in the limbs, which, however, do not pit on pressure.

Alcoholism also gives rise in some people to a vast increase of adipose tissue, and the sodden, unwholesome fatness of the hard drinker is a sufficiently well known and unpleasant spectacle. The overgrowth of inert people who do not exercise enough to use up a healthy amount of overfed tissues is common enough as an individual peculiarity, but there are also two other conditions in which fat is apt to be accumulated to an uncomfortable extent. Thus, in some cases of hysteria where the patient lies abed owing to her belief that she is unable to move about, she is apt in time to become enormously stout. This seems to me also to be favored by the large use of morphia to which such women are prone, so that I should say that long rest, the hysterical constitution, and the accompanying resort to morphia make up a group of conditions highly favorable to increase of fat.

Lastly, there is the class of fat anæmic people, usually women. This double peculiarity is rather uncommon, but, as the mass of thin-blooded persons are as a rule thin or losing flesh, there must be something unusual in that anæmia which goes with gain in flesh.

Bauer^[8] thinks that lessened number of blood-corpuscles gives rise to storing of fat, owing to lessened tissue-combustion. At all events, the absorption of oxygen diminishes after bleeding, and it used to be well known that some people grew fat when bled at intervals. Also, it is said that cattle-breeders in some localities—certainly not in this country—bleed their cattle to cause increase of fat in the tissues, or of fat secreted as butter in the milk. These explanations aid us but little to comprehend what, after all,