THE TREATMENT OF OBESITY FOR CHILDREN IN LOW-INCOME FAMILIES

A Study of the Social Worker's Role in a Clinical Setting

by

FRANCES META WATT

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A B S T R A C T

This study reviews the methods and degree of success of treatment for obese children at the newly-founded Metabolic Clinic at the Vancouver Health Centre for Children. The Clinic has confined itself to the treatment of children from low-income families. The extent and significance of emotional and physical maladjustments is related to the causes of obesity and the efficacy of treatment given; this indicates the considerable significance of social casework as a treatment aid.

Current doctrines on the causes and attendant problems associated with obesity in children are reviewed as a background against which to evaluate the Clinic, drawing heavily for this purpose on the experience and findings of Dr. Hilde Bruch in her work with a clinic in New York.

The specific evaluation of the work of the Clinic is made through case summaries and illustrations. (The writer worked at the Clinic during the school session, and during the summer of 1950.) A tentative statistical interpretation of the progress with the twenty-six cases, treated during this period, is made in terms of the percentage of weight loss or gain in relation to the amount by which each child exceeds the estimated normal weight.

The very limited extent to which treatment of individual cases has been successful leads to rather negative conclusions. The importance of clinical teamwork and particularly of social casework in diagnosis of the underlying causes of the patient's obese condition is clear. But the dgree to which the clinical team's efforts can take effect depends upon the amount of cooperation which it is possible to obtain from the patient and his family. Evaluation must bear in mind that the formation of a Metabolic Clinic for children at Vancouver is of very recent origin. It is concerned with the treatment of a condition about which medical science has not hitherto devoted much attention, so that the Clinic work must be seen as the exploratory and pioneer.

ACKNOWLEDGEMENTS.

I wish to preface my acknowledgements by expressing my gratitude to Miss G. Rubinovitch for stimulating my interest in this study.

I should like particularly to thank Dr. L. Marsh for his untiring assistance throughout the preparation and organization of this study, since without his help it would not have materialized.

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CHAPTER I

SETTING OF THE STUDY

Nature of Obesity

It has been stated[1] that obesity[2] is the most frequent physical abnormality found in mankind. Approximately twenty-eight percent of the world's population are ten percent or more overweight.[3] The handicaps imposed by obesity have been enumerated by a number of authors: yet frequently physicians dealing with individuals fail to emphasize to the patient the seriousness of this disease. It is easy to shrug off "a few pounds of overweight" as something of little consequence, but to do so may be ignoring what is perhaps the best chance to lengthen the life and diminish the future illnesses of the person concerned. Statisticians have in recent years been pointing out the increase in deaths from such degenerative diseases as diabetes, cancer and heart disorders. We may

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1. Obesity: derived from the Latin "obesus" meaning eaten up or lean; gradually the term came to have the opposite meaning, that of being overweight. The term "adiposity" may be used as a synonym and is perhaps a better choice since it is derived from the Latin "adips" meaning "fat".

2. Editorial, A Study of Impairments found among 10,000 unselected examinees, Article II, Proceedings Life Ext. Exam., 1:89-93, July - August, 1939, page 89.

3. Ibid., page 90.

justifiably infer from such statistical trends that medicine is approaching a point of diminishing returns and that increasing efforts will reduce the death and illness rates only slightly. Actually, great improvement in the health of the nation is possible by means of the correction and prevention of obesity. It is significant that in time of war, countries with diminished supplies of food have domonstrated a definite decrease in the incidence of degenerative diseases.[4]

Obesity causes a diminished vital capacity, generally through the mechanical restriction of respiratory movements by deposits of fat in the abdominal and thoracic walls.[5] If the duration of this obesity is long enough, emphysma (distention of tissue) develops and the patient's vital capacity is permanently impaired even if there is an adequate reduction of weight at a later date.

Though obesity may stem from a number of physiological causes the condition may more generally be associated with psychological maladjustments. It is not yet well known that the theories that obesity is due to glandular imbalance, metabolism or other physiological factors have been refuted by

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4. Metropolitan Life Insurance Company, Ideal Weights for Men, Metropolitan Life Insurance Statistical Bulletin, 24:6-8, June, 1943.

5. Short, J.J. and Johnson, H.J., The Effect of Overweight on Vital Capacity, Proceedings Life Ext. Exam., 1:36-41, March - April, 1939.

Newbourgh[6] and others[7], who in a series of thorough investigations, have been unable to find in the great majority of obese persons any deviations from normalcy in endocrine or metabolic behaviour. The conclusion is warranted that the condition of obesity is simply due to a positive caloric balance and that these persons eat more food than they expend in the form of energy.

Special Significance for Children

The problems associated with obesity have special significance for children since recent work has revealed that extent to which this condition may spring from psychological origins and the manner in which it can become a problem in quite early childhood.

Dr. Bruch, who has done a great deal of work with obese children has investigated the psychological significance of this disease.[8] She has shown in a series of articles that obesity due to a physiological condition occurs in about five percent of the clinical attendances.

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6. Newbourgh, L.H., Obesity; Energy Metabolism, Physiol.Rev., 24:18, January, 1944.

7. Conn, J.W., Obesity: Etiological Aspects, Physiol.Rev., 24:18, January, 1944.
Freed, S.C., Obesity in Greenhill J.P., Office Gynecology, ed.4, revised Chicago, The Year Book Publishers, March,1940.
Bruch, H., Obesity in Childhood and Endocrine Treatment, Journal of Pediatrics, 18:36, January, 1941.

8. These include: Physical Growth & Development of Obese

The psychic pattern of the mothers of obese children is usually as distinctive as that of their offspring. Such mothers usually go to extremes in protecting their children from even the minor conflicts of living, but paradoxically entertain great ambitions for them. Their children are sheltered from the frictions of normal daily contact with other children. They are commonly bathed and dressed by their mothers far beyond the usual age for such care. Dr. Bruch found that the obese child is commonly the only or the youngest child in the family. Within such families there is also frequently a great emphasis on food. Deserts and candies are used as rewards for good behaviour; conversation centres around delicacies of the table, and the child gains the feeling that food is the end and purpose of life. The mothers of obese children were found by Dr. Bruch to be emotionally starved themselves, often disappointed in their husbands or in the sex of their children, or worried over domestic strife. As if in compensation, these mothers attempt to lavish upon their children a love that they do not honestly feel. Under such conditions they tend to overemphasize the material things;

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8. cont'd. from p.3.

Children, Am.J. of Diseases of Children, 58:457,Sept.1939.

(b)Basal Metabolism and Serum Cholesteral of Obese Children, Am.J. of Diseases of Children, 58:1001, Nov. 1939.

(c)Physiological and Psychological Aspects of the Food Intake of Obese Children, Am. J. of Diseases of Children, 59:739, April, 1940.

9. Hill, Joel, Infant Feeding and Personality Disorders: a Study of Early Feeding in its Relation to Emotional and Digestion Disorders, Psychiatric Quarterly, II:356-382,July, 1937.

namely, food, protection from the unpleasantness of work, and protection from contact with other children "who might play rough". These mothers are, nevertheless, obten unable to give their children true affection.

The Metabolic Clinic, for Children, Vancouver

The tremendous wartime expansion of the population of Vancouver and the concomitant increase in the school population, brought with it proportionally larger numbers of children with physical and emotional problems. As a result of a comment made by the Associate Director of the Metropolitan Health Committee that five hundred of Vancouver's five hundred thousand school children were thirty percent overweight, it was decided that a sufficient number of children would be eligible for treatment at the Health Centre for Children of the Vanouver General Hospital to warrant the formation of a special clinic.

The number of children that could be expected to attend such a Clinic was roughly estimated from the assumption that ten percent of the population live on incomes low enough to make them eligible for treatment at the Vancouver General Hospital Out-Patient's Department or Health Centre for Children. According to this estimation, ten percent or five hundred and fifty children might be referred to the Metabolic Clinic. This group is only 0.01 percent of the total school population, but if this number is expressed in terms of clinical attendances or rather, potential attendances, the number represents a fair

sized group.

If this group of children were to be treated in the general pediatric clinic, the prognosis of their disease would be impeded by two factors. First, there would be a lack of coordination in the treatment prescribed as a result of the variance between the medical advice of the different visiting doctors. Secondly, the efficacy of the subsequent work of the dietician, social worker and public health nurse, in carrying out the treatment prescribed would be nullified by this variance in the medical advice. Consequently such efforts to tackle the problem of obesity would be of little value for the purpose of improving the treatment and follow-up process since they would not be used to make any valid predictions.

It was for the purpose of devising an effective method of treatment for the problem of obesity that a separate clinic was formed, within whose bounds it has become possible to practice controlled methods of treatment.

This clinic was called the Metabolic Clinic so that it would be possible to study the problem of the underweight child as well as other glandular disorders at a later date. The term metabolic also has a psychological value in that it does not point so directly at the patient's complaint. This is important in view of the extreme sensitivity of obese persons with regard to their abnormality.

The Health Centre of which the Metabolic Clinic is now a part, operates as a branch of the Out-Patient Department

and is therefore subject to the same administrative policy concerning staff regulations and services offered. However, it functions as an independent body regarding financing of new developments and capital expenditures.

The services provided by the Women's Auxilliary of the Vancouver General Hospital, have been invaluable. This organization has, by means of a snack bar, provided soup, milk and cookies for both children and mothers. They have also undertaken some of the work of providing transportation for patients, weighing and measuring the children and assisting with the clerical duties.

The Health Centre performs the dual role of a treatment centre for children as well as providing training for students. As it serves as a health centre for the whole Province as well as in the greater Vancouver area, it is thus able to detect disease in its earliest stages. Its services entail a thorough overhaul and check-up and include such things as tuberculine testing, urine examination, weighing, and the taking of temperatures. Children going to special departments have all had a thorough examination before being passed onto the specialists.

By its role as a place of training for both internees and residents, the Health Centre provides much valuable clinical ma terial which is only available through an out-patient department. The following clinical services are offered at

the Health Centre:- pediatric, ear, nose and throat, orthopaedic, eye, allergy, infant feeding, diseases of the skin, model well-baby, child psychiatry, rheumatism and cardia, surgical, neurological and metabolic.

Eligibility for admittance to the Clinic, as mentioned in a previous section, is confined to those whose income is not greater than one hundred and ten dollars per month for the man, wife and one child, or a maximum sum increase of twenty dollars per month for each child thereafter. Sometimes special consideration is given to borderline cases where the family has had a lot of medical expense; in such instances, the social workers are responsible for assessing eligibility for treatment and admission to the clinic.

The building occupied by the Health Centre was formerly a cafeteria run in connection with the Nurses' residence of the Vancouver General Hospital: it was completely rehabilitated during the winter of 1947-48, the expenses being met by a fifteen thousand dollar donation from the Rotary Club. The origins of the Health Centre were largely due to the initiative of Dr. Paterson, pediatrician-in-charge. For one year the salaries and various expenses connected with the Health Centre were maintained by private donations. At present the current expenses come under the budget of the Vancouver General Hospital Out-Patient's Department.[10] The costs of additional staff,

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10. Annual Report, Health Centre for Children, The Vancouver General Hospital, June 1949 - May 1950, page 1.

equipment and new developments must still be undertaken by voluntary contributions, though recently some Dominion Health grants have been received.

The Group Involved in the Present Study.

This study attempts to analyse and evaluate the experience of the Metabolic Clinic since its inception and thereby to reveal the significance disturbances in relation to the problems of obesity in children. It is therefore necessary at this stage to consider the origins of the group studied at the Clinic.

All children coming to the Health Centre for the first time must be referred by a Public Health or School Nurse,[11] private doctor, or a member of a recognized agency. If a child

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11. All patients attending the Health Centre for Children for the first time must produce a referral slip from a recognized body, such as the Metropolitan Health Committee, another social agency or a private doctor. According to the regulations, the Metropolitan Health Committee or the social agency, before making a referral, must find out if the patient is attending a doctor privately. In such cases the referral must be verified with the doctor. This step in the referral process prevents any duplication in treatment. The doctor usually acquiesces to the transfer of the patient to the Health Centre for Children if the patient is eligible for treatment since it is much more advantageous for the patient to receive treatment free.

The referral slip gives the patient's name, address and a statement of the patient's complaint. This slip must be signed by a doctor and may consist of a "blue form" submitted by the Metropolitan Health Committee or a letter written by a doctor serving a social agency or in private practice. The referral slips are checked by the social worker in the Health Centre and assist in determining eligibility.

Although the nature of the complaint is specified on the referral slip, all patients are received by the Pediatric Clinic for a complete medical check-up before being referred by one of the pediatricians to a specialized clinic.

is referred who is already seeing a doctor privately, it is necessary to check with the doctor concerned before the child is admitted.

Cases are referred to the Metabolic Clinic on a selective basis from the pediatric attendances. Direct referrals made by the Public Health Nurses were not initially considered since it was felt that the number of cases should be kept to a minimum in the early period to facilitate the development of a routine and some definite policy in treatment.

The significance of the referral policy adopted by the Clinic lies in the fact that a child may originally have been referred to the Health Centre for a complaint not necessarily connected with obesity. Since all cases are initially sent into the Pediatric Clinic, the child would be screened out at this level for the Metabolic Clinic. By this selective process within the Health Centre, the number of patients attending the overweight clinic has been controlled. This has enabled the more severe cases to be seen first and also thoses cases which presented the most favourable prognosis.

For the most part the group studied in the Metabolic Clinic is confined to children who are thirty percent over the normal weight for their age, height and body build. This percentage constitutes about 0.9 percent of Vancouver's school population according to the statistics of the Metropolitan Health Committee, (approximately 500 of the 500,000 school children).

Since only those children belonging to low income group families are eligible, only about fifty of these five hundred petentially overweight children are likely to be referred to the Health Centre.

In an interview with the writer on July 18, 1950, the Associate Director of the Metropolitan Health Committee explained that, at present, due to the limitations of staff and facilities, it is only possible to treat those children who are thirty percent or more over their normal weight. This criterion of thirty percent is an arbitrary figure set up by the City School Health Services. Eventually the Committee hopes to treat all children twenty percent over their normal weight, but this number would, as yet, present too large a group for the existing nursing and dietetic staff.

The cases admitted to the Metabolic Clinic are not strictly confined to those children who are thirty percent or more overweight, because of the referral process of the Metropolitan Health Committee. Since there is no internal policy in the Health Centre limiting the degree of obesity to be considered for feferral, it is quite possible that some of the pediatricians may refer children who are somewhat less than thirty percent overweight. The children referred by the Metropolitan Health nurses will, however, all be thirty percent overweight.

As explained in the previous section all cases referred to the Health Centre for Children will have to be financially eligible. This regulation is set up in accordance

with the policy of the Out-Patient Department of the Vancouver General Hospital. Eligibility is confined to married couples earning not more than ninety dollars per month plus twenty dollars per month for each child. If there is only one parent responsible for the child, the amount of earnable income is seventy dollars per month for the parent, plus twenty dollars per month for each child. In borderline cases special consideration is given to those families who have had a great deal of medical expense and still face heavy bills. For example, a couple with one child earning one hundred and ten dollars per month or less, may send their child for treatment at the Health Centre for Children.

CHAPTER II

DIAGNOSIS OF THE EMOTIONAL AND PHYSICAL CAUSES

Introduction - the Physical Condition of Obesity

Obesity can be described as due to an intake of calories in excess of the requirements for energy metabolism, physical activity and growth (protein anabolism). Thus, in the development of adiposity there are two important variables, the calorie intake and the calorie expenditure.[12] A relative increase in diet or a relative decrease in the energy metabolism, physical activity and/or rate of growth, will tend to yield a surplus of calories which may be stored as body fat.

Most obesity is due to over-eating rather than to a diminished energy expenditure on a normal dietary intake. Not uncommonly, patients or their parents will cling tenaciously to the belief that the quantity of food eaten is not large. However, in such cases it is usually possible to discover a history of dietary excess at some earlier date. In other words, once a patient has eaten too much and becomes fat, he will tend to remain in that condition even if he is eating only a maintenance diet, and he will not lose weight until such time as he eats fewer calories than he is burning.

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12. Talbot, N.B., Obesity in Children, Medical Clinics of N. Am., Vol. 29, 1945, page 1217.

In certain circumstances over-eating may be more common amongst families on low incomes than it is amongst high income families. Dr. Bruch and Miss Touraine studied forty families attending a clinic in New York[13] and found from this study that the amount spent on food was disproportionately large in the low income group family. Much greater emphasis was put on food since financial insecurity represented an ever-present threat; consequently there was a tendency to eat well while it was still possible. Therefore in such families a low income has led to a pattern of over-eating.

Physical Causes of Obesity

Mention has already been made[14] of the limited incidence of obesity due solely to glandular or other defects. It is interesting to note, therefore, that of the twenty-six patients seen in the Metabolic Clinic at the Health Centre for Children, only one child was found to be overweight due to a physiological dysfuntion. Physiological causes of obesity may be classified under two general headings: (1) intra-cranial lesions and other bodily defects (non-glandular disturbances), and (2) endocrinal disturbances.

(1) Intra-cranial lesions[15] and other bodily defects

The "Frohlich syndrome" consists of disturbances of the

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13. Bruch, H., Touraine, G.: Obesity in Childhood V, The Family Frame of Obese Children, Psychosomatic Med., Vol.2, April 1940, p.141.

14. See Chapter I, page 2.

15. Lesion: an injury, wound or morbid structural change.

functions involved in nutrition, digestion and assimilation, in the presence of a neoplasm or tumor-like growth at the base of the brain. These disturbances are trophic or nutritional disturbances and take the form of infantilism or the persistence of childish characteristics into adult life. They include obesity and genital dystrophy or displacement of the genital organs particularly in the male due to the adipose condition. The clinical work of Frohlich is recognized as showing for the first time, the relationship between the diagnostic significance of obesity and other nutritional or trophic disturbances. However, his assumption that the tumor originated from the hypophysis or pituitary body has not been borne out by subsequent clinical and experimental evidence.[16]

The regulation of food intake by the central nervous system is not limited to the cerebral cortex. Another central representation has been discovered in the vegetative nuclei of the hypothalmus. Experimental lesions have been used to demonstrate this association of adiposity with the region of the vegetative centres. Keller and Noble noted the great greediness and tendency to over-eat (polyphagia) of animals in which adiposity developed after hypothalmic or infundibular lesions.[17] Frohlich describes pathologic lesions in the hypothalmic region which may

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16. Bruch,H., Frohlich Syndrome: Report on Case, Am. Journal of Diseases of Children, Vol. 58, 1939, page 1282.

17. Keller, A.D., and Noble, W., Adiposity with Normal Sex Function Following Extirpation of the Posterior Lobe of the Hypophysis in the Dog, Am. J. of Physiology, Vo. 113, 1935, page 79.

be associated with adiposity, as neoplasms or tumors. The incidence, however, of such demonstrable organic causes among the large number of patients suffering from obesity is small.

Due to the difficulty of isolating physiological from emotional causes, one cannot help but wonder if certain emotional experiences evoke an increased desire for food by hypothalmic stimulation. The hypothalmus regulates and controls the physiological expression of hunger. The similarity between obesity of known central origin and simple obesity makes it likely that analagous mechanisms are involved in the production of the condition.[18]

Bodily defects found in association with obesity, such as retinal degeneration or retinitis pigmentosa, mental retardation and hypogonadism, would appear to be hereditary familial deviations.

(2) Endocrinal Disturbances

As stated previously, relatively few if any cases of obesity are due to glandular disturbances. It has been found also that many patients may actually gain weight on thyroid therapy because their appetites become greater as the result of increased nervous tension induced by the medication.[19]

Dr. Bruch has stressed the mental as well as physical dangers of glandular treatment[20] because of its tendency to produce

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18. Bruch, H., Physiological and Psychological aspects of the food intake of Obese Children, Am. J. of the Diseases of Children, Vol. 59, April 1940, page 739.

19. Freed, S.C., Psychic Factors in the Development and Treatment of Obesity, The J. of the Am. Medical Assn., Vol. 133, No. 6, Feb. 1947, page 369.

20. Bruch, H., Obesity in Childhood and Endocrine Treatment, The J. of Paediatrics, Vol. 18, 1941, page 36.

or increase the apprehensive and over-solicitous attitude of the parents, and to block the road to a rational treatment of obesity.

Emotional Causes of Obesity

The financial stress present in practically all low-income group families should be borne in mind when considering the emotional causes of obesity. This stress or lack of security may in itself bring many additional problems because the family is placed under a tension which may initiate or contribute to family discord. Since it has not been possible to make a comparable study of a group of children coming from homes in the higher income groups, it will be difficult in this study to isolate the problems arising from financial insecurity and the problems stemming purely from personality difficulties.

It would be faulty reasoning to assume from this lack of empirical evidence that families in the higher income groups are capable of more mature familial and social adjustments or that they possess greater ego strengths. One would expect families from both income groups to have the same capacities, weaknesses and strengths: but the family faced with financial insecurity has an added tension or strain which may act as a catalyst in hastening or bringing about familial discord.

Of the twenty-six cases studied at the Health Centre, half the families functioned without the assistance of the father. In five families the father had died. The father was ill in four other families, and in another four families the father had either

left completely or only returned occasionally. Although these problems are not peculiar to low income groups, the absence or failure of the father to contribute support has in these cases meant that the family has had to depend on social assistance or small pensions for subsistence. Absence or incapacity of the "breadwinner" has rendered many of these families financially eligible for free medical treatment at the Health Centre. If a study were to be made of a group of children coming from 'well to do' homes it is doubtful whether the absence of the father would be proportionally as large. This illustration shows how the economic status of the group studied has a definite bearing on the incidence and type of problems that occur.

The emotional causes of obesity can be considered under three general headings: (1) Personal adjustments, (2) Inter-familial adjustments, and (3) Environmental and social adjustments. A study of the twenty-six children who have attended the Health Centre has domonstrated the complexity of causal factors in producing an obese condition. For this reason it should be born in mind that the above classification of emotional causes is somewhat arbitrary and that it will be necessary to stress the most predominant causal factors individually in each case.

(1) Personal Adjustments

It is perhaps hardest to determine the cause of adiposity when this condition arises from faulty personal adjustments, since a child's personality is highly coloured by his parental relationships. Moreover, there is something unique in

each child's physiological and emotional make-up, so that he responds to a particular situation in a different manner from another child exposed to the same familial and environmental influences.

The child's adjustments to his life situation can be traced back to his earliest social contacts. Mouth or oral activities play a large role in the young infant's life. These activities have great emotional significance for the baby. Through suckling at the mother's breast the infant associates the receiving of food with the warmth of the mother's love. As Alexander puts it, "The first relief from physical discomfort, the child experiences during nursing, and thus the satisfaction of hunger becomes deeply associated with the feeling of well being and security..."[21] Babcock has stressed the significance of the early nursing process in the infant's first interpersonal experiences with the mother, and its role as a non-verbal means of communication between mother and child. Certain children become fixated at this oral stage of emotional development due either to inadequacy or, at times, an excess of maternal love.

In later life these individuals may have excessive oral receptive needs. Sometimes we speak of these individuals as "oral characters" or "unweaned sucklings". They are very dependent, childlike, demanding people. Their craving for love and security, if not satisfied, may be translated into a crav-

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21. Alexander, F., Gastro-intestinal Neurosis (Chap.VI), in Portis, Diseases of the Digestive System, Lea & Febiger, 1941, page 159.

22. Babcock, C.G., Food and Its Emotional Significance, Journal of Am. Dietetic Assn., Vol. 24, 1948, page 390.

ing for food because of this unconscious infantile association of 'being fed' with 'being loved.' This intimate association of eating with love and security continues throughout life.

The particular psychological illness characterized by a return to this oral stage of emotional development is depression. Some clinical observations have concluded that over-eating seems to be a specific defence against depression, and that when some fat people lose weight they become depressed.[23] The common denominator is this concept of orality. Despite violent protestations against their obesity, and despite the exhortations and dietary advice of their physicians, many fat people continue to over-eat. This paradox suggests the possibility that over-eating subserves some strong emotional need. It is also generally agreed among psychoanalytic investigators that oral fixations are prominent psychological features in alcoholism and other drug addictions.

Application to Children:

An example of this compensatory reaction could be seen in the case of Penny T., a girl of thirteen who attended the Metabolic Clinic for some months but could not seem to lose weight. Every time that Penny was questioned as to whether she really wanted to lose weight she immediately became intensely anxious, proclaiming strongly that she really did want to lose weight and would honestly try to stick to her diet. However, at

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23. Hamburger, W.W., Emotional Aspects of Obesity, The Medical Clinics of North America, March 1951, page 486.

each successive visit to the Clinic there was no marked improvement and, although she declared that she was following her diet, there was always some justification for a dietary indulgence. On closer investigation it was found that Penny only attended the clinic to please her mother, with whom she was both very dependent and also most hostile. Penny was a most confused girl. Her father, of whom she had been very fond, left her mother about four years ago and had subsequently taken no further interest in Penny. This desertion had been extremely disillusioning for her. Penny's mother, a rather weak person, has in the meantime been living with another man and has had two children by him. Penny, who lives at home, is quite fond of her mother, but does not respect her for what she had done. That food represents a form of emotional satisfaction for Penny has been demonstrated in the repeated coincidence of upsetting occurrences in her home life with her dietary transgressions.

Obese children have generally been observed to be less active than non-obese children.[24] This tendency may be fostered by mothers who fail to give encouragement and opportunity when their young obese child expresses a desire to do things for itself. In such a situation the child gradually loses interest in becoming independent and passively accepts the services of others. Dr. Bruch made an inquiry into the aspects of muscular activity of one hundred and sixty obese children in New York and found that in seventy-seven per cent of these children there

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24. Bruch, H., Obesity in Childhood, Am. Journal of Diseases of Children, Vol. 60, 1940, page 1099.

was a marked delay in ability and willingness to take care of themselves. Enuresis occurred as a parallel expression of immaturity in forty per cent of the children studied.[25] Similar findings have been made in the study of the twenty-six children attending the Metabolic Clinic at the Health Centre. The accompanying symptom of enuresis has occurred in proportionally the same number of children and the frequency of incidence appeared to be higher in boys. This attempt to keep the child in a dependent position is a manifestation of the possessive and over-protective mother.

As a result of this over-protective attitude of the mother the child tends to be shy, unaggressive and withdrawn. He becomes oversensitive to possible insult and injuries and his lack of self-reliance and self-confidence might be explained as a response to the repeated rebuffs which hit a fat child from day to day and isolate him from normal social contacts.

The child's feelings of inadequacy and helplessness which are fostered at home by the mother make him feel incapable of competing or communicating with his peers. Since he fails to obtain any satisfaction from his outside contacts he resorts to eating which, as mentioned earlier, represents a form of love and security to the child. One situation seems to lead to another, setting up a chain reaction of cause and effect.

Eating gives the child the satisfaction which he fails

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25. Bruch, op. cit. page 1101.

to attain in his outside contacts and also maintains or increases his size. He finds that his adiposity becomes a protective wall against society and a very convenient barrier behind which he can withdraw when he is unable to face his external environment. Obese patients tend to become quite hostile towards society and do not wish to lose this adipose tissue which affords a physcial defence against active participation in society.

Due to the child's induced reluctance to attempt to participate in ordinary day-to-day activities he develops a fear of everyday events. Even such experiences as daily entrance into school become loaded with traumatic significance. Despite this withdrawal from activity, the child strives for personal growth and independence; consequently his physical size becomes the only manifestation of this development. Bodily largeness gives the child a sense of power and strength, which his actual human relationships have denied him. In his rapid rate of growth, early sexual maturation and the expansion of his body size, the obese child belies all attempts to keep him small and independent.[26]

Diet or the limiting of food intake presents a very real threat to the obese child. Since food has assumed such emotional significance the withdrawal of food symbolizes the withdrawal of affection and security. The parents begin to re-

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26. Bruch, H., Psychiatric Aspects of Obesity in Children, Am. Journal of Psychiatry, Vol. 99, 194 , page 756.

cognize the child's association of food with affection and appreciate the traumatic effects of such a withdrawal of food. Don B.'s case is a good illustration of this point, since he became so hostile towards his mother when she tried to keep him to his diet that she was forced to acquiesce to his demands. Don's mother had devoted all her time and affection to her husband who was demanding of her. Since she found it hard to give warmth and security to Don the giving of food symbolized the affection that she could not give herself.

(2) Inter-familial Adjustments

When the family situation is not a normal one, the genesis of a distorted emotional and social development in the child may take several forms. If the mother's attitude toward the child is one of hostility, rejection or over-anxiety, she will tend to concentrate on the mechanical aspects of his care; food assumes unusual important and an abnormal emotional significance. In addition, the urge to shield the child from harm results in overprotection.

What causes the mother to react in this manner? Dr. Bruch describes the overprotective mother as one who is dissatisfied in her marital relations or is without community outlets for her ambition. This type of mother concentrates on her home and her children in her strivings for personal satisfaction and achievement. By keeping her child in close personal contact and by ministering to him, she fosters in him the need for her continued attention. With threats of witholding her

affection she tries to control and mould him to her will. By doing this she prevents him from developing personal independence and establishing satisfying relations with an outside world in which she herself has not found security.[27]

Penny T.'s mother is an example of a woman who is overprotective for possessive reasons. Although she made Penny attend the Metabolic Clinic it was from a desire for social approval rather than from any real wish to see Penny lose weight. Her mother indicated in one interview that Penny was a very useful person to have around and that she was also a good companion. She resisted any suggestion to help Penny become less withdrawn socially by developing outside interests. It was also interesting to note that Penny's mother did not attempt to support or encourage her to keep to her diet. Mrs. T. was overprotective in her approach, particularly if outside situations appeared to be too much for her daughter whereupon she would tell Penny to come home and stay with her. Penny was continuously hostile to her mother since she was striving to be independent, but failed to receive the necessary support and encouragement that she also needed.

In considering the motivations of an overprotective mother, particularly those amongst the low income group families, it should be noted that such reactions may often be compensatory. Dr. Bruch found in her study of the family backgrounds

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27. Bruch, H., Obesity in Childhood and Personality Development, American Journa l of Orthopsychiatry, Vol.11, 1941, page 467.

of obese children that many mothers had suffered great poverty and often hunger in their childhood and were thrown upon their own resources at an early age. They had reacted to their early experiences with self-pity and resentment and had been blocked in emotional development. They had continued to look upon life in the light of their early disappointments and failures, and had been unable to loosen the ties to their past. In a primitive way they tried to create for their children that "normal" carefree childhood of which, they felt, they themselves had been deprived, and which was represented for them in a life of idleness and in abundance of food.[28] This was not uncommon in the families who had children attending the Metabolic Clinic. Several mothers mentioned with pride that they always kept "a good table".

Robert F.'s mother, who was quite obese herself, is an example of this type of mother who desired to give her children what she had not had herself. Her husband was ill and unable to work so she supported the family by 'charring'. Although her earnings were limited, Robert's mother mentioned that the three of them thought nothing of eating two or three steaks each at a meal. The family lived in a dark and dingy attic suite but, to use a colloquialism, 'ate like kings'. Robert's mother told the social worker that she had been brought up on a small farm in Saskatchewan and had known what it meant to be hungry; consequently she always made sure that her own children ate well.

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28. Bruch, H. and Touraine, G., Obesity in Childhood, V, The Family Frame of Obese Children, Psychosomatic Medicane, Vol. 2, April, 1940, page141.

From the foregoing discussion it may be seen that a mother may be overprotective towards her child, either to satisfy her needs to possess him or to insure that the child does not suffer in the same way that she did. There may be, however, a more complicated reason for this overprotecteve reaction. Dr. Bruch and Miss Touraine, in their article on the family background of the obese child, point out that a fundamental rejection may be compensated for by overprotection and excessive feeding.[29] These manifestations of physical care and attention belie the mother's real feelings. Bruch found that more than fifty per cent of the children studied had been unwanted. Some of the mothers admitted that they had attempted to induce an abortion before the child was born, others said that the child was a 'mistake'. These families were also conspicuous by their small size. This was borne out by the fact that seventy per cent of the children were either only children or else the youngest in the family.[30] Most of the children attending the Health Centre in the present study were either only children, or else the oldest or even the youngest child in the family.

The mother's feelings of rejection or hostility towards the child stem from her own unsatisfactory childhood experiences as a result of which she finds it hard to give affection. She may feel insecure and unable to extend her limited capacity for

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29. Bruch, op.cit., (Am. Journal of Orthopsychiatry Vol.11)p.467

30. Bruch, H., Touraine, G., op. cit. p. 142.

affection to a child. On the other hand the husband may be weak and dependent and may be hostile towards the child because it is a competitor for the mother's affection.

Don's case is perhaps the best example of a mother who could devote her attention only to her husband. Don's mother had had a very unhappy childhood and found it hard to give very much of herself to her children as her husband was sickly and demanded all her time and attention. Don has an older brother and sister who are still living at home. There are two more sisters and a brother who are all married and live away from home. The brother and sister who are still living in the home are quite hostile towards their mother and show her little consideration. Until the death of her husband, Don's mother had given him little attention. Since his mother gave him food, this became a symbol of her affection and Don derived a great deal of emotional satisfaction from eating.

In some cases the rejection of the child is more noticeable in the father. This was so in Ron H.'s case. Ron was the fifth child in a family of six. His father began drinking very heavily while Ron's mother was carrying him. This man has never accepted or tried to befriend Ron and has a very poor relationship with Ron's two older brothers. There has been a certain amount of conflict in the home, particularly in connection with the father's drinking, and Billy's mother who is unable to give a great deal of affection or security, admitted that she gives Ron things to eat to compensate for

any friction or upset that has occurred in the home. Food to Ron represents a form of emotional security.

The absence of the father from the family constellation, as discussed earlier, leads to financial insecurity and presents in some cases an additional tension. The mother is faced with complete responsibility for the family and must manage on a limited income. In such a situation it is not always possible for the mother to give her children all the care and attention that they need. This family tension is not the sole cause of the child's obese condition but it magnifies the traumatic experience of the loss of the father. In each of the five cases attending the Metabolic Clinic where the father had died it was noted that the obese condition first became apparent shortly after this incident.

Strong emotional ties have also been noted in those families where the father has left the home. In two cases there are very definite hostile feelings on the part of the children concerned towards the father for rejecting them and leaving the home. The child in both cases blames the mother for driving the father out of the home. The reaction of the two other children whose fathers are out of the home has been that of a very strong identification with the father. Both these cases are teen-age girls; consequently their age might be quite a factor. In any case this strong identification introduces friction in their relationship with their mothers. In these home environ-

ments described there is a lack of adequate emotional security. These children are disillusioned by their parents and interpret the father's absence as a personal rejection. Consequently food for these particular children becomes charged with high emotional value since it is one of the most fundamental sources of satisfaction.

(3) Environmental and Social Adjustments

The obese child, as mentioned earlier in this chapter, is very sensitive to possible insults and injuries. This sensitivity is encouraged by the overprotective attitude of the mother. An adequate sense of security and competence is lacking as the child goes up the scale of his developmental ladder and there consequantly evolves an inability to cope adequately with his environment. He tends to exclude himself from the normal activities of society and thus he continues to fail in developing interests and social skills necessary for adequate adjustment to his environment.

Most of the children attending the Health Centre were inclined to be withdrawn and were reluctant to participate in school activities. In some cases there were signs that the child wanted to be more active but felt too conspicuous. In other cases the child showed no inclination or desire to be active but was quite content, superficially at least, to go home to his radio program or comic strip. However, this attitude appeared to be a form of rationalization rather than a real desire.

The obese child is continuously reminded of his condition since he is usually the biggest child in the class and out-

strips his peers in size and body build. His embarrassment is not diminished by the fact that he is usually clumsy in his movements and thereby made more self-conscious. Contrary to what one would expect, the over-weight child tends to seek the company of children younger than himself, since his discrpancy in size is then commonly accepted as being due to his greater age. This phenomenon was noticed in a number of the cases attending the Health Centre. Perhaps, in view of the previous discussion, this factor is not so surprising since the obese child is emotionally immature for his age and because of the over-protective attitude of his mother will tend to play with children whose games are not 'so rough'.

In the lower income group families the over-weight child must suffer on another count since he must wear outsized clothes which, being 'hand-me-downs', are usually very shabby. This situation, of course, is not unusual for a normal child in this group, but the over-weight boy or girl is not likely to get new clothes as frequently and must often make do with some shapeless garment which is much too big or too small. This is perhaps more acute in its effect on teen-age girls, but in all cases it can have a definite bearing on the child's willingness to participate in social activities.

Ron H.'s case, which was mentioned in the previous section as an example of paternal rejection, is of significance at this point in illustrating the difference that the loss of a few pounds can make in regard to social activities. Ron first

attended the Metabolic Clinic at the Health Centre in the spring of 1950. He was seven years old and weighed one hundred and thirty-five pounds. His mother explained that the other children on the street would not play with him and also that as he could not run he was excluded from participation in games at school. Ron spent his spare time sitting by the radio and reading. By Christmas 1950, he had lost twenty-five pounds. It was at about this time that Ron's mother related that one of the neighbours has asked Ron to come and play with her children. Ron played baseball this spring and has given up sitting by the radio.

Children of foreign-born parents often tend to be over-weight and Bruch noticed this fact in her clinical study of New York families.[31] Three of the twenty-six children attending the Vancouver Metabolic Clinic fell into the obese category. These children present a problem both in diagnosis and treatment since the language difficulties involved are a barrier in communication. Although cultural factors and different eating habits are usually involved it is not possible to determine whether there are any other possible contributory causes. The tenacity with which such parents cling onto the language and customs of their home country often militate against the attempts of the younger generation to adopt the mores and customs of their new country.

In recapitulation, then, the determination of the causal factors of obesity depends heavily upon an understanding of the underlying psychological causes and particularly upon the

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31. Bruch, Op. cit., (Psychosomatic Medicine), page 143.

emotional problems within the patient's family. This is particularly significant in the case of children. A review of the pertinent literature on obesity fails to reveal any intrinsic metabolic, endocrinologic or physiologic abnormality in the usual case.[32] From the twenty-six cases studied in the Metabolic Clinic the most predominant cause of obesity seemed to arise from emotional factors involved in the parent child relationship. In nineteen out of the twenty-six cases the mother manifested some form of over-protectiveness of the child. Open rejection of the child has been noted in at least eight of these cases. The mother gave indications of being overpossessive in another eight and compensatory reactions were noted in the remainder.

If an attempt were made to classify the predominant causal factors, they would seem to fall into two main groups. Those are physical factors and emotional factors. The physical factors may be sub-divided into glandular and non-glandular disturbances. The emotional factors can be further sub-divided into parent child relationships characterized by varying types ov over-protection. Thus, overprotection may be due to over-possessive, compensatory or rejetive feelings.

Diagnostic Process

In order to make an accurate diagnosis the doctor must have certain background information concerning the patient. This includes a dietary history,[33] a copy of the Wetzel grid, a determination of the Basal Metabolic rate,[34] and both medical

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32. Hamburger, op. cit., page 487.

33. See Appendix A note (1) for details concerning structure of grid.

34. See Appendix A note (2) for details concerning determination of Metabolic Rate.

and social histories. Before seeing the patient the doctor reviews these various reports so that he is well prepared for the interview.

The dietary history is completed by the child with the assistance and guidance of the school nurse before attending the Clinic. This history consists of a record of all the food that the child has eaten during a period of one week. On the day that the child is to attend the Clinic for the first time this food record or history is sent in by the school nurse. The dietician at the Clinic interviews the child and accompanying parent and discusses the diet with them, making a note of any further pertinent information regarding food habits.

The Clinic nurse contacts the school nurse for information for the Wetzel Grid. It has been difficult in many cases to obtain weights for more than the past year or two. This grid gives an indication of the degree that the child has deviated from the normal weight for his height, age and body build.

It is perhaps important to ask whether the grid is a suitable indicator of obesity in children with abnormal bodily dimensions. A comparison of the measurement per se determined from the grid, and of the skeletal age, as measured by the traditional roentgenographic method,[35] is desirable. There must be good agreement between these two indicators before one is justified in replacing the well-established, though tedious,

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35. Roentgenographic Method: Roentgen, a German physicist (1845-1922) found that rays from the cathode had peculiar penetrating powers through matter opaque to other ether rays. Photographs may be taken of bones, metallic substances, etc.

roentgenographic method by the new and simpler one. It has been found that the skeletal age is a much more reliable figure to use in the prediction of future growth and development.[36] However, in general, the Wetzel Grid has proved to be of special value in demonstrating three things. Firstly, in the graphic recording and early recognition of abnormal changes in the child's height-weight relationship. Secondly, in the determination of the appropriate caloric intake from the height, weight and age relationship of the child. Finally, it is possible to predict maturation and future development.

The calculation of the rate of the basal metabolism of the children attending the Metabolic Clinic has been a guide in ruling out the possibility that the obese condition of the child could be caused by hypo-thyroid functioning. Although Bruch[37] questions the validity of this calculation, it has been used only as a means of confirming the diagnosis.

The use of body surface standards in the determination of the metabolic rate of adults has been surprisingly accurate, but these standards cannot be applied in the case of children. Due to the rapid changes in the body surface in a growing child height standards have been used.[38] Dr. F.B.Talbot

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36. Bruch, H., The Grid for Evaluating Physical Fitness (Wetzel), J. of the Am. Medical Ass'n., Chicago, Vol.118, No.15, 1942, page 1290.

27. Bruch, H., Balal Metabolism & Serum Cholestral of Obese Children, Am. J. of the Diseases of Children, Vol. 55, Nov. 1939, page 1001.

38. Talbot, F.B., Basal Metabolism Standards for Children, Am. J. of Diseases of Children, Chicago, Vol.55, No.3, March 1938, page 455.

and his associates have done a great deal of work in this area and have based one set of standards on body weight. They obtained figures of heat production from children whose weight was normal for their height, consequently the standards can be called the height standard or the standard for the "expected weight".

A medical history is taken when the child attends the general Pediatric Clinic for the first time. Since all children, who are referred to the Health Centre must first be seen in the Pediatric Clinic this examination is an essential process in diagnosis. Arrangements are made for the determination of the Basic Metabolic rate at the time that the child is referred from the Pediatric Clinic to the Metabolic Clinic. This referral procedure initiates the diagnostic process since the clinic nurse upon notification of referral proceeds to notify the school nurse and the clinic social worker. The former, as mentioned previously, is responsible for the dietary history and for supplying information for the Wetzel Grid. The social worker is responsible for contacting the parents of the child in order to obtain details concerning the child's social history. Information is found about the patient's family, personality, and the adjustment of his family to society. Any information relating to difficulties which are experienced in the home is particularly important. Sometimes it is possible thereby to assess the amount of interest or cooperation that can be expected.

The information contained in all these reports is shared by the clinical team andwhen possible a short conference

is held before the patient is seen. This discussion gives all the members of the team a more complete picture of the child and it helps the doctor to formulate an appropriate plan of treatment before the child is actually seen.

CHAPTER III

TREATMENT

Methods of Approach in Treating Obesity

The treatment of an obese condition is no avail unless the patient is willing to co-operate. Therefore before consideration can be given to the type of treatment given, it is necessary to determine the patient's reaction and whether it will be possible to help him accept treatment. It has been evident in some cases attending the Metabolic Clinic that the child had no interest in dieting or in trying to lose weight. This lack of interest has varied from reactions of overt hostility to attitudes of passive indifference towards treatment. Therefore the determination of the patient's desire to co-operate becomes a prerequisite in the treatment process.

Current thinking in the Treatment of Obesity.

It is desirable first to consider some of the latest views on the treatment of obesity with respect to both physical and emotional factors. Such preliminary consideration will help us in reviewing the treatment methods which have actually been used at the Metabolic Clinic.

Glandular Therapy

The incidence of obesity arising from physiological

disturbances has been remarkably low. Consequently there has been little published material on the treatment of obesity arising from intra-cranial lesions, tumors, etc. Dr. Bruch, however, has discussed the dangers of glandular therapy. She feels that the assumption that glandular therapy is entirely harmless is as dangerous as the assumption that glandular maldevelopment is the probable cause of obesity. Severe reactions to such therapeutic injections are not uncommon. Since gonadotropic substances have been in use for only a few years nothing can be said at present about desirable consequences in later life. The possibility that the overstimulation of the immature gonads may result in functional impairment cannot be disregarded.[39]

While inherent constitutional factors may play a definite role in the development of obesity, important contributory factors are often revealed by a study of the environmental forces. As mentioned in the previous chapter, most obese children are exposed to excessive overprotection and oversolicitude. The outward manifestation of these attitudes barely covers the underlying hostility and rejection on the part of the mothers. In such an environment, which does not offer adequate emotional security, food gains an inordinate importance and represents satisfaction, security and love. The atmosphere of fearful apprehension confers upon social contacts

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39. Bruch, H., Obesity in Childhood and Endocrine Treatment, The Journal of Paediatrics, Vol. 18, 1941, page 36.

and muscular activities the meaning of danger, threat and insecurity. The development in such surroundings of obesity and of immature and overdependent behaviour becomes comprehensible. In a family with this attitude of over-anxious concern, the diagnosis of an endocrine disorder in the child may only have an aggravating effect. It serves only to intensify the parent's attitude of general overprotectiveness and to increase and justify the excessive care lavished upon the child.

The psychological implications of glandular therapy in relation to the child's future development and maturation should be weighed carefully against the physical implications. Since there has not yet been any evidence of the effects of glandular therapy on the child in later life, the potential psychological damage that can be done by such treatment should be considered carefully.

Dietary Therapy

Although diet in itself will not solve the problem of obesity it is a most important factor in conjunction with psychological support and other forms of therapy. Depending on the size of the child and the degree of obesity, a diet is usually prescribed which gradually cuts down on the food intake.

Although over-eating is often vehemently denied by such fat children and their parents, the actual intake is always in excess of that of normal children. Parents often become anxious when the child is on a diet and are convinced that they will starve. The comment has been made several times by an

overly solicitous parent that "I just couldn't let Johnnie go to school without a little bit extra". For this reason it is very necessary for the dietician to give the mother a detailed explanation of the diet and how it is made up.

Development of good eating habits are, however, more important than adoption of a temporary diet, since the child will always be predisposed to obesity unless his eating habits change. Both parents and child need to be educated in this respect and should have an understanding of food values.

Drug Therapy

It has been found necessary to some cases to give the child a more material form of support than that afforded solely by verbal encouragement. In such cases Amphetamine sulphate (benzedrine sulphate) is prescribed to curb the appetite.[40] It has been found that only rarely does this drug fail to curb the appetite, except in those patients whose drive for food is overpowering and who probably require psychotherapy. These patients resist subconsciously any suppression of the appetite because of the great pleasure derived from eating, even though they may consciously express a desire to have their appetite curbed.[41]

In some instances the suggestive powers of pills of no medicinal value have proved to be of psychological value in the treatment process. Some children find that they need

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40. See Penny T. Chap. II, page 20.

41. Freed (M.D.) S.C., Psychic Factors in the Development and Treatment of Obesity, J. Am. Medical Association, Chicago, Ill., Vol. 133, No.6, Feb. 1947, page 371.

to have a prop in the form of pills despite the fact that there is no physiological need for medication. It is necessary to remember in treatment, particularly in the case of younger children, that every type of support and encouragement is needed since the motivation or desire to loose weight is not always strong.

Emotional Factors.

If good feeding practices are instituted by an understanding and loving mother who has insight into the needs of her child, there will result a relationship between them which will be sustaining to them both in future times of stress. The feeding process will become the matrix for healthy development not only in nutrition but in motor and social development.

Parents often fail to realize the significance of this early attention to the needs for food, warmth and cleanliness and the progressive security and competence which comes with proper parental devotion and guidance. If a child feels loved and wanted he has little need to find emotional security by such substitute mediums as food.

In treatment is necessary to assess the willingness of the parents to face themselves rather than project their personality difficulties onto the child. Very often it is not possible for such people to face their own difficulties and they can only express these things through the child. They state that the child will "never stop eating", or that "he will never leave me for a minute". Such statements distort reality

by implying that the onus is on the child and not on the parent. Such a parent would find it impossible to admit that she had no capacity to give the child security and love other than by the supplying of food. If it were possible for such parents to admit that they had not really wanted the child and for them to accept this fact without feeling guilty, treatment would be simplified. However, since such a situation is quite rare, it is necessary to work along with the parents and to carry the treatment as far as they are willing. If the mother feels threatened by a revelation of her own difficulties, then one must work with the parent through the child. In many cases the degree of help that can be offered is very limited since the parents do not really want to see their children lose weight.

The pediatrician-in-charge at the Metabolic Clinic has found generally that the cases coming to him privately are much more co-operative in treatment than those cases coming to the Health Centre. The initiation of the private and clinical attendance is different. The patient who sees the doctor privately is seeking medical advice of his own volition. However, the patient who attends the Metabolic Clinic does so either because he has been referred from one of the other clinics within the Health Centre or because a Public Health Nurse, who has noticed his condition as being conspicuous among his school-mates, has made a referral with his mother's permission. Thus the circumstances surrounding the initial attendance of the case at the Clinic in the Health Centre is not always conducive

to complete cooperation since the child's mother may have felt impelled to comply with the suggestion of treatment only because of social pressures. Due to the nature of this referral process, one can generally anticipate superficial cooperation only, with underlying resentment and hostility.

Although each case attending the Metabolic Clinic is seen initially by the social worker, there is not sufficient opportunity to make a detailed social history from separate interviews with the child and parents. Such a detailed history would, of course, be presented to the doctor along with the dietary history. Those cases that show signs of a deeper disturbance should be referred for psychiatric help and therapy.

Group Therapy

Some children find it easier to discuss their problems in a group situation rather than by means of individual interviews. Group therapy is directed towards social adjustment, and enables each child to make the necessary adjustments and adaptation in a particularly favourable environment. Group participation can contribute many good features to treatment. For example, the mutual support and competitiveness of the group gives more incentive to the children for losing weight. Consideration of the less successful members within any group, however, necessitates careful control of the degree of competition with the group. Through group participation a child may also develop a better understanding of his own emotional problems which may be related to his over-eating.

Treatment methods Used in Metabolic Clinic

Since the Metabolic Clinic is relatively new, treatment methods have been used on an experimental basis. The approach has been necessarily flexible, so that it is difficult to attempt at this time anything more than an arbitrary classification of treatment groups.

That the treatment services which the Clinic has to offer are limited by lack of staff and other facilities will become apparent in the following section and final chapter. At present the group of children attending the clinic is not large but any increase would place considerable strain on the existing staff. The methods employed and problems arising in the treatment process will be discussed under the two headings of (1) physical factors and (2) emotional factors. Where possible, practical illustrations will be presented from clinical attendances.

(1) Physical factors

a. Glandular Therapy: Thyroid treatments have been given to one case attending the clinic. Glyne is ten years old and believed to be a cretin. At this point it is difficult to assess the success of the thyroid treatments that she has had. Glyne lost 12 pounds in the first six months of her attendance at the Clinic but there has been no recent weight decrease since she is now close to the normal weight for her height and age. It is difficult to predict the prognosis in a case such

as this since Glyne is not able to accept the responsibility of her own diet due to her retarded mental development.

b. Dietary Therapy: The type of diet prescribed will vary with the patient's caloric intake at the time of admission to the clinic. In cases where the mother is cooking for a large family and would have difficulty in preparing a separate meal for the patient, or in cases where the mother has a low I.Q., half the original helping is recommended. This is not always satisfactory, but in some cases it presents less friction for the patient and family. If the patient, as a member of a large family, is inclined to be withdrawn and appears to be sensitive, it is wiser not to single him out and make him more conspicuous by requiring him to eat different meals.

Special diets of 1600 and 1900 calories respectively are prescribed for most cases.[42] The dietician explains the diet to the patient and mother and points out where it can fit in with the family menu. Where possible the diet is altered to fall in line with what the patient has been having. Incidentally the dietician is able to give the mother advice on budgetting, since the diet is geared for a low income.

There is the occasional obese patient who seems to be able to respond to diet alone without the aid of drugs or psychological support. This was so in the case of Tom B. who attended the Metabolic Clinic for three months and lost over seventeen pounds during the period. Tom was fifteen years old, about six

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42. See Appendix B for 1600 and 1900 calorie diets.

feet tall, and quite intelligent. He showed great interest in his diet and was most cooperative. Tom always attended the Clinic by himself so that very little was known about his family. However, it would seem that he had a real desire to lose weight. The success of treatment in this case can be attributed to the degree of motivation.

c. Drug Therapy: Amphetomine sulphate has been prescribed in a number of cases to curb the appetite. It has not been given to the child until there was proof, after a number of visits, that there was a need for some artificial means of curbing the appetite. In some instances amphetomine sulphate has not been as successful as Seblin, a bulk food which gives a feeling of satiation.

This situation occurred in Billy's case. Billy was eight years old and as described in the previous chapter was the second youngest in a family of six children. His mother was overprotective and fed Billy to compensate for the conflicts or tensions that occurred in the home. Billy felt that amphetomine sulphate did not help him a great deal but found that Seblin did help him over his hungry period. One can only conjecture on the fact that the amphetomine sulphate is taken in pill form and the Seblin is more like a cereal in presenting a large volume of mass intake. Psychologically there may be more satisfaction in eating a few spoonsful of Seblin bulk than in swallowing one pill, since the sensation of eating is not removed in the second case.

As yet there has been no experimentation at the Metabolic Clinic done with sodium bicarbonate pills to determine the psychological value of such a harmless medication. In cases where the child cannot expect much psychological support from his family, it may be of assistance to give some such artificial means of support.

(2) Emotional Factors

Due to the limitations in casework staff it has not been possible to make a detailed study of each case and a proper 'follow-up' has only been possible in a few instances. Consequently the number of cases from which to draw detailed material is rather limited. However it is possible to cite two instances which illustrate the value of casework on a supportive relationship level.

Ron H.'s case has been mentioned several times but some of the pertinent factors involved will be reiterated in order to discuss this aspect of his treatment. Ron was eight years old. When referred to the Metabolic Clinic last spring he weighed 134 pounds. Although he was quite cheerful and happy when he was in the Clinic his mother complained that he was not mixing with the other children and was not participating in any of the school or sporting activities. Ron spent his time reading funny books and listening to the radio. She also mentioned that he was enuretic.

Ron was the second youngest in a family of six. His father (Mr.H.), began to drink very heavily while Mrs. H. was

carrying Ron. Mr. H. has never taken much interest in Ron and does not get on with Ron's two older brothers. There has been considerable conflict in this home, with much of it focussed on the results of Mr. H.'s drinking bouts. Mrs. H. has an expression of long-suffering on her face, and this seems to be carried over to her personality. She seems to be incapable of giving any affection or security, particularly to her husband, and has been in the habit of giving Ron something extra to eat in order to compensate for any family turmoils or upsets. Mrs. H.'s apparent helplessness has won the children to her side in any family conflicts, so that Mr. H. is put in the position of competing with his children for his wife's affection.

Ron showed only fairly favourable progress for the first few weeks at the Clinic but a sudden decrease in weight was noted last July. This sudden improvement occurred after the following incident in his home. The mounting tension from Mr. H.'s continued drinking had terminated in a family row after which Mr. H. had threatened to leave his wife. He stayed away from the family for a week during which time his wife began to take legal action. This frightened Mr. H., who returned home resolved to try and improve his ways. He took Ron to a ball game and tried to show a genuine interest in his son. Since this time, conditions in the home have been somewhat improved and Ron has lost quite steadily so that by November 1950, he had lost twenty-five pounds. Mrs. H. reported also that his enuresis had disappeared and that he was

hardly ever in the house.

However, in late November Ron began to have temper tantrums and cried if he was denied food. It was arranged that he should have some play-interviews. Through these interviews Ron was able to work off some of his annoyance and anger over his diet which he had not been able to express at home. Ron had been able to cooperate on his diet for a period of six months with encouragement from the doctor and from his family by means of bribes. The continuation of this nutritional deprivation and the frustration of not being able to be angry with his mother was apparently more than he could stand. Mrs. H. reported that Ron was no longer having tantrums a short period after the play interviews started. Through these interviews Ron was helped to understand his ambivalent feelings twoards his mother. He was shown that it was quite understandable for him to be angry about his diet, but that when he felt mad he could perhaps go outside and work it off on a foot-ball.

In this case one can see the pattern of an overprotective but rejecting parent. The limitations in the treatment given Ron should more properly be considered in the next chapter but will be discussed here in order that the reader might better appreciate the relevant factors in the case (under discussion). As in most cases the focus in treatment should more appropriately have been directed at the parents. However, since Mrs. H. did not send Ron to the Metabolic Clinic in order-

that she might receive help, the focus of treatment had to be concentrated upon Ron. Ron's parents were both very dependent, and having failed to find the looked-for support in each other, Mr. H. had resorted to alcohol and Mrs. H. to her children, winning their support and sympathy by her martyr-like attitude. In such a family constellation there is little room for the giving of emotional security to a child such as Ron, particularly as he was born under rather disturbing circumstances; ie., the start of his father's drinking bouts. As there is little hope that Mr. and Mrs. H.'s basic personality patterns can be changed, Ron should be helped to accept existing conditions. At the moment he is beginning to accept the ambivalent feelings that he holds towards his mother. It is important that Ron should not feel guilty about his negative feelings towards her since they are normal. Later Ron may realize that he was not particularly wanted and he will need help to accept this fact. He has been able by means of dietary and supportive help to become more active. He has become more self-confident and outgoing. He is beginning to understand some of his feelings and does not feel as guilty about them.

In contrast to Mrs. H., Penny's mother was overprotective from overpossessive motives. Penny was the oldest child left in the home, and she had four younger brothers and a baby sister. Though Penny was only fourteen, she had had to bear a great deal of the responsibility for bringing up her brothers. She was extremely resentful about the burden of

this responsibility.

Penny's mother, Mrs. T., had been married twice. She had shown a pattern of living with a man and having two or three children before the marriage was legalized. After the marriage something would happen and the couple would separate. Mrs. T. was trying to get a divorce from her second husband so that she could marry a third man by whom she had had two children, whilst a third child was on the way. Mrs. T. depended on Penny for help in the home and for companionship. Ironically enough Mrs.T. was afraid of Penny possessing the weakness which she had displayed in her own life. For this reason Mrs. T. fostered in Penny a fear of men.

Penny was quite mature for her age and was experiencing the conflicts of adolescence. She wanted to be independent and to be free of her responsibilities at home but her obese condition fostered this very dependence and prevented her from breaking away. She was confused about her feelings for her mother whom she both loved and disliked. Penny was also quite disillusioned with her father who had been Mrs. T.'s second husband. Penny had been very fond of her father but reacted to his lack of interest in her by feeling that she disliked him. This negative feeling was furthermore extended to all men in general because of Mrs. T.'s forebodings, which had unfortunately been substantiated by the promiscuous activities of the high school boys in the district where the T.'s lived.

Food had acquired great emotional significance for

Penny, since she had very few friends or outside contacts. She would have liked to be active both in school and socially but self-consciousness about her size coupled with her lack of confidence made her seek companionship with children much younger than herself, and made her derive emotional satisfaction through food.

It was obvious from the first day that Penny attended the clinic that she was a very upset and confused girl. Supportive casework help was given and for a short period Penny became much more outgoing and happier in appearance. This change did not, however, last after Penny was moved from the Junior High School to a larger High School. Although she has not felt as conspicuous for both her age and size since she attended this school, Penny has found it harder to compete with other children. Consequently she has withdrawn and is not as active socially. Mrs. T. has apparently fostered this withdrawal since she fears that Penny may leave her.

This case is interesting because it illustrates the perversity of an overpossessive parent. Although Mrs. T. insists that Penny attend the Metabolic Clinic, she does not support this action by helping and encouraging her daughter to diet. It would seem that Penny must attend the clinic only that her mother might claim social approval for looking after her well. In actuality Mrs. T. fears the possibility of losing her daughter as Penny loses weight and is enabled to participate more easily in a wider society. Penny on the other hand,

cannot give up the food which gives her the emotional satisfaction and security that she fails to get from her mother or her outside social contacts. Needless to say the prognosis of this case is very poor and Penny is not attending the clinic at present. She could be greatly helped towards self-reliance and self-confidence if her mother was really interested in seeing her lose weight.

These two cases illustrate the complexity of factors to be considered in diagnosis and treatment. Treatment is limited not only by technological and financial facilities, but also by the family background. This lack of real interest or cooperation in treatment constitutes the most common limitation arising from the family background.

Group therapy would have been of great value in the treatment of Penny T. A group experience reveals to children who are unduly sensitive about their physical condition that they are not unique and it thus helps them in learning to mix with other children. Last fall two group meetings were held for some of the children attending the Metabolic Clinic. The city nutritionist led the discussions at these meetings, which were of an experimental nature only. These particular meetings were not intended to be therapeutic in nature but were conducted as discussion groups with the objective of encouraging the children to discuss the difficulties in dieting. They did, however, indicate that such meetings could, if well organized, be helpful.

Summary

Treatment consisting only of a mechanical reduction in food intake is often doomed to failure. Endocrine treatment, with extremely rare exceptions, has no justifiable place in the management of obesity in childhood. It is not only useless, it may even prove harmful through the impairment of sexual development or some mysterious abnormality.

To be of real value, therapy should help the child to grow independent and self-reliant and to make constructive use out of his good physical and mental endowment, so that he can find more dynamic outlets for his inactive drives than the static form of physical largeness.

CHAPTER IV

THE DEVELOPMENT OF THE CLINICAL TEAM AND ITS OPERATION

The Clinical Team

Reference has already been made[43] to the manner in which the doctor, dietician, social worker and nurse were able to cooperate together in the diagnosis and treatment of children attending the clinic. A better appreciation of the role played by the social worker in the team, and the means by which casework methods have been able to contribute to the efforts of the clinic, may be obtained from a study of the formation of the clinical team and the evolution of its policies.

Early in April 1950, when the new Metabolic Clinic for children was to be started, the social work supervisor at the General Hospital discussed the proposed staff requirements with the pediatrician in charge of the Health Centre. It was decided that there would be need for a dietician and a social worker. It was agreed that the dietician from the Out-Patient's Department (O.P.D.), and a social worker would be assigned to this clinic.

An outline of policy for the clinic was also developed at this time. It was decided that the dietician should see every case referred and make out a dietary history. The nurse working in the clinic would be responsible for obtaining

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43. See Chap.II, page 33, Diagnostic Process

the necessary information for the Wetzel Grid. Cases would be referred to the social worker if family difficulties seemed to be present or if there was evidence of personality problems. At this time the idea of a clinical team had not been formulated and its potential value was not appreciated.

Development of Policy

After three months of operation there was felt to be a definite need for closer liaison between the different members of the clinic's staff since there were signs of a lack of coordination between the work of each member. Accordingly on June 24, 1950, the first staff meeting since the formation of the clinic was hel in order to discuss some of the difficulties which had been experienced. The pediatrician in charge of the clinic, the social work supervisor, the dietician, the nurse and the clinic social sorker attended this meeting, where the aims and methods of the clinic were reviewed. Everyone agreed that the clinic had fallen short of its original intention in that no effective treatment approach to the problem of obesity had yet been evolved. It was felt particularly that there was little coordination or team-work in the approach of the staff to the patient.

Initial contact with the patient was analyzed and it was decided that in future when each new patient attended the clinic that he should first been seen by the dietician and social worker. Thus the dietary and social histories could be assembled and discussed with the pediatrician in charge of the clinic

before he saw the patient. Ideally, it was felt that a plan of treatment should be decided upon by the clinical team before the doctor saw the patient. This would facilitate coordination between members and set the team in action.

The referral process was discussed and it was decided that the present method of referral on a selective basis should be continued until the clinic was equipped to handle a larger group. The group at this time consisted of approximately fifteen patients. Up to this point Dr. Paterson had been the only pediatrician referring cases from the general pediatric clinic. It was agreed that the other pediatricians in the Health Centre should be informed of the services of the Metabolic Clinic.

A number of other points brought out at this meeting, though not directly connected with method, were certainly concerned with approach.

(1) Since the technology of treatment of obesity is relatively new, it was emphasized that it would be necessary to maintain flexibility in approach and to be ready to investigate or accept improved methods of treatment.

(2) The method of referral for social service was discussed; it was revealed that sometimes the dietician picked up the problem while taking the dietary history and referred the case to the social worker, or the social worker selected cases from among the clinical attendances who appeared to be emotionally disturbed. It was agreed that this was an unsystematic method of referral.

(3) The value of having a large number of student nurses and internes attending the clinic was questioned. It was pointed out that on many occasions the patient had been obviously embarassed by the gathering. The presence of such a large group was likely to unnerve the patient and made his attendances at the clinic an ordeal. However, if the Vancouver General Hospital was to remain a training hospital, the presence of a group of internes and of dietetic and nursing students was a very necessary adjunct. It was therefore the duty of the social worker to see that the patient had an understanding of this function of a training hospital. It was decided that if a child seemed to be particularly embarrassed, even knowing the reasons for the presence of the group, arrangements could be made for such a patient to be seen by the doctor alone.

It was agreed that regular meetings were definitely of value in leading to closer cooperation in teamwork and in assessing the effectiveness of the treatment methods.

Some Aspects of the Referral Process

Prior to the fall of 1950, the Public Health Committee had adopted the following approach to the treatment of obesity. The Public Health Nurses in the schools kept a Wetzel Grid for each child. (It is found that the highest percentage of obese children deviate from their normal channel before the age of eleven years.[44]) If any child showed marked and permanent signs

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44. Bruch, H., The Grid for Evaluating Physical Fitness (Wetzel), Journal of Am. Med. Assn., Vol.118, No.15, 1942, page 1289.

of being overweight the school nurse then advised the child and parents about diet. If the parents and child were interested and willing to cooperate, the nutritionist would also supervise the child's diet. In the view of the Associate Director of the Metropolitan Health Committee there was additional gain from the visit of the nutritionist to the child's home since it led to a better understanding of the family's income, ability to budget and food habits.

There was a limitation in the Metropolitan Health Committee's (M.H.C.) approach to the problem, since the committee was not permitted to give the child a complete medical check-up but had to refer the patient to a private doctor with whom the Public Health Nurses cooperated. Consequently, there was a variety of medical approaches to the problem and there was no standardized medical treatment, as is possible in the Metabolic Clinic of the Health Centre. (Since there is only one doctor seeing all the patients in the Metabolic Clinic, treatment can be standardized and modified if necessary).

A meeting was held in the fall of 1950 and it was agreed that the Public Health Nurses should, in the future, refer all children for obesity. Up to this time direct referral had been discouraged since the Clinic was not equipped to handle a large group.

Early in October, one of the social workers from the Health Centre visited the Metropolitan Health Committee to discuss the techniques of the referral and follow-up processes

in order to clarify these procedures and to decide upon the best means for the two bodies to work together.

The following memorandum was drawn up as a result of this visit, setting up the policy which was to be followed.

(i) The Public Health Nurse in the school will refer the over-weight child to the Health Centre Pediatric Clinic with the specific problem of obesity.

(ii) The social worker will make out a social history for the case after it has been seen in the Pediatric Clinic. In doing this the social worker will be clear with the Social Service Index and the Public Health Nurse in the usual way.

(iii) The child is then referred to the Metabolic Clinic to see the dietician and the pediatrician in charge of the Metabolic Clinic.

(iv) A letter will be written to the Director of School Health Services informing him of findings. (For all cases referred by Public Health personnel, a report must be submitted to the Director)).

(v) The social worker will follow those cases where a need for casework is indicated. She will work closely with the Public Health Nurse in this and contact her for any information which she can give concerning the family, the child's behaviour and the program in school.

(vi) Those cases which the social worker will not be visiting will be followed by the Nurse.

(vii) It may be arranged that the student dietician will visit the home, partly to gain experience in home visiting and partly to give assistance regarding dietary recommendations.

In this memorandum the Assistant Director of the Metropolitan Health Committee made two recommendations. Firstly, that the Public Health Nurse could be of assistance to the Clinic by having the child keep a food record for a few days before his or her appointment at the Health Centre. When the child is seen at the Pediatric Clinic the record would be sent along. This recommendation has been carried out and has proven to be most helpful to the dietician in making up the dietary history.

The second recommendation was that the visit of the student dietician should if possible be timed to coincide with that of the social worker or Public Health Nurse in order to maintain continuity of service to the family. As the student dietician is with the Metropolitan Health Committee for one month only, it would be too confusing for the family concerned to have such a wide variety of visitors. This last recommendation has not been implemented for cases attending the Health Centre. In cases where the social worker is visiting the family, it is felt that the presence of another person would lead to confusion since the public health nurse is already visiting in the home. In such circumstances the family could very easily feel that their private life was being too closely investigated.

Some Aspects of the 'Follow-up' Process

It is necessary to describe the part played by some of the workers and to indicate the significance even of the patient's environment, in order to be able to appreciate the complementary role of the social worker in the follow-up process.

The dietician, for example, often develops quite a close contact with the patient and his family, thus serving to strengthen the efforts of the social worker. Besides explaining a specific diet, as prescribed by the doctor to the patient or accompanying parent, the dietician has to adopt and coordinate this diet to the patient's previous regular food habits so that the change will not seem too drastic. This may necessitate recommending substitute constituents and will require a detailed knowledge of the family food budget. Moreover, since the average family receiving treatment at the Health Centre cannot afford dietary extras, the prescribed diet must be economical as well as nutritionally balanced. The dietician may subsequently go over the diet with the patient, after it has been followed for a while and time has been allowed for encountering any potential difficulties. This check-up may involve a certain amount of interpretation of the meaning of diet to the patient.

The dietician at the Metabolic Clinic has been particularly sensitive to emotional difficulties and has helped the social worker on many occasions in being able to present another view point. Very often, the patient will discuss with

the dietician problems associated with the intake of food, since the latter have a definite bearing on his social adjustment. He may not mention such problems to the social worker since he is not aware of their significance.

This handicap was evident in the case of Babs B. The dietician had previously seen Babs' grandmother, Mrs. M., in the Metabolic Clinic of the Out-Patient Department and was able to talk to Babs about her family. Since Babs felt that the dietician understood some of the problems in her family background she was able to discuss some of her own difficulties which she had not felt free to mention in her first interview with the social worker. Babs resented the amount of responsibility which had been forced upon her in the home. Her own mother being bed-ridden, her grandparents were looking after the home. Mrs. M., handicapped by being excessively overweight, relied on Babs to do most of the housework. Since most of her free time was taken up with these household duties, Babs had very few friends, and food had become a form of compensation for her lack of social contacts and also for this lack of security in her home.

The work done by outside personnel is often essential in aiding and supplementing the role of the social worker. For example, the Public Health Nurse, besides making the referral and supplying data for the Wetzel Grid, may be able to give other pertinent information relating to the child's personality, progress at school and family history. The food record which is also of value to the Clinic is completed by the child under

the supervision of the nurse. Where the social worker is not available to work intensively with the child or family, the nurse is in fact the main link between the Clinic and the family.

In the same way, the teacher can serve as a valuable source of information regarding the child, since she is able to observe the nature of the child's social adjustment in the school. Moreover it is at school that the child is often able to resolve many of the problems it will meet in social adjustment, and the teacher can help in this respect by encouraging the child to be more aggressive and less withdrawn in class participation. The child can also be made to feel accepted by the other children in the school through the teacher's efforts, and this is especially important when it is remembered that this school contact takes up the major part of the child's day. Children from low income families often have a number of brothers and sisters and consequently they respond very favourably to any personal interest that is shown in them. The school teacher and public health nurse can therefore between them be of very great help to the child in bringing about this desirable social adjustment.

The value of this 'outside' teamwork was demonstrated in the case of Penny T. Penny was obviously not getting on well at school; her marks were very low and she showed great reluctance to mix with her school mates. Mrs. T. fostered Penny's tendency to withdraw. However, Penny responded well to anyone who appreciated her difficulties so the social work-

er whose contact with Penny was of necessity limited to the Clinic, discussed Penny's case with the teacher and school nurse. With an understanding of Penny's problems, both the teacher and the school nurse were able to supplement the social worker's contact, and Penny showed a marked improvement as a result of the additional attention. She became interested in playing on the school basket-ball team and was generally much happier within herself. The social worker found that Penny was subsequently able to view her problems in better perspective and that she could understand and accept both her mother's attitude and her own feelings.

What might be described as a favourable alignment of environmental forces in the treatment process is achieved when the social worker is able to obtain the cooperation and interest of the child's family. Through interpretation of the services of the Clinic and the value of diet, the family can become an integral part in the treatment process. Since the psychological factors in obesity are mostly centred in the parent-child relationship or in the 'sibling relationships'[45], the constructive assistance of the family is one of the main goals in treatment. This goal is not always easily achieved, since a family will often appear to be willing to cooperate whilst being unconsciously antagonistic to treatment.

There are a number of reasons for this antagonism.

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45. Sibling Relationship: - generally refers to children with respect to their real parent, but may also imply a relationship whereby some other person is approximating the parent role.

The mother may be over-protective of the child and fearful of seeing it suffer. She may have been feeding the child excessively to compensate for her feelings of hostility or rejection. Again food may be her only means of compensating for the lack of emotional security in the home. If the mother is particularly possessive she may feel that by keeping her child fat that his or her outside activities will be restricted, and being unattractive to other children, he will be found to spend more time at home. For any of these reasons, the mother may not cooperate willingly in the treatment plan.

One may well ask why such mothers would paradoxically permit their children to attend a Metabolic Clinic. Usually it is because the public health nurse or teacher has talked to the mother about her child's obesity, causing her to feel that she will be criticized if her child is too obese, and social pressures force her to encourage the child to lose a little weight. But such mothers usually never intend to follow the diet rigidly.

Whilst one mother may be loath to force her child to diet, since the giving of food is her only way of giving affection and security, another mother will force her child to diet for punitive reasons. This manifestation is particularly evident where the mother has a masochistic type of personality. In this case, diet presents a new area of conflict and the existing mother-child hostility feelings are aggravated.

Such considerations focus our attention more directly

upon the significance of the part played by the social worker in the clinical team. Every patient that attends the clinic could benefit from casework at some level which might vary from interpretation on a superficial basis to insight therapy, requiring the aid of a psychiatrist.

Besides her unique role in developing favourable family relationships in the treatment process, the social worker also aids the other members of the team in the following ways. The social worker's first contact with the patient is usually made at the time of the latter's admittance for treatment to the Health Centre when an 'admission sheet' is filled out. This initial contact is helpful in giving the worker an idea of what is involved in the case and also in establishing a relationship with the patient. Both these factors are of value when more detailed information is sought for the social history which is prepared and presented to the doctor before he sees the patient.

The social worker also acts as a liaison with the outside personnel; ie., public health nurse or teacher, or other collateral and the clinic. This job of coordination involves not only exchanging of information but also making arrangements for treatment etcetera. Other agencies interested in the case concerned are contacted through the services of the Social Service Exchange.

Summary

It can be seem that, since its inception, consider-

able progress has been made by the Metabolic Clinic in finding the extent to which each person might be able to contribute to successful treatment. The flexibility of approach on the part of the staff members has enabled the gradual development of a policy which has strengthened the manner in which each worker has been able to supplement the activities of his or her associates. There seem grounds for believing that the potential contribution from casework is still limited by inadequate facilities and that a better appreciation of the social worker's role could lead to further improvements in the results of the Clinic's work.

CHAPTER V

EVALUATION OF THE CASES ATTENDING THE METABOLIC CLINIC: SUCCESS AND FAILURE: CONTINUING NEEDS

The fact that no single index of success or failure can be isolated justifies the existence of the Metabolic Clinic since from the foregoing chapters it is apparent that the actual loss of weight is not always the primary consideration in the treatment of the obese child. Although the ultimate objective of the clinic is to enable the child to lose weight, permanent success in this respect depends on the improvement in the social adjustment of the child rather than in the loss of a few pounds.

A number of factors, therefore, will have to be kept in mind in assessing the work of the Metabolic Clinic. This work cannot be evaluated in the light of the success or failure in weight losses alone since obesity is a symptom of a particular physical or emotional condition. Ideally, treatment should be focussed on the cause of the obese condition. However, in cases where the cause is definitely emotional, it is not always possible or wise to point up the real origins of the child's adjustment to over-eating. Because the child's adipose condition gives concrete evidence of a need for treatment, obesity becomes the apparent focal point or purpose of treatment. The success of the treatment is governed by the following four factors:

(1) the degree of cooperation of the patient and his family;

(2) the meaning of food to the patient and to his family;

(3) the ego strengths of both patient and family, (this becomes apparent after assessing the incidence and nature of other problems occurring in the family);

(4) the ability of the patient and family to accept help.

These four points will be used in assessing the work of the Metabolic Clinic. Limitations in treatment are not confined only to the patient and his family background but arise also from lack of resources within the clinic itself. Therefore the limitations of both sides will have to be considered before valid conclusions may be drawn from this study.

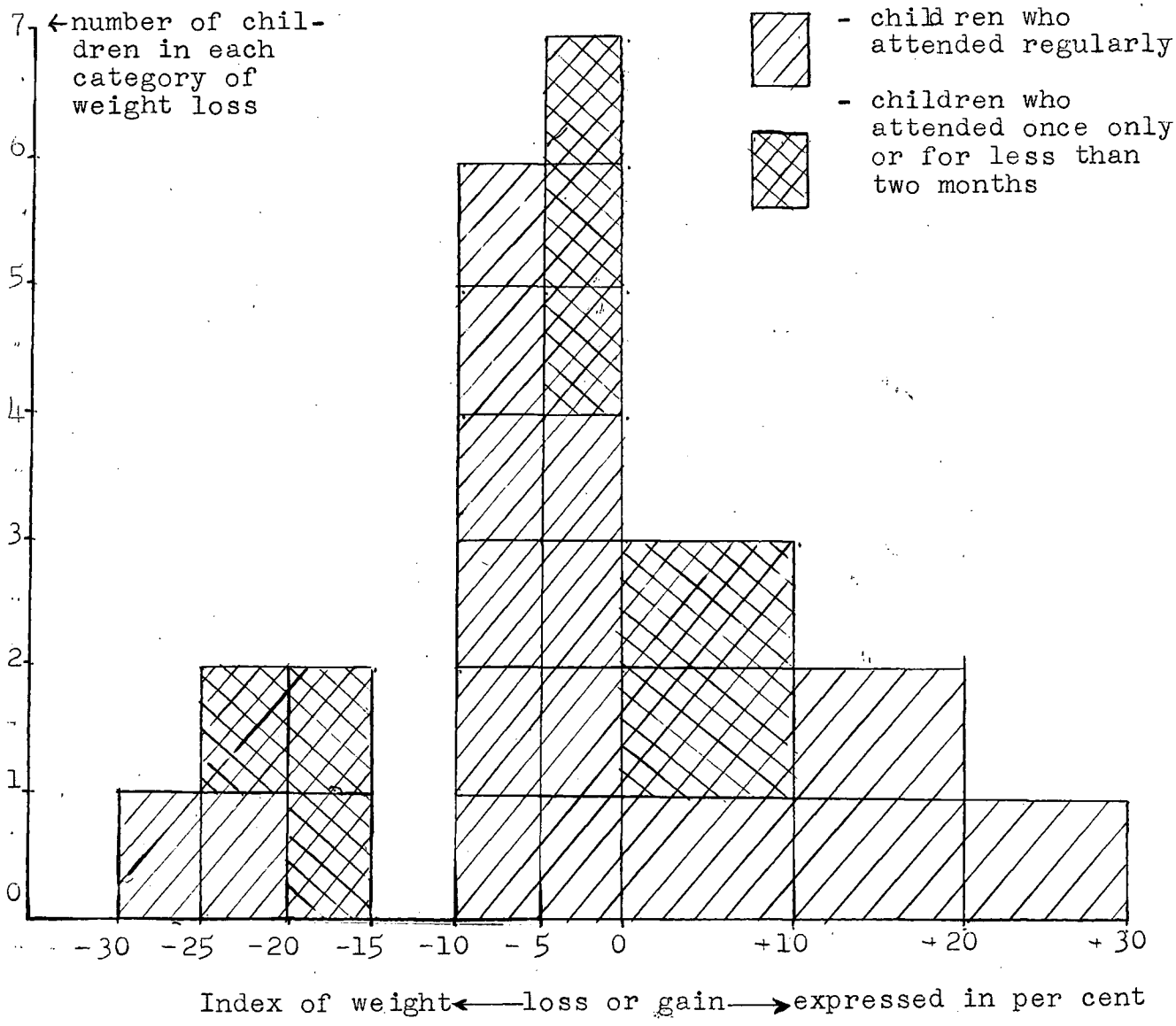
Since, however, treatment is apparently concerned with weight loss, the latter can be of some value as a tentative indicator of success or failure. Such an assessment can be made by means of the average monthly weight loss of the twenty-six children attending the Metabolic Clinic. A numerical evaluation of treatment, on this basis, is seen in Fig. 1.

A General Index

In order to understand the significance of the numbers in Fig. 1, it is necessary to realize that this group of twenty-six children is only homogeneous in respect to their obesity. The degree of obesity varies in each case as does the age, height, body build and sex. There is, moreover, considerable variance in the length of time during which the child has been

Fig. I*: SUCCESS OR FAILURE IN WEIGHT LOSS OF CHILDREN ATTENDING THE METABOLIC CLINIC

Loss (or gain) of weight expressed as percentage of required weight loss[x], averaged on a monthly basis.



[x] "Required weight loss" was determined for each child in relation to age, weight and body build.

N.B. One exceptional case not shown on chart showed weight increase of 50% of excess weight.

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* See Appendix C for schedule giving details of Fig. I.

in attendance at the clinic since some cases have attended regularly for ten months or more, whereas others have been seen only once or twice. Due to this variance between each case the chart can only be used as an arbitrary tool in evaluation and may not always give a valid indication of success or failure. In order to obtain a more comparable measure as between patients, the percentage of the average monthly weight loss or gain has been estimated in relation to the amount that each child exceeds the normal weight for his age, height and body build. The average normal weight for each child is established only within a certain range so that the figure indicating the amount of overweight is an approximation. Patients who have been seen only two or three times or who have attended the clinic for a period of two months or less have been shown on the chart as potential casses of weight loss or gain. It has been found that the preponderance of weight loss occurs during the early stages of treatment. Consequently, cases with few attendances have been distinguished on the chart by cross hatching which indicates that they have been classified provisionally since their continued attendance might relegate them to a different and probably lower, group.

Seven out of the twenty-six children, or approximately twenty-five per cent who have attended the Metabolic Clinic, have not been successful. Two of these children attended the Clinic once only, so that it is impossible to determine what degree of success could be expected if they re-

turned. For the purposes of this study, however, these two cases have been counted as failures on the assumption that they were not sufficiently interested to return or that dieting would have deprived them of something that they were not prepared to give up. It is also known that these two children were still in Vancouver at least for some time after their only attendance.

The other five cases would appear to have failed for a variety of reasons. However, in each case there is noted a definite lack of interest on the part of the patient and his family. Moreover obesity was less marked in these five children than in the remaining 'success' group, since the latter were on the average thirty-seven pounds over-weight whilst the five failures were approximately twenty-four pounds over-weight. Such a small sample permits only a tentative postulate, but it seems likely that this greater degree of obesity of the 'success' group offered a greater incentive to reduce.

Illustration by Cases: Failures

It is possible in these five cases of failure that obesity had not in itself become a problem in the minds of the child or his family. This was definitely so in the case of Helen H., a girl of fifteen who showed no interest in losing weight. She was merely fifteen pounds over-weight, and would probably not manifest any interest in losing weight until her tendency towards adiposity seemed to become a problem to her.

Maladjustments within the homes of the other four

cases were such as to overshadow that relating specifically to the child's obese condition. For example, Ezra C.'s parents were Hungarian immigrants with very poor understanding of the English language. Not only were their eating habits different but an older unmarried daughter who was a cripple gave birth to twins while Ezra C. was still attending the clinic. This incident, though irrelevant to the case in question, was indicative of the emotional needs of some members of his family. Moreover, since Ezra C.'s mother, sister and one brother in particular are also considerably over-weight, his condition was probably not considered unusual. Because of the language difficulties, it has been very hard to communicate with Ezra's parents and he himself has not been particularly talkative, but rather inclined when visiting the clinic to sit with a subdued and terrified expression giving monosyllabic answers to all questions. As it seemed impossible to establish a working relationship with Ezra or his family, and as their lack of cooperation bordered on outright resistance, it was agreed by the clinical team that it was useless to continue attempting something that was not wanted.

Don B. was considered a failure becuase the experience of his own life had given diet or a shortage of food intake too much significance for him. Shortly before Don first attended the Metabolic Clinic, his father died of cancer of the stomach. One can imagine a long period when Don's father required very careful feeding and a great deal of attention in order to induce him to eat at all. Consequently food had

taken on a great significance for this boy who was eleven years old when his father died. The death of Don's father as a result of the disease and the attendant enforced starvation made a deep impression on Don. His very hostile reaction to any deprivation of food is therefore understandable. Don's mother, who was inclined to be neurotic, found that this struggle to get Don interested in losing weight was too much. It was agreed that as Don was not grossly over-weight (twenty-five pounds) it would be less disturbing for both his mother and himself if he did not attend the Metabolic Clinic. It was also felt that help could be more appropriately offered through the Psychiatric Clinic.

Ina D.'s family, like that of Ezra C., is faced with a number of problems sufficient to outweigh any interest that might be shown in her losing weight. Ina's parents, preoccupied with their own difficulties, do not get along together and Mr. D. is frequently away from the home. Mrs. D. is a neurotic type of person and devotes all her attention to the boys in the family. Ina definitely feels unwanted and misses the support and affection of a more normal home life. Under the present strained family conditions Ina finds it difficult to devote her interest and attention to trying to lose weight. This family is well known to the Health Centre and there are many strengths which could be utilized in helping Ina to reach a point at which she could diet with success. For example, she needs help in learning to accept her mother's attitude and in

understanding her own reciprocal feelings towards her parents. This is an example where more casework help would be of great benefit if it were available.

Roy M. appears to be the least successful case judged by the chart on weight loss or gain. However, the fifty per cent weight increase measures the amount by which Roy exceeds the normal weight for his height and age. Since he is only ten pounds over-weight, the increase of five pounds which he made during the six weeks that he attended the clinic represents one half of the amount by which he is over-weight. It was felt that Roy would not benefit from continued treatment at the clinic due to his home conditions. Roy's parents, who are on social assistance live with his sister who has two daughters older than he, as well as a son who is younger. Roy's sister has a form of paralysis and is bed-ridden. Her first husband was killed during the war and she now has a common-law husband who is in and out of the home. Consequently, there is a great deal of insecurity in this home. Roy's mother, who weighs over three hundred pounds, is being seen in the Metabolic Clinic of the Vancouver General Hospital Out-Patient's Department. The City Social Service Department are also in contact with this family. Due to the other contacts already established with this family, it was felt that since casework help could not be offered to Roy himself it would be better if he were not seen at the clinic. He is not likely to benefit from diet without such casework; neither will his condition improve until such time as his home circumstances are

ameliorated and his family able to take more interest in his welfare.

Brief analysis of these seven cases reveals a common obstacle to the degree of progress and success, which obstacle is manifested in the complete lack of cooperation and interest on the part of the parents or child or both. This limitation could be largely overcome if more casework help were available. Interpretation concerning the meaning of obesity could be helpful to those cases actually desiring help with their personal difficulties and able to accept such aid. However, in such cases, as in all others, it is necessary to start from the patient's viewpoint by discussing the things which he brings up himself and then subsequently to work through these problems with him in order to help him relate his difficulties to his excessive oral needs. Ina D. might have benefitted from intensive casework relationship since the strains of her upset home life precluded her interest in losing weight. If she were helped to understand her parents, her anxiety would be greatly reduced and she would perhaps be able to channel the satisfaction of her needs for security and affection away from the excessive intake of food. With a better understanding of her parents should would perhaps be able to learn in what areas should could anticipate affection from them and which areas she should become more independent.

Don B. is another boy who could benefit from psychiatric help. It is doubtful whether he could ever accept

help through a Metabolic Clinic since the deprival of food points too directly to the core of his disturbance, that is the association of death with the withdrawal of food. Without the skill of a psychiatric therapist attendance in such a clinic would do more harm than good. Members of the clinic feel that in a case such as this, referral to a psychiatric clinic is more appropriate.

As a result of this consideration of the clinic's unsuccessful cases, three recommendations can be made:

(1) There is a need for more casework services; ie., increase in casework staff;

(2) There is occasional need for psychiatric help in therapy. The clinic has at present the services of a psychiatrist for diagnostic purposes only;

(3) There is need for an interpreter on a voluntary or short-time basis for those with language difficulties.

Illustration by Cases: Successes

Some of the more significant factors determing success in treatment are also evident in the following cases. The first two cases, Betty O. and Tom B., are noted for the degree of cooperation shown by both parents and children. Betty O. attended the clinic for three months until she reduced to her normal weight. However after discharge from the clinic she regained weight. Betty has been seen in the Health Centre Psychiatric Clinic and both she and her mother are receiving casework services. It is felt that it may be necessary for her to return to the Metabolic Clinic when some of the present

difficulties are overcome. In helping Betty at present the Metabolic Clinic would only be duplicating the services of the Psychiatric Clinic. This is interesting as a 'success' case because, despite the strains and tensions that had been in this home, Betty and her parents were able to take an interest and cooperate in diet. Lasting success in maintaining normal weight will depend on both Betty and her mother being able to overcome some of the emotional difficulties connected with the death of Mrs. O.'s first husband, who was Betty's father.

Betty's gain in weight after leaving the Metabolic Clinic also indicates the greater need for training in good eating habits rather than temporary adoption of a diet. This need was noted in the other most successful case, that of Tom B. Tom attended the Clinic for a period of four months and lost approximately twenty pounds during that time. Unfortunately little is known about Tom's family or of his personal difficulties if any, since he was able to maintain a regular weight loss each month through dieting alone. Tom was discharged from the Clinic in July, 1950, and returned in May, 1951, having gained eight pounds. He was put back on a nineteen hundred calorie diet and his weight returned to normal.

These two cases also reveal the limitations of assessing the degree of success or failure by the amount of weight loss alone. Though Betty O. has attained a higher percentage of weight loss, Tom B. might be rated as a more

successful case if the degree of personal adjustment and the cooperation in treatment which he showed are also considered. Although the degree of obesity for each case is approximately the same, Tom had twice the amount of weight to lose in actual pounds. Despite the fact that Tom lost only four and a half pounds per month whereas Betty lost three, a directly relative comparison of weight loss between the two cases would be a very arbitrary criterion for measuring the success of treatment.

Anne K., Bee E., and Nancy O., all attended the Clinic for a month or less, consequently they can only be considered as 'potential cases'. Anne and Nancy have been seen only twice and little is known about their backgrounds. Nancy kept to her diet for the two weeks between her visits to the Clinic but after her second visit she consistently broke her appointments and has not returned. Anne showed little interest in losing weight although she did lose two pounds in two weeks. Perhaps one of the reasons for her lack of interest and cooperation stems from the emotional and economic strains in her home. As Anne's father was crippled the family subsisted on her mother's allowance. Although little is known of these two cases it seems probable that if a social worker had been available to spend more time with them on admittance to the clinic and had been able to help these girls relate their obese conditions to their personal problems these girls would have been encouraged to desire help. This is assuming that they were secure enough to be able to discuss their personal feeling and problems and able to accept insight into

the reasons for their feelings and needs.

Bee E. showed good progress in her first two visits, losing four pounds in a month, but then she gained two pounds in the second month. If Bee had continued to attend it is doubtful if she would have continued to lose weight because of her home situation. Be has a very poor relationship with her adoptive mother who is extremely hostile. There were several instances when Mrs. E. attempted to degrade Bee in front of the clinic team by openly discussing her real parents or by relating other very personal information about Bee. Mrs. E. seemed totally unaware of her own needs for help and it soon became apparent that the clinic was a means of punishing Bee. In view of these facts it was decided that Bee should discontinue attendance at the clinic. If there had been more casework staff at the clinic this child could have been helped, though the treatment would have involved a long term contact. Through such a relationship it might be possible to help Mrs. E. herself.

A group of six children amongst the patients attending the clinic, have all lost from five to ten percent of their excess weight per month. It is interesting to note that this group have all attended fairly regularly and that it is the only group which does not include any 'potential' cases.

Glyne P. (mentioned in a previous chapter), is believed to be a cretin and has had some thyroid treatments.

Due to her limited mental abilities she can only be guided by her mother and has not exhibited any outward reaction to the diet. Glyne's success in dieting therefore depends entirely on her mother. During the first six months Glyne lost twelve pounds but her weight has not changed during the last few months. Any further treatment should be directed towards Mrs. P. who could benefit from help on a supportive and advisory basis.

Ron H. showed a steady weight loss until shortly before Christmas when he began to protest quite violently at his dietary restrictions. Ron has been one of the very steady attendants of the clinic. His mother has been quite cooperative but tends to indulge Ron if she feels that his diet is going to be too much for him. Besides having a diet, Ron has had amphetomine sulphate tablets to reduce appetite for a short period and now he has 'seblin', a bulk food. Ron has also had play interviews with the social worker to help him work off some of the annoyance and anger that he has not been able to express freely in his home. Only a limited amount of success may be anticipated in working with Ron himself since his parents are not well adjusted and need help themselves. Marital disharmony has been the cause of the insecurity in Ron's life. Perhaps when he is older Ron will be able to understand his parents but at present he is still at an age when he needs encouragement and affection above all else. Considering the limitations in this case the treatment has been fairly successful. Complete success,

however, rests on the ability of his parents to accept help for their own personality difficulties. Group therapy could also contribute a great deal to Ron's well being in his relationships with his school mates.

Ron's parents unconsciously hindered the complete success of the treatment whereas Robert F.'s mother quite consciously and deliberately fed Robert when she felt he was losing weight too quickly. Robert was grossly over-weight and was put on a restricted diet. Amphetamine sulphate was also prescribed in an attempt to help him curb his appetite. This was counteracted, however, by his mother who was also excessively fat and who frankly admitted that she did not want her son to become too thin. Robert has left town to work with his brother in a lumber mill up the coast. This overpossessive mother could have been helped, by means of a casework relationship, to accept the fact that her son has a right to be an independent individual.

In contrast to Mrs. F., Daphne's mother followed the diet more rigidly than Daphne. Daphne S. is fifteen, with a friendly and jolly personality. Her interest was closely associated with her feelings of what she felt that she should do, rather than with what she really wanted to do. Due to her enthusiastic and happy nature, Daphne may not have found her over-weight condition too much of a problem, and consequently she may not have attempted to follow the diet too strictly. However, one wonders whether her gaity was not the result of an attempt to win approval amongst her

school mates which she feared she might lose due to her physical largeness. Daphne did not attend the clinic regularly enough to establish a relationship with the social worker and it was not possible to have more than brief friendly chats.

The degree of cooperation that can be expected from a child depends not only on his other interests, such as in Daphne's case, but also on the need or compulsion to please parental figures. Wynne H. was most cooperative, as were her parents. The H.'s were older parents, Mr. H. being an invalid pensioner. This couple have demanded perfection and in mosts respects have received it. However, since coming to the Metabolic Clinic Wynne has developed some personality problems, and she is at present attending the Psychiatric Clinic because she has been stealing and has developed nervous tics. The ultimate success of this case will depend on the casework help she receives in relation to these problems.

As an example of the reaction to a land of plenty, John G.'s parents, who are immigrants from Germany, have grossly over-fed him. John is three and half years old and weighs fifty-eight pounds. Since attending the Metabolic Clinic he has lost three pounds. At present treatment is limited by language difficulties. The need for an interpreter is apparent in this case as in that of Ezra C.'s, who was discussed amongst the failure group.

Marginal Group

The last section of the 'success' group is composed

of children who have lost excess weight at a rate of five percent or less. They should be regarded as borderline cases and their continued attendance at the clinic depends on the small degree of interest or cooperation which they manifest.

Eileen I., who is fourteen, is the daughter of Italian immigrants. Eileen's parents have not helped her with her diet but an older sister has become interested and has been quite cooperative. Eileen has been given 'seblin' to help curb her appetite and she is on the sixteen hundred calorie diet. In the six weeks that she attended the clinic she lost four pounds and then gained two. It was only possible to anticipate erratic progress since Eileen has a number of emotional and social problems. The Juvenile Court and the City Social Service Department have contact with this girl. There is no doubt that her obese condition is related to these personality problems. When another agency already has contact with a child the social worker in the Metabolic Clinic works in close cooperation with this other agency.

The socializing nature of group therapy could prove to be of great value in helping such children as Eileen I. or Wynne H., who manifest their difficulties in social adjustment through delinquency. Group therapy for the child in conjunction with adequate casework services to both the child and his parents would help such cases toward satisfying their need for love and attention in a more acceptable manner than delinquency.

Sandy McK.'s family is also in contact with the

City Social Service Department. Mr. McK. died a year ago leaving his wife and three children of whom Sandy, aged thirteen is the youngest. Sandy's mother is neurotic and does not encourage him to keep to his diet. Over-eating has been a form of compensation for Sandy since he did not put on excessive weight until after the death of his father. Success in Sandy's case will be largely determined by the degree of help which his mother can accept since she is at present so preoccupied with her own feelings and problems that she has little time for her children.

There are two so-called 'potential' cases in this group. The parents of these two girls are totally uncooperative. Lucy J.'s father is suspicious of clinic procedure and fearful of any treatment that might be offered. It is not surprising therefore that Lucy has not returned to the clinic. Day P.'s parents are too preoccupied with their own troubles to be concerned with Day's difficulties. She showed initial interest in her diet but as in Sandy McK.'s case, she failed to get the parental support that she needed. As mentioned earlier, more could be done for these cases providing that there was sufficient casework staff to spend more time with each child and his respective parents. However, in Lucy J.'s case it is doubtful if even this service would be sufficient, since her father was so possessive that he even associated her losing weight with becoming more attractive and enlarging the possibility that some other man would claim her affections.

These last few cases which are borderline in terms of the amount of success to be anticipated bring into focus the decision which must be made in all social agencies. A quandry exists between practical considerations and the belief that no child or adult is beyond reach of help. No matter how well an agency is staffed there is a limit to the number of people that it can serve. The solution of the quandry lies in selecting only those cases which will benefit most from the services available. The final decision as to whether a child should continue to attend the clinic is governed by the first four points mentioned at the beginning of this chapter; namely, the ego strengths, degree of cooperation, ability to accept help, and the particular significance of food, to the patient and his family.

Four cases were actually discharged from the clinic as a result of this selection on the basis of response to available treatment facilities. All four showed little or no interest in losing weight and their attendance was the result only of the suggested referral from a doctor in one of the other clinics at the Health Centre or from a Public Health nurse. In these cases the girls or their mothers in their wish for social approval, felt obliged to comply with the suggestion. In two cases, because of their own personality and marital difficulties the mothers showed no interest in helping their daughters. Lois D.'s mother did not get on with her husband and resented the affection he showed their daughter. Moreover, Lois showed little interest in her diet

because of her hostility towards her mother who represented a controlling authority. She transferred some of this hostility towards the clinic, since she associated the control imposed by the diet with her mother.

Babs B.'s mother was an invalid and the daughter of Roy M.'s mother. The situation in this family was described earlier and in the light of these difficulties it did not seem wise to impose further restrictions upon Babs. She was quite morose in her attitude and seemed too preoccupied with other matters to be concerned with diet.

Penny T. and Jean P. were likewise discharged as their mothers would not cooperate and resisted attempts to help being given by the clinic. Penny's mother resembled Lucy J.'s father in being over possessive and in regarding the child's obese condition as a means of maintaining her dependence. Jean's mother felt that treatment would be ineffective since she and most of her family shared her daughter's over-weight condition.

Conclusions

Parental support and interest is important in every case. Consideration of possible factors determing the degree of parental cooperation shows no definite correlation between family structure and the probable degree of success in treatment. The absence or death of the father, although of frequent occurrence, appears fairly evenly throughout the entire range of 'success' or 'failure' cases. Similarly,

in this limited group the child's position in the family does not seem to be a determining factor of success. The degree of cooperation seems to depend rather upon the frequency and nature of other problems occurring in the home. However, the extent to which such problems will prevent parental cooperation in treatment will depend on the family's unity and ability to face these adverse conditions.

(1) The Need for More Social Work Staff

This survey of the first year's work of the clinic shows the need for more casework as well as for social workers to help in this part of the treatment process. Meeting these needs would allow for:

(a) A more extended contact with the patient at admittance to the clinic. This would help to remove the patieht's anxiety about treatment, or help him to appreciate its need. Such contact would give the patient a better understanding of the emotional implications of obesity.

(b) Casework services on a more intensively therapeutic basis. These services may vary from help on a supportive basis to that on an insight basis. By means of the former process the patient is able to discuss his problems freely and gains more confidence in himself through the strength of the relationship. This type of help is more concerned with the solution of the immediate problems, whereas insight therapy helps the patient to change his personal adjustment which is not just a solution to present problems but a means of preventing similar situations recurring. Help through insight is offered to patients who are able to accept and understand the underlying reasons or motivations for their behaviour. Therefore help on a supportive basis is short term in that it is focussed on immediate problems but help through insight therapy aids the patient make a better life adjustment which is the long term prevention basis for repetition of his present problems.

(2) The Need for Psychiatric Follow-Up

In order to be able to provide more intensive case-work services psychiatric services will be needed on a therapeutic basis. At present the clinic has the services of a very good diagnostic psychiatric clinic, but only for one day every second week. It would be of great value to the Metabolic Clinic if such therapeutic work could be carried out, since many of the children who have attended the clinic would have benefitted from psychiatric help.

This lack of psychiatric and social work service has the greatest limitation in planning treatment at the Metabolic Clinic, and such success as has been attained so far has been due mainly to dietary services offered. Children who are deeply disturbed or who suffer severe home maladjustments, have tended to drift through the clinic, often dropping our or being discharged because of their lack of interest in diet which actually is due to their preoccupation with personal and family problems.

(3) The Value of Group Therapy

A high proportion of the twenty-six children attending the Metabolic Clinic had difficulty in 'mixing', or in adjusting themselves socially outside of their families. Some of these children would have found it easier to discuss their problems in a group situation rather than by means of individual interviews. The role of group therapy has been discussed in the previous chapter on treatment methods.

(4) The Need for an Interpreter

The need for an interpreter becomes apparent in the case of Ezra C. and John G. At present the Clinic is not large enough to warrant such services except on a casual part-time basis. Since less than twelve per cent of the children who have attended the clinic have foreign-born parents this service would not be required for more than two afternoons a months. The limited amount of such aid required in no way detracts from the very real need.

(5) The Need for Developing Good Eating Habits

The experience with the two most successful cases, Betty O. and Tom B., has indicated to the clinical team the need for an understanding of diet and food values by the children and their families. With good feeding habits it should be possible for children to maintain normal weight. Adiposity is caused primarily by an excess of caloric intake over energy expenditure which is stored as fatty tissue. Since each individual has a different rate of energy exped iture, what appears to be sufficient food for one person is an excess for someone else. Therefore it is necessary in teaching children and parents good feeding habits to give each child an indication of the amount of food that he should eat each day to maintain normal weight and meet his energy requirements.

Though the lack of success in the clinic which this study reveals leads to rather negative conclusions, its

revelation of the problems to be overcome in the treatment of obesity are a very positive contribution. That the attainment of success is not easy in such a clinic can be appreciated by a better understanding of those limitations which, it is hoped, have become more apparent through this study. These concluding recommendations for future development are based therefore on a recognition of such limitations.

(1) The need for more social work staff.

(2) The use of psychiatric follow-up or therapy as well as the diagnosis of deeply disturbed children.

(3) Group therapy, the selective introduction of which could prove to be of value in some cases.

(4) The services of an interpreter to facilitate the treatment of children of foreign-born parents.

(5) The need for emphasis upon the development of good eating habits which could be effected by discussion groups for both parents and children.

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APPENDIX A

INDICATORS OF OBESITY

Note 1: Wetzel Grid

This device is used for recording the child's height and weight in order to determine the extend of deviation from normal. The area of normal progress on the grid is divided into seven growth channels. If subsequent measurements follow the course of one of the established channels it may be concluded that the child is healthy and is progressing normally. The importance of the grid is that it recognizes differences of body type, since the seven channels of the grid allow for the characteristics of different growth lines.

The channels proceed from the lower left hand corner of the chart to the upper right hand corner. The channels to the right of the median channel represent slender build, those to the left represent stocky build. Therefore the channel on the extreme right represents poor physical status and that on the extreme left represents obesity. Abnormal changes in weight may be expressed by an upward trend, ie., deviation of the growth line to the left indicating an increase in weight. A downward trend of the line, or deviation to the right, would indicate a decrease in weight.

The seven channels indicating height and weight progress are subdivided by so-called developmental lines. These

lines are related to standard schedules of developmental progress and are called auxodromes. Comparison of the measurement per se, determined from the grid, and of the skeletal age, as measured by the traditional roentgenographic method, must show a good agreement before one is justified in replacing a well established, though tedious, method by a new and simpler one.[1] It has been found that the skeletal age is a much more reliable figure to use in the prediction of future growth and development.

Note 2: Basal Metabolism

The determination of the basal metabolic rate[2] has actually been of little value in the diagnosis of the causes of obesity. Its use has been the result of a popular misconception that people who are predisposed to adiposity do not have as large energy requirements as people who are of a slimmer build. According to this thinking, the obese person haveng lower energy requirements will store the excess food in the form of fatty tissue. This has proved to be fallacious particularly in relation to children.

It is to be expected that a rapidly growing child requires proportionally more energy per unit of body substance

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1. Bruch, H., The Grid for Evaluating Physical Fitness (Wetzel), J. of Am. Medical Assn., Chicago, Vol.118, No.15, 1942, page 1290.

2. The basal metabolic rate (BMR) is a special index of measurement of the heat produced within a patient eighteen hours after taking a mixed meal.

than a slowly growing child or adult. However, the fact that obese children grow and mature at a faster rate than normal is hardly consistent with the assumption that their requirements for growth are less than those of normal children.

In a study of the degree of activity of the obese child as compared to the non-obese child, Dr. Bruch[3] found that obese children were not so active. Their recreational activities, other than muscular exercise, showed little indication of creative self-expression. The majority of these children sought entertainment by frequenting movies or persistent listening to the radio and reading at the comic strip level. A striking correlation was observed between a marked apprehension on the part of the parents, concerning the dangers of social contact and physical exercise, and the activities of the children themselves. A comparison of food intake and muscular activity revealed that these two factors have an opposed emotional value. On this basis the increased food intake of the obese child in the presence of decreased muscular activity becomes comprehensible.

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3. Bruch, H., Obesity in Childhood, Am.J. of Diseases of Children, Vol.60, 1940, page 1082.

APPENDIX B

DETAILED CONSTITUENTS OF 1900 CALORIE DIET

	GMS PROT.	CALS CALS.	GMS CALC.	GMS PHOS.	MGS IRON	I.U. VIT.A.	MGS THIAMIN	MGS RIBOFLAVIN	MGS NIACIN	MGS VIT.C.	I.U. VIT.D.
Milk 1 Quart (41 oz.)	43.1	800.	1.45	1.14	1.23	1968	.049	2.09	1.23	12.3	25.5
Butter 4 tsp.	.1	147.	.003	.003	.04	660	--	.00	.02	--	24.
Bread Whole wheat 3 slices ½" thick	8.6	236.	.04	.33	2.70	--	.162	.09	2.88	--	--
Cereal ½ cup	3.7	96.	.01	.09	1.30	--	.165	.04	.30	--	--
Milk Pudding	4.1	135.	.09	--	.53	278	.038	.16	--	.5	--
Fruit 2 servings ½ cup each	1.4	119.	.02	.03	.80	1356	.096	.07	.82	33.6	--
Vegetables 3 servings ½ cup each	4.8	119.	.11	.12	2.61	6906	.165	.17	1.23	43.5	--
Egg 3-4 per wk. ½ per day	3.8	47.	.01	.06	.81	342	.036	.10	.03	--	27.
Meat 2 servings 1½ oz. each	16.3	163.	.01	.20	3.60	3456	.100	.61	6.70	6.7	6.
Potato 1 small	2.0	85.	.01	.05	.72	20	.110	.04	1.20	17.	--
TOTAL	87.9	1947.	1.79	2.05	14.34	14986	.921	3.37	14.41	113.6	82.5

REDUCING DIET
SUITABLE FOR A GROWING SCHOOL CHILD
(Approx. 1900 Calories)

TOTAL FOOD FOR ONE DAY

Meat or Substitute - 1 serving daily (at least) - meat 2" x 3" x ½" or substitute: fowl, fish, egg, cottage cheese, Canadian cheese.

Milk - 1½ pints to 1 quart.

Butter - 4 teaspoons.

Bread (whole wheat) - 3 slices ½ inch thickness.

Cereal (whole grain) - ½ cup.

Milk Pudding - 1 serving, ½ cup.

Fruit - 2 servings, ½ cup each

Vegetables - 3 servings, ½ cup each

Potato - 1 small

Egg - 3 or 4 weekly

BREAKFAST

Unsweetened fruit or fruit juice - ½ cup. Any one of the following: 1 apple, apple juice, 1 orange, orange juice, grapefruit juice, prunes.

Cereal - ½ cup whole grain cereal, e.g., rolled oats, or whole grain combinations on market.

Bread - 1 slice ½ inch thickness.

Butter - 2 teaspoons

Milk - ¾ cup (6 oz.)

At least 3 mornings per week an egg should be substituted for cereal in above breakfast.

LUNCH

Meat or Substitute - 1 serving (meat 2" x 3" x½" (egg may be poached, scrambled, soft or hard cooked)

Vegetable - 1 cup (see vegetable list) or 2 servings ½ cup each. When in season make a salad. ½ cup tomato juice or tomatoes should be used often when green vegetables not in season. Raw vegetables are particularly good sources of mineral and vitamins.

Fruit - ½ cup fresh or canned (see fruit list).

Bread - 1 slice, ½ inch thickness.

Butter - 2 teaspoons

Milk - ¾ cup (6 oz.)

OR LUNCH BOX

Soup - ¾ cup canned or home-made.

Sandwich - 2 slices bread, ¼ inch thickness. Butter - 2 teaspoons. Filling of egg, meat, fish or cheese.

Vegetable - ½ cup tomato juice or tomatoes or any vegetable.

Fruit - 2/3 cup fresh or canned (see fruit list)

Milk - ¾ cup (6 oz.)

Sandwich and vegetable may be interchanged. For example, with tomato and lettuce sandwich 1 hard cooked egg or 1 one-inch cube of cheese may be carried.

AFTER SCHOOL

Milk - ¾ cup (6 oz.)

Bread - ½ slice, ½ inch thickness, or 1 arrowroot biscuit or two Graham wafers or 1 rye krisp cracker or 1 rusk or 1 bran muffin or 1 serving unsweetened fruit, e.g. 1 apple or 1 orange.

DINNER

Meat - 1 serving 2" x 3" x ½" without gravy - Liver should be served once weekly.

Vegetable - ½ cup (see vegetable list).

Potato - 1 small, ½ cup.

Milk Pudding - 1 serving, 1/3 cup custard, junket, rice, sago, tapioca, bread pudding, cornstarch pudding, ice cream or 1 ice cream cone.

Milk - ¾ cup (6 oz.)

BEFORE RETIRING

Milk - ¾ cup (6 oz.)

Bread - ½ slice, ½ inch thickness or 1 arrowroot biscuit or 2 Graham wafers or 1 rye krisp cracker or 1 rusk or 1 bran muffin or 1 serving unsweetened fruit.

VEGETABLE LIST:

Artichoke	Cauliflower	Lettuce	String beans
Asparagus	Chard	Marrow	Spring onions
Beetroot	Green Peas (not canned)	Onions	Tomato
Broccoli	Cucumber	Parsnips	Turnip
Brussels sprouts	Endive	Radishes	Watercress
Cabbage	Egg plant	Rhubarb	Squash
Carrots	Kale	Spinach	Mushrooms

FRUIT LIST:

Apples	Grapefruit	Pears	Strawberries
Apricots	Grapes	Pineapple	Raspberries
Blackberries	Melons	Plums	Blueberries
Cherries	Oranges	Lemons	Limes
Gooseberries	Peaches	Red Currants	

MEAT LIST:

Beef Veal Lamb Chicken Liver Heart

NOTES:

1. A standard measuring cup should be used to measure amounts of food.
2. Clear fat free broth, oxo, bovril, bouillon or consomme add no food value to the diet and may be taken as desired.

DON'TS:

1. Avoid the use of sauces, gravies, salad dressings and cream.
2. No fried foods are allowed. Meat should be cooked without the addition of any extra fat, i.e., roasted, boiled or broiled. Avoid canned meats, sausages, weiners, bacon and sardines. All meats should be lean. Trim visible fat from meat.
3. Avoid pie, pastry, cake, cookies, candy, chocolate, candy coated gum and rich desserts. Avoid waffles and griddle cakes.
4. No preserves as jam, marmalade, honey or peanut butter are allowed. NO sugar is allowed.
5. Avoid soft drinks, milk shakes, cocoa.

DETAILED CONSTITUENTS OF 1600 CALORIE DIET

	GMS PROT.	CALS CALS.	GMS CALC.	GMS PHOS.	MGS IRON	I.U. VIT.A.	MGS THIA-MIN	MGS RIBO-FLAVIN	MGS NIACIN	MGS VIT.C.	I.U. VIT.D.
Milk 1½ Pt. (30 oz.)	32.3	600.	1.08	.85	.92	1476	.03	1.57	.92	9.2	19
Butter 4 tsp.	.1	147.	.003	.003	.04	660	--	.00	.02	--	24
Bread 2½ slices ½" thick	7.2	197.	.03	.27	2.25	--	.13	.08	2.40	--	--
Cereal ½ cup	3.7	96.	.01	.09	1.30	--	.16	.04	.30	--	--
Milk Pudding	4.1	135.	.09	--	.53	278	.03	.16	--	.5	--
Fruit 2 servings ½ cup each	1.4	119.	.02	.03	.80	1356	.09	.07	.82	33.6	--
Vegetable 3 servings ½ cup each	4.8	119.	.11	.12	2.61	6906	.16	.17	1.23	43.5	--
Egg 3-4 per wk. ½ per day	3.8	47.	.01	.06	.81	342	.03	.10	.03	--	27
Meat 2 servings	16.3	163.	.01	.20	3.60	3456	.10	.61	6.70	6.7	6
TOTAL	73.7	1623.	1.40	1.66	12.86	14474	.77	2.80	12.42	93.5	76

REDUCING DIET
SUITABLE FOR A GROWING SCHOOL CHILD
(Approx. 1600 Calories)

TOTAL FOOD FOR ONE DAY

Meat or Substitute - 2 servings daily - meat or fish or fowl 2" x 3" x ½" or substitute 1 egg, ½ cup cottage cheese, 2 one inch cubes Canadian cheese.

Milk - 1½ pints

Butter - 4 teaspoons

Bread (whole wheat) - 2½ slices ½-inch thick.

Cereal (whole grain) - ½ cup.

Milk Pudding - 1 serving, 1/3 cup.

Fruit - 2 servings, ½ cup each

Vegetables - 3 servings, ½ cup each; plus one small potato.

Egg - 3 or 4 weekly

BREAKFAST

Unsweetened fruit or fruit juice - ½ cup. Any one of the following: 1 apple, apple juice, 1 orange, orange juice, grapefruit juice, prunes.

Cereal - ½ cup whole grain cereal, e.g. rolled oats, or whole grain combination on market.

Bread - ½ slice ½-inch thickness or 1 slice ¼-inch thickness.

Butter - 2 teaspoons

Milk - ¾ cup (6 oz.)

At least 3 mornings per week an egg should be substituted for cereal in above breakfast.

LUNCH

Meat or Substitute - 1 serving (meat 2" x 3" x ½") (egg may be poached, scrambled, soft or hard cooked).

Vegetables - 1 cup (see vegetable list) or 2 servings, ½ cup each. When in season two or more vegetables may be combined to make a salad. ½ cup tomato juice or tomatoes should be used often when green vegetables not in season. Raw vegetables are particularly good sources of minerals and vitamins.

Fruit - ½ cup fresh or canned (see fruit list).

Bread - 1 slice, ½ inch thickness, or 2 slices ¼ inch thickness.

Butter - 2 teaspoons

Milk - ½ cup (4 oz.)

OR LUNCH BOX

Soup - ¾ cup canned or home-made.

Sandwich - 2 slices bread, ¼ inch thickness. Butter - 2 teaspoons. Filling of egg, meat, fish or cheese.

Vegetable - ½ cup tomato juice, or tomatoes, or any vegetable.

Fruit - 2/3 cup fresh or canned (see fruit list).

Milk - ½ cup (4 oz.)

Sandwich and vegetable may be interchanged. For example, with tomato and lettuce sandwich 1 hard cooked egg or 1 one-inch cube of cheese may be carried.

AFTER SCHOOL

Milk - ¾ cup (6 oz.)

Bread - ½ slice, ½-inch thickness, or 1 arrowroot biscuit, or two Graham wafers or 1 rye krisp cracker or 1 rusk or 1 bran muffin or 1 serving unsweetened fruit, e.g. 1 apple or 1 orange.

DINNER

Meat - 1 serving 2" x 3" x ½" without gravy - Liver should be served once weekly.

Vegetable - ½ cup (see vegetable list).

Potato - 1 small, ½ cup.

Milk Pudding - 1 serving, 1/3 cup, custard, junket, rice, sago, tapioca, bread pudding, cornstarch pudding, ice cream or 1 ice cream cone.

Milk - ½ cup (4 oz.)

BEFORE RETIRING

Milk - ½ cup (4 oz.)

Bread - ½ slice, ½-inch thickness, or 1 arrowroot biscuit, or 2 Graham wafers or 1 rye krisp cracker or 1 rusk or 1 bran muffin or 1 serving unsweetened fruit.

VEGETABLE LIST:

Artichoke	Cauliflower	Lettuce	String beans
Asparagus	Chard	Marrow	Spring onions
Beetroot	Green Peas (not canned)	Onions	Tomato
Broccoli	Cucumber	Parsnips	Turnip
Brussels sprouts	Endive	Radishes	Watercress
Cabbage	Egg plant	Rhubarb	Squash
Carrots	Kale	Spinach	Mushrooms

FRUIT LIST:

Apples	Grapefruit	Pears	Strawberries
Apricots	Grapes	Pineapple	Raspberries
Blackberries	Melons	Plums	Blueberries
Cherries	Oranges	Lemons	Limes
Gooseberries	Peaches	Red Currants	

MEAT LIST:

Beef Veal Lamb Chicken Liver Heart

NOTES:

1. A standard measuring cup should be used to measure amounts of food.
2. Clear fat free broth, oxo, bovril, bouillon or consomme add no food value to the diet and may be taken as desired.

DON'TS:

1. Avoid the use of sauces, gravies, salad dressings and cream.
2. No fried foods are allowed. Meat should be cooked without the addition of any extra fat, i.e., roasted, boiled or broiled. Avoid canned meats, sausages, weiners, bacon and sardines. All meats should be lean. Trim visible fat from meat.
3. Avoid pie, pastry, cake, cookies, candy, chocolate, candy coated gum and rich desserts. Avoid waffles and griddle cakes.
4. No preserves as jam, marmalade, honey or peanut butter are allowed. NO sugar is allowed.
5. Avoid soft drinks, milk shakes, cocoa.

APPENDIX C

Details of Total Children attending Clinic, showing Success or Failure in Weight Loss

SUCCESS GROUP - those children showing loss of weight

Name	Sex	Age in yrs.	Height in ins.	Attendance	Weight at first Attendance	No. of Lbs. overweight (approx.)	% of Av. per mensum gain or loss of overweight
Betty O.	F	11½	59	3 mos.	107½ lbs.	9 lbs.	30%
Tom B.	M	15	70	4 "	200 + "	17+ "	25%
Anne K.	F	14	54½	1 "(P[x])	104½ "	20 "	25%
Bee E.	F	8	46	1 "(P)	111 "	30 "	16%
Nancy O.	F	11½	59½	½ "(P)	134 "	30 "	16%
Glyne P.	F	9	51¼	6 "	94 "	20 "	10%
Ron H.	M	8½	56	10 "	134 "	34 "	7%
Robert F.	M	15	62	3 "	236 "	80+ "	7%
Daphne S.	F	15½	69½	4 "	202 "	70 "	6.8%
John G.	M	3½	40	4 "	58½ "	15 "	6%
Wynne H.	F	10½	55⅛	10 "	117 "	30 "	5.7%
Sandy Mc.	M	13	67	5 "	186½ "	40 "	5%
Eileen I.	F	14	62	1½ "(P)	162⅛ "	40 "	5%
Penny T.	F	13	62¼	8 "	154 "	35 "	4.7%
Lucy J.	F	13	65¾	1½ "(P)	218¼ "	60 "	4%
Day P.	F	15	63	½ "(P)	192½ "	70 "	4%
Lois D.	F	16	61¼	6 "	217 "	80 "	3%
Babs B.	F	11	62¾	5 "	134 "	15 "	3%
Jean P.	F	16	63½	5 "	180 "	55 "	1%

- See next page for details of 'failure group'.

x (P) - potential cases i.e. children who attended the clinic once or for a period less than two months.

Details of Total Children attending Clinic, showing Success or Failure in Weight Loss

FAILURE GROUP - those children showing gain of weight

Name	Sex	Age in yrs.	Height in ins.	Attendance	Weight at first Attendance	No. of Lbs. overweight (approx.)	% of Av. per mensum gain or loss of overweight
Tony G.	M	13	61½	once (P)	144¾ lbs	35 lbs.	-
Mike T.	M	11	59½	once (P)	123 lbs	25 "	-
Ina D.	F	12½	61½	3 mos.	136½ "	35 "	3%
Don B.	M	12½	58¾	7 "	121 "	25 "	12%
Ezra C.	M	13	58½	7 "	135¾ "	35 "	14%
Helen H.	F	15	59½	3 "	116 "	15 "	30%
Roy M.	M	8	54	1½ "	85 "	10 "	50%

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