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ABSTRACT

This reference brief deals with the problem of childhood obesity and how it can lead to obesity in the adult. Eighty-four abstracts are presented of studies on the identification, prevention, and treatment of obesity in children, focusing on diet and psychological attitudes. Subjects of the studies were children ranging in age from infancy through adolescence. (JD)

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# Special Reference Briefs

## Childhood Obesity

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**Prepared by:**

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**in cooperation with**
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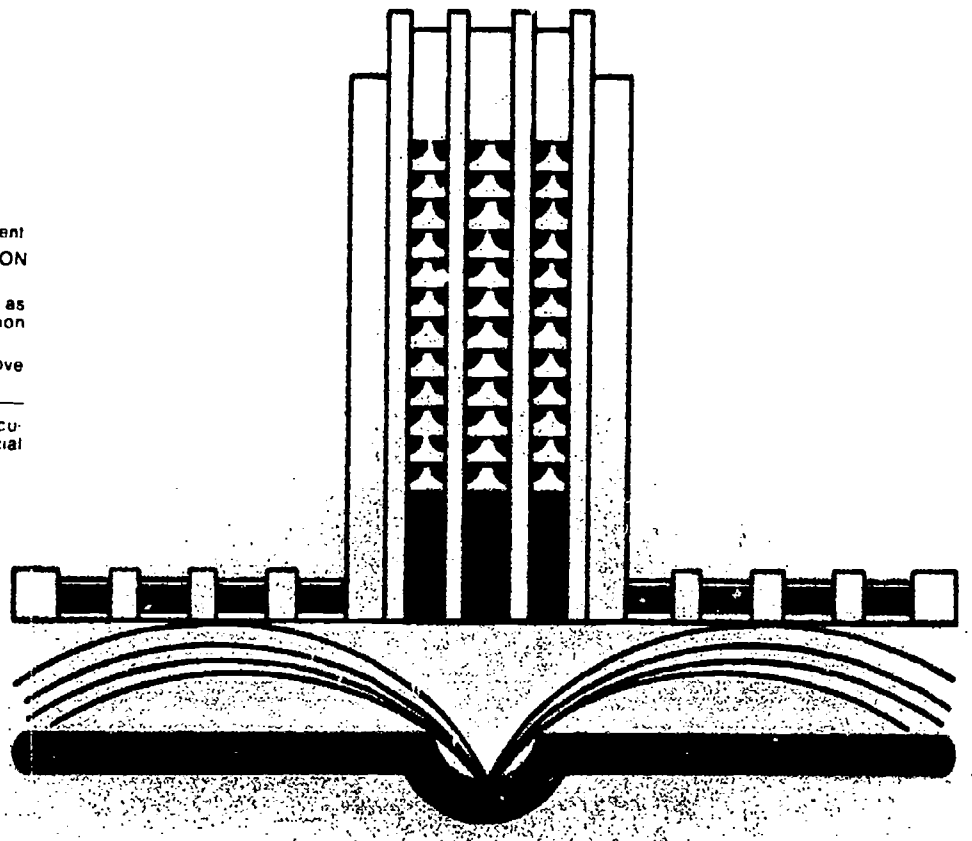

# Childhood Obesity

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Obesity constitutes one of the most serious health risks in the United States and other Western societies. It is associated with hyperlipidemia, hypertension and adult onset diabetes and is therefore a risk factor for coronary artery occlusion, the leading cause of death in the United States. Obesity is also related to certain less life threatening diseases such as: 1) gall bladder disease, 2) increased surgical mortality and morbidity and 3) in women, poor pregnancy outcome. Finally, obesity carries with it a certain social stigma which can be very difficult for the obese individual in our society to deal with. Because of the prevalence of obesity in our adult population (about 20% of adults are 120% or more of ideal weight), it constitutes a very significant public health problem. Therefore it is not surprising that the question of whether or not childhood obesity leads to adult obesity has been the subject of study for many years.

For a long time it was believed that children tended to "grow out of obesity." Mothers and physicians felt that adult obesity and childhood obesity were related only in extreme cases. The term "baby fat" became part of our vocabulary. More recently, however, it has become evident that a very strong relationship exists between childhood obesity and adult obesity, particularly in children three years of age or older. Thus an obese three year old has a 60% or more chance of being an obese adult. Obesity in childhood or adolescence therefore must be considered an antecedent of adult disease. Further evidence suggests that the type of obesity which usually occurs during childhood or adolescence may involve hypercellularity of the fat depots (too many fat cells) and that this type of obesity is particularly resistant to treatment. These data have provcked considerable interest in childhood obesity, its causes, prevention and treatment.

There are data which suggest that obesity may be the final result of a number of processes. Clearly, consuming inappropriately large amounts of calories is one. Others however include a variety of alterations in energy metabolism so that the obese individual is more efficient in utilizing energy and therefore, at any given energy intake, is more likely to have an excess which can be stored as fat. This increased efficiency may be genetically or environmentally induced, or both. Thus the cause of obesity may not be gluttony, but rather too much energy for that particular individual. Although the evidence that childhood obesity is related to similar metabolic alterations is much less clear, those data which are presently available suggest that this is the case.

Regardless of the cause, both prevention and treatment of obesity, childhood and adult obesity, involves limiting caloric intake and increasing energy expenditure. In children this process is complicated by growth. Restricting calories too

stringently may compromise growth. On the other hand, the fact the child is growing may be a help to prevention and treatment. If the rate of weight gain is too rapid (the child is increasing the percentile for body weight too quickly), then preventive measures are indicated. The aim of such measures are not for the child to lose weight, but for the child to maintain weight and at the same time grow in height. Literally to allow the child to "grow out" of his or her obesity. The objectives of treating an already obese child are the same; stabilize weight without compromising growth. Although this approach to childhood obesity is not simple, it can be used under careful supervision. Such treatment may not work, particularly in very obese children. However it would appear that currently it is the safest and most effective method available.

* * *

These references were selected by Dr. Winick from an AGRICOLA database search provided by the staff of the Food and Nutrition Information Center. Please refer to the end of the Bibliography for information on how to obtain copies of these items.

## BIBLIOGRAPHY

1
The Adipose child, medical and psychological aspects.
Laron, Zvi.; Dickerman, Zvi; 226 p., ill.
Pediatric and adolescent endocrinology
Basel, Karger, 1976.
NAL: RJ418.A3; F&N

Abstract: Internationally recognized experts present papers discussing many aspects of childhood obesity. Major topics considered are basic aspects of adipose tissue metabolism, fat metabolism in the newborn and infant, the role of infant nutrition on the subsequent development of obesity, studies with adipocytes, metabolic changes in the obese child, psychological problems in the obese child and adolescent, the therapeutic problems in the obese child.

Obesity/Adipose tissue/Children/Adolescents (12-19 years)/ Endocrine disorders/Metabolism/Infant nutrition/ Psychological aspects/Weight loss.

2
Adipose tissue in childhood.
Editor, Fernand P. Bonnet. Bonnet, Fernand P., 173 p., ill.
Boca Raton, Fla.: CRC Press, c1981.
QP88.15.A33 F&N; B-3220

Abstract: A review of data (published during the past 14 years) presents information on fat cells in human obesities with a focus on management of childhood nutritional or endocrine diseases. Growth of white adipose tissue and levels of local fat deposits are explored. Emphasis is on cellular changes corresponding to general and regional fat tissue development; genetic, endocrine, and nutritional factors acting on the adipose cell size during normal growth or in pathological states are examined. Information on fat cell precursors (obtained from animal investigations) is included. Mechanisms of storage, mobilization of the cell lipids, and fatty acid composition of lipids are described. (rkm).

Reference materials/Children/Obesity/Endocrine disorders/Fat cells/Adipose tissue/Fatty acids/Lipids.

3
Adiposity indices in children.
Rolland-Cachera, Marie Francoise; Sempe, Michel.; Guilloud-Bataille, Michel.; Patois, Elisabeth.; Pequignot-Guggenbuhl, Francoise.; Fautrad, Veronique.
American journal of clinical nutrition; July 1982. v. 36 (1) p. 178-184. ill., charts.
NAL: 389.8 J824

Extract: On the basis of a longitudinal study of growth in French children, attempts were made to find a valid index for estimating adiposity, and to specify the optimal conditions for its use. The Quetelet index was found suitable for application to children, but as with all methods, a certain lack of precision proved unavoidable because of the different stages of growth observed at a given age. For use by clinicians, charts were provided based on the Quetelet index and on age, permitting estimation of adiposity in any child on the basis of longitudinal study measurements. For use by epidemiologists, standard values were given for studying groups of subjects, even when a reference population is not available. Body adiposity may be expressed independently of age and sex. (author/kbc).

Children/Adipose tissue/Indicators/Obesity/Growth/Reference standards/Epidemiology.

4
Adiposity rebound in children: A simple indicator for predicting obesity.
Rolland-Cachera, Marie-Francoise; Deheeger, Michele.; Bellisle, France.; Sempe, Michel.; Guilloud-Bataille, Michel.; Patois, Elisabeth.
American journal of clinical nutrition; Jan 1984. v. 39 (1) p. 129- 135. ill., charts
NAL: 389.8 J824.

Extract: To follow and predict the evolution of adiposity during growth, individual adiposity curves, assessed by the weight/height(squared) index, were drawn for 151 children from the age of 1 month to 16 years. Adiposity increases during the 1st year and then decreases. A renewed rise, termed here the adiposity rebound, occurs at about 6 years. Individual weight/height(squared) curves may differ regarding their percentile range level and age at adiposity rebound. The present study shows a relationship between the age at adiposity rebound and final adiposity. An early rebound (before 5.5 years) is followed by a significantly higher adiposity level than a later rebound (after 7 years). This phenomenon is observed whatever the subject's adiposity at 1 year. The present observations might be connected with the cellularity of adipose tissue. (author).

Adipose tissue/Fat cells/Body composition/Tissues of the body/ Growth/Infants (To 2 years)/Preschool children (2-5 years)/School children (6-11 years)/Adolescents (12-19 years).

5
Adoption study of obesity.
Bonds, D.R; Crosby, L.O.
New England journal of medicine; July 10, 1986. v. 315 (2) p. 128-130. charts.
NAL: 448.8 N442, FNC
Abstract: Five letters to the editor critique a recently published paper that concluded that obesity in offspring was more strongly associated with maternal than paternal size, and that a significant trend existed between the body-mass index of adopted children and that of their biological parents but not of their adoptive parents. A sixth letter to the editor by the authors of the paper provides a defense and commentary in response to these 5 letters.(wz).

Obesity/Children/Genetic factors/Psychological factors.

6
Aerobic capacity, obesity, and atherosclerotic risk factors in male adolescents.
Fripp, Raymond R.; Hodgson, James L.; Kwiterovich, Peter O.; Werner, John C.; Schuler, H Gregg; Whitman, Victor.
Pediatrics; May 1985. v. 75 (5) p. 813-818. charts.
NAL: RJ1.P42, FNC

Extract: Correlations between aerobic capacity, obesity, and atherosclerotic risks factors were evaluated in adolescents with low-to-moderate levels of physical fitness. Subjects with higher levels of fitness had a more favorable risk profile with decreased body mass index, lower systolic and diastolic blood pressure and plasma triglyceride levels, and higher plasma high-density lipoprotein-cholesterol levels. Simple linear regression analysis revealed an association between body mass index and blood pressure, plasma triglyceride and plasma high-density lipoprotein-cholesterol. The level of aerobic fitness as determined by exercise duration was also associated with the same atherosclerotic risk factors. However, multiple linear regression analysis demonstrated that body mass index provided the largest explanation, by those variables examined, of the interindividual variance in blood pressure, plasma triglyceride, and high-density lipoprotein-cholesterol. Aerobic fitness contributed only minimally to the variation in these risk factors. These findings suggest that if aerobic conditioning is used to modify atherosclerotic risk factors, it should be accompanied by a reduction in weight in adolescents with low-to-moderate levels of physical fitness. (Author).

Obesity/Cardiovascular diseases/Respiration/Risks/School Children/Adolescents/Males/Blood pressure/Lipid metabolism/ Blood composition/Fitness.

7
Australian 10-year-olds' perceptions of food. III. The influence of obesity status.
Worsley, A.; Peters, M.; Worsley, A.J.; Coonan, W.; Baghurst, P.A.
International journal of obesity; 1984. v. 8 (4) p. 327-340. ill., charts, forms.
NAL: RC628.A1O2 F&N

Abstract: The results of 2 Australian studies assessing relationships between body fitness and food perceptions in obese, average, and slim 10 year-old children are presented and discussed relative to possible social and physiological influences. The first study (453 children) revealed that obese boys associated high-energy foods to positive out-comes (e.g., growth, satiation) and rated bread and potatoes as fattening

moreso than did slim boys; the second study (500 children rating 40 foods for 8 attributes) showed that obese, average weight, and slim children perceived properties related to energy and tastiness-preference in the foods differently. (wz).

Food beliefs/Children/Obesity/Body fat/Perception/Diet studies.

8
Avoiding childhood obesity.
Sebrell, W. Henry.
American baby for expectant and new parents; Jan 1983. v. 45 (1) p. 38, 64.
NAL: HQ750.A2A4 F&N

Abstract: How a child is fed during infancy is an important factor in the development of childhood obesity. Fat children are usually the result of overfeeding during infancy. Eating patterns and attitudes established early in life continue and are difficult to change. In addition, fat babies are thought to create more fat cells than do normal weight children and the number never decreases. It is important to set a desirable eating pattern during the infant's first years. Recommendations are given for feeding the baby during it's first year. Beverages and foods not recommended should be avoided. Don't force more food on the child than the child is willing to eat and don't insist that all food be eaten. A number of other don'ts are given (e.g., don't mistake thirst for hunger, and don't compare the baby with other babies). (kbc).

Obesity/Infants (To 2 years)/Children/Food habits/Food intake/ Frequency of feeding/Fat cells.

9
Behaviour therapy of obese children and results 21 months after treatment.
Minderaa, R.B.; Wit, J.M.
International journal of obesity; 1983. v. 7 (2) p. 143-152. charts.
NAL: RC628.A1O2 F&N

Abstract: The results of modified behavior therapy on 11 obese children (ages, 8-14), 21 months after therapy, are discussed. A shaping procedure was used to encourage self-improved behavior modifications with respect to the amount and quality of food the children consumed, their physical activities, and their eating behavior, itself. An attempt also was made to have the children improve their discrimination between hunger and satiation, and to improve child-parent interactions. A notable weight reduction was effected in 4 of the 11 children, which was sustained at

follow-up; psychopathologic and constitutional factors appeared to inhibit adaptation of the behavior modification therapy in the remaining children. (wz).

Obesity/Children/Behavior modification/Diet improvement/Food habits/Weight loss/Therapy.

10
Blood pressure and blood lipids in adolescent obesity.
Buzina, R.; Suboticanec, Kornelija.; Stavljenic, Ana.; Blagus-Pavlekovic, Gordana.; Milanovic, Nada.; Salzer, Branka.
Human nutrition: Clinical nutrition; 1982. v. 36C (6) p. 459-467. ill., charts.
NAL: QP141.A1H8 F&N

Abstract: A study evaluated the relationship of adolescent obesity to blood pressure and blood lipids, and assessed the level of increased relative body weight and adiposity at which blood pressure and blood lipid elevation is likely to occur. The study involved 232 school children (ages 15-17) having a relative body weight 95-140% and a body fat of 10-45%. Relative body weight and percentage of body fat correlated positively with systolic blood pressure in both sexes, and with diastolic blood pressure in the girls. Relative body weight and percentage of body fat in boys also correlated positively with total lipids and with very-low-density lipoprotein and negatively with high-density lipoprotein. In girls, relative body weight and percentage of body fat correlated positively with blood cholesterol, total lipids, and low-density lipoprotein cholesterol. Hence, increasing relative body weight 25% above standard weight in both adolescent sexes and increasing percentage of body fat 25% above standard in the boys and over 35% in the girls may elevate blood pressure and alter blood lipid values. (wz).

Obesity/Blood pressure/Lipoproteins/Cholesterol/Adolescents (12-19 years)/Dietary factors/Blood analysis.

11
Caloric intake and expenditure of obese boys.
Waxman, Marjorie; Stunkard, Albert J.
The Journal of pediatrics; Feb 1980. v. 96 (2) p. 187-193. ill., charts.
NAL: RJ1.A453

Abstract: In order to elucidate the pathogenesis of childhood obesity, the caloric intake and energy expenditure of obese boys was measured. Four families, each with an obese boy and non-obese brother within 2 years of the same age, were observed during family dinners and school lunches. Obese boys consumed more

calories at both meals, ate faster, and were less active at home than sibling controls. However, obese boys were found to be equally active as their peers at school, using time-sampled activity assessment. Measurement of oxygen consumption allowed conversion of activity data into energy expenditure; these findings indicate that obese boys expended more calories during activity than controls. Thus, increased caloric intake, and not physical inactivity, plays a causal role in the obesity of these boys. These findings suggest that the energy imbalance leading to childhood obesity differs from that in obesity of adults.

Obesity/Nutrient excesses/Children/Caloric intake/Hyperphagia/ Energy expenditure/Energy balance/Physical activities/Eating rates/Males/Dietary factors.

12
Changes in height velocity of obese preadolescents during weight reduction.
Dietz, W.H. Jr; Hartung, R.
American journal of diseases of children; July 1985. v. 139 (7) p. 705-707. ill., charts.
NAL: 448.8 AM38

Abstract: A retrospective study evaluated height velocity before and during weight reduction in a cohort of 19 obese preadolescents (14 girls, 5 boys) who experienced marked reductions in weight/height ratio under a balanced calorie-deficient diet (1.5-2.0 g protein/g body weight) over a period of about 10 months. The results indicated that even mildly energy restrictive diets may effect a reduction in linear growth velocity, emphasizing the importance of careful monitoring in obese children on mildly energy restrictive diets.(wz).

Obesity/Children/Weight reduction/Calorie-restricted diets/Child development/Height.

13
Childhood obesity.
Korsch, B.
The Journal of pediatrics; Aug 1986. v. 109 (2) p. 299-300.
NAL: RJ1.A453, FNC

Abstract: Childhood obesity is a multifaceted problem with multiple causes and programs for treatment based on each possible cause or on varying combinations of causes. Factors related in varying degrees to obesity in childhood include overeating, reduced physical activity, genetic predisposition, cultural and socioeconomic background, emotional factors, and metabolic and endocrine conditions. There are important long-term public health implications for obese children, since many will remain obese

during their adult lives. Significant psychosocial effects also have been demonstrated in obese children. Results of research studies examining the social stigma of obesity and its effects on children are summarized. Cultural eating patterns and images of desirable body weight and shape have been shown to vary greatly among cultural groups. Personality assessments and self-esteem measurements of obese children have shown measurable personality disturbances in these children but no evidence of clinical, psychosocial problems. Additional research is needed to increase our knowledge of childhood obesity, and to help dispel judgmental, prejudicial reactions and feelings toward obese individuals.(aje).

Obesity/Children/Causality/Treatment/Self esteem/Psychological factors.

14
Childhood obesity and self-esteem.
Kaplan, K.M; Wadden, T.A.
The Journal of pediatrics; Aug 1986. v. 109 (2) p. 367- 370.
ill., charts.
NAL: RJ1.A453, FNC

Extract: To explore the relationship between obesity and self-esteem, the Piers-Harris Self-Esteem Inventory was administered to black inner-city children (grades 4 through 12). Those with chronic illnesses or in special education were excluded, yielding 851 for the study. Body mass index (BMI) served to estimate adiposity, and Ten State Nutrition Survey (TSNS) data yielded reference growth curves. BMI and BMI relative to TSNS ideals were calculated for each child. Using analysis of variance to compare groups based on relative BMI, small differences in mean self-esteem scores were detected (3 to 4 units or one-third standard deviation). These statistically significant differences are unlikely to be clinically significant. The correlation between BMI and self-esteem was small: BMI accounted for only 1% of the variance in self-esteem score. Moreover, all self-esteem scores fell within the normal range. Neither age nor sex affected the relationship. The consequences of childhood obesity may be less harmful than formerly assumed. Our findings may explain why the promise of enhanced self-esteem falls to motivate weight loss in many children.(author).

Obesity/Self esteem/Children/Blacks/Urban areas.

15
Childhood obesity: Susceptibility, cause, and management.
Dietz, W.H. Jr.
The Journal of pediatrics; Nov 1983. v. 103 (5) p. 676-686. ill., charts.
NAL: RJ1.A453

Abstract: A review of the susceptibility, cause, and management of childhood obesity is presented. Obesity is referred to as a disease although the point at which fatness becomes pathological is controversial. Epidemiologically speaking, little has been done to clarify obesity's natural history (i.e., energy metabolism, environmental determinants, rates of success with weight loss). Lack of understanding of the pathogenesis of obesity and cultural biases also thwart treatment. Included are discussions on: diagnosis; natural history; host characteristics (energy intake, expenditures, and storage; metabolic rate; brown adipose tissue (and its significance); environmental associations (physical environment; ethnicity; social environment; and family environments); and treatment (initial evaluation; history and physical examination; counseling; dietary therapy; mechanism of protein sparing; surgery; and compliance). Definitive conclusions are lacking, but recent developments have improved understanding and advanced treatment. (kbc).

Children/Obesity/Childhood diseases/Disease prevention/Therapy/ Medical treatment/Epidemiology/Etiology.

16
Childhood prevention of atherosclerosis and hypertension .
Edited by R. Lauer (and) R. Shekelle.; 484 p., ill.
New York: Raven Press, 1980.
NAL: RJ426.A82C4 F&N; B-2562

Abstract: Atherosclerosis and hypertension, common causes of death in adults, may originate in childhood. Genetic, environmental, and nutritional factors may contribute to the disorders, but may also have preventive value in children. Investigations concerning the earliest origins of these disorders are presented, with a focus on those areas of research which represent potential medical strategies for prevention of atherosclerosis and hypertension. The predictive value of nutrition, obesity, cigarette smoking, plasma lipids and lipoproteins, serum cholesterol, heredity, blood pressure, and other risk factors is examined. Sociological and cultural dietary studies, such as the design of lipid profiles in children, are

described; these are aimed at reducing cardiovascular risks in certain populations by fat-modified diets. The effect of socioeconomic status on the development of obesity in children is evaluated.

Atherosclerosis/Cardiovascular disorders/Hypertension/Children/ Environmental factors/Nutritional intervention/Disease prevention/Obesity/Dietary factors/Atherogenesis/Hereditary factors/Risk factors/Cultural factors.

17
Childhood versus adult onset obesity in a comprehensive, multidisciplinary weight reduction program.
Nasr, Norma J.; Kaminski, Mitchell V. Jr.; Sriram, Krishnan.
Journal of the American College of Nutrition; 1982. v. 1 (2) p. 187-192. charts.
NAL: RC620.A1J6

Abstract: A comprehensive weight reduction program was undertaken by 16 obese patients whose weight was greater than 130% of ideal body weight. Patients were divided into 2 groups based upon time of onset of obesity (childhood-onset occurred before age 11 and adult-onset occurring after 18 years). Childhood-onset patients lost significantly more weight than the adult-onset obese group during the 3-month study and responded better to the multidisciplinary team approach. (kbc).

Weight loss/Children/Adults/Obesity/Program design/Program effectiveness/.

18
Circadian metabolic rhythms in obese children.
Desjeux, Jehan-Francois.; Gernez-Lestradet, Catherine.; Deschamps, Ingeborg.; Machinot, Sylvine.; Rolland, Frederique.; Lestradet, Henri.
Annals of nutrition and metabolism; Mar/Apr 1982. v. 26 (2) p. 106-110. ill.
NAL: RM214.N8

Abstract: Circadian metabolic rhythm was examined in obese and non-obese children using 2 different techniques. The 1st involved oral glucose tolerance tests (OGTT) carried out at 9 a.m. (12-14 hour fast) and 3 p.m. (6-hour fast) on 2 consecutive days with 20 obese children (11 girls), ages 7-15. The control group was 13 healthy, normal-weight children (4 girls), ages 7-15. For the 2nd protocol, circadian variations of plasma glucose and insulin were determined over a 24-hour period with another group of 30 obese children (14 girls), ages 6-16. The control group was 5 children (1 girl), ages 5-15. Following OGTT, there was a significant drop in the insulin/glucose ratio in the afternoon in the control

children, while the ratio remained high in the obese group throughout the day. Free fatty acid, growth hormone, and cortisol response differences also were noted. The control children had a blood glucose level circadian rhythm which was absent in obesity. The data suggest metabolic rhythm impairment in obese children. (wz).

Obesity/Children/Metabolic disorders/Glucose tolerance/Insulin/ Glucose.

19
Comparison of school-based treatments for adolescent obesity.
Lansky, David; Brownell, Kelly D.
The Journal of school health; Aug 1982. v. 52 (8) p. 384-387. chart.
NAL: LB3401.J6 F&N

Abstract: Two weight loss programs were studied: behavior modification (B) and exercise/nutrition (E/N) education. Seventy-one obese adolescents participated with both groups experiencing similar rates of attrition (21% for B, 31% for E/N). Growth appeared normal in the 63% who lost weight. The B program was slightly more effective than the E/N program; however, both programs emphasized that diverse approaches yield similar findings. Very obese children did better with behavior modification, possibly because of its more structured elements. (kbc).

Adolescents (12-19 years)/Obesity/Weight loss/Behavior modification/Exercise (Physiology)/Program evaluation/ Secondary schools.

20
Consequences of modified fasting in obese pediatric and adolescent patients. II. Metabolic effects of glucose compared to fat non-protein calories.
Merritt, Russell J.; Blackburn, George L.; Bistrian, Bruce R.; Batrus, Carol.; Suskind, Robert M.
Nutrition research; Jan/Feb 1983. v. 3 (1) p. 33-41. ill., charts.
NAL: TX341.N88

Abstract: Glucose was substituted for fat (400 calories each), during modified fasting therapy of 8 obese adolescents to evaluate the metabolic effects of substituting glucose. The study assessed whether the 400-calorie glucose diet retarded weight loss, altered the metabolic profile of starvation, or improved nitrogen (N) balance. When the glucose diet followed the fat diet, weight loss decreased and N-balance improved from - 0.4 to 3.9 g/day. Weight loss and N-balance did not differ significantly

after 3 weeks on the glucose diet from what they were after the fat diet. Other factors and Ramifications of this finding are discussed. (wz).

Fasting/Obesity/Adolescents (12-19 years)/Dietary factors/ Glucose/Calorie-restricted diets/Fat-restricted diets.

21
Consequences of modified fasting in obese pediatric and adolescent patients. I. Protein-sparing modified fast.
Merritt, Russell J.; Bistrian, Bruce R.; Blackburn, George L.; Suskind, Robert M.
The Journal of pediatrics; Jan 1980. v. 96 (1) p. 13-19. ill., chart.
NAL: RJ1.A453

Abstract: Since the sparing of lean tissue is especially important in growing adolescent patients, treatment of obesity involves the selective loss of body fat. Calorie deficit dieting in obese adolescents results in negative nitrogen balance, net catabolism, and a decreased growth rate. Sixteen obese patients from 9-16 years of age were treated with a protein sparing modified fast diet for 4 weeks, using lean meat as the sole calorie-containing nutrient. Patients lost an average of 7 kg with positive daily nitrogen balance. Common side effects associated with fasting such as protein deficiency and infections were not reported and growth rates remained stable. In addition, 2 year follow-up studies showed that more than 50% of the initial weight loss was maintained in 40% of the patients, which compares favorably with other forms of therapy.

Obesity/Weight loss diets/Adolescents (12-19 years)/Fasting/ Deficiency diseases and disorders/Nitrogen balance/Growth.

22
Decreased prolactin secretion in childhood obesity.
AvRuskin, Theodore W.; Pillai, Shashikala; Juan, Christina; Kleinberg, David L.
The Journal of pediatrics; March 1985. v. 106 (3) p. 373-378. ill., charts.
NAL: RJ1.A453, FNC

Extract: Twelve obese patients and 7 control subjects, age and sex matched, whose weights were greater than 200% of ideal weight and 100% of ideal body weight, respectively, underwent intravenous insulin and thyroid releasing hormone (THR) tests. Serial prolactin growth hormone, insulin, blood sugar, cortisol, glucagon, thyrotropin stimulating hormone, thyroxine, and triiodothyronine were obtained by RIA. Obese patients showed no significant differences from controls in basal and nadir glucose,

basal and peak glucagon, cortisol, and thyroid responses to both tests. Basal insulin levels were higher and peak growth hormone responses after insulin were lower in the obese group than in controls. Where as all control subjects had prolactin response to both tests, 5 of 12 obese patients had no responses to insulin. Obese patients had lower prolactin responses at 30 minutes after insulin, and lower prolactin responses at 60 minutes after TRH. Maximum prolactin responses after TRH were lower in obese patients. Maximum prolactin responses after insulin were lower in obese patients. Thus prolactin secretion in childhood obesity is decreased after both stimuli, but more so after IV insulin than TRH ard suggests that, as in adult hypothalamic obesity, neuroendocrine regulation of prolactin release in obese children is impaired. (Author).

Obesity/Prolactin/Children/Hormones/Insulin/Growth/Blood composition/Clinical investigations.

23
Developmental trends in eating rates of normal and overweight preschool children.
Drabman, Ronald S.; Cordua, Glenn D.
Child development; Mar 1979. v. 50 (1) p. 211-216. ill.
NAL: RJ1.C3

Extract: Eating rates and other meal behaviors were observed for 30 normal and 30 overweight white preschool children in their school cafeterias. Children were classified according to weight, age and sex. Overweight preschool children demonstrated a somewhat higher rate of distinctly fewer chews per bite. Boys showed increasing chew rates with increasing age. Talk rates also increased with age but were unrelated to sex or weight status. Sip rates were not significantly associated with age, sex, or weight status. Results support the hypothesis that overweight persons are characterized by an increased eating rate and show that it is apparent even around the time of first self-feeding.

Eating rates/Food habits/Overweight/Preschool children (2-5 years)/Obesity/Age factors/Sex (Characteristics).

24
Diet and physical activity of obese schoolchildren of different socioeconomic levels.
Veloso-Naves, M.M; dos Santos, J.E.; Dutra de Oliveira, J.E.
Nutrition reports international; Nov 1984. v. 30 (5) p.1197-1207. charts.
NAL: RC620.A1N8

Extract: The objective of the present study was to compare the caloric and nutrient intake, feeding habits and pattern of

physical activity of 16 obese schoolchildren of contrasting socioeconomic level (high socioeconomic level - HSEG, and low socioeconomic level - LSEG). Dietary data were obtained by recording food intake for 4 consecutive days. Information on physical activity and feeding behavior was collected by a questionnaire Completed during a home visit. There was no significant difference in daily caloric intake between groups (2288 Kcal and 2438 Kcal), but there were differences in animal protein (HSEG = 69.3 g, and LSEG = 43.8 g) and simple carbohydrate (HSEG = 130.9 g, and LSEG = 83.2 g) consumption. Both groups exhibited a low pattern of physical activity and different feeding behavior associated with inadequate intakes. The data suggest important differences between the 2 groups in terms of the environmental factors involved in the etiology of childhood obesity, although the possible involvement of feeding habits and types of food consumed as well as other nutritional factors must be considered. (author).

Obesity/School children/Nutrition/Socioeconomic status/ Physical activity/Diet studies.

25
The effect of feeding pattern on weight gain and fat deposition in early infancy.
Ferris, Ann M. Gleason; 240 p.
Amherst: University of Massachusetts, 1978.
NAL: RJ216.F45 F&N; C-2155

Abstract: A longitudinal study of 92 female infants and their mothers tested the effects of both quality and quantity of food intake on weight gain and fat deposition. Subjects f d a formula and solids had the most weight for height. Low-fat milk diet, and prenatal smoking by the mother, affected the deposition of fat. At 1 and 2 months, the number of calories from solids affected weight gain positively. Infants on low-fat milk obtained a larger Percentage of calories from solid foods than did infants on formula or whole milk, but still remained calorie deficient. Results indicate that infants should be breast or formula fed and the introduction of solid foods delayed until after 4 months. Also, low fat milk in infancy may be deficient in calories and fats, and its routine use should be re-evaluated.

Infants (To 2 years)/Breast feeding/Bottle feeding/Consumption patterns/Adipose tissue/Obesity/Food intake/Weight gain/ Literature reviews/Food habits.

26
Effect of feeding practices on the incidence of iron deficiency anemia and obesity in a native American population.
Read, Marsha H.; Boling, Marsha A.
Nutrition reports international; Oct 1982. v. 26 (4) p. 689-702. charts.
NAL: RC620.A1N8

Extract: Feeding practices of 266 native US infants participating in the Women, Infants, and Children (WIC) Supplemental Feeding Program of the Inter-Tribal Council of Nevada, were investigated. Relationships were examined between: bottle-feeding and the incidence of obesity; early introduction of solid foods and the incidence of obesity; and early introduction of solid foods and the incidence of anemia in breast-fed infants. Over 1/2 of the infants in this study were obese; 73% were being bottle-fed, and 77% were introduced to solid foods during the 1st 4 months. However, no significant relationships existed between either bottle-feeding or early introduction of solid foods to obesity or iron deficiency anemia. (author/wz).

Obesity/Iron-deficiency anemia/Infant feeding/Infant nutrition/ Infants (To 2 years)/WIC program/Breast feeding/Food habits.

27
An epidemiologic study of maladaptive eating attitudes in a Canadian school age population.
Leichner, P.; Arnett, J.; Rallo, J.S.; Srikameswaran, S.; Vulcano, B.
The International journal of eating disorders; Sept 1986. v. 5 (6) p. 969-982. charts.
NAL: RA784.A1I5

Abstract: Although cases of anorexia nervosa and bulimia are being seen increasingly by health care professionals, little data is available on the prevalence of these disorders in the general population of school age children. Using a validated eating attitude test (EAT), a total of 5150 students, aged 12-20, from public schools and one university in the Province of Manitoba were surveyed. Overall, 5 per cent of males and 22 per cent of females scored 30 or above on the scale, suggesting significant concerns and attitudes regarding eating. These concerns were somewhat higher in urban versus rural settings and seemed to increase between the ages of 12 and 13 and remain high thereafter. Many of the students who scored high on the EAT were overweight, suggesting that these attitudes or concerns are not specific to anorexia nervosa and/or bulimia.(author).

Anorexia nervosa/Obesity/Bulimia/School children/Food beliefs/ Urban areas/Rural areas.

28
An exploration of observational learning in modifying selected eating responses in obese children.
Perry, Raymond P.; LeBow, Michael D.; Buser, Mary M.
International journal of obesity; 1979. v. 3 (3) p. 193-199. chart.
NAL: RC628.A102

Abstract: Two observational learning models attempted to modify the eating behavior of obese children. Eighteen subjects, ranging in age from seven to 12 years and in weight from 74 to 160 lb., were assigned to three groups. In four sessions each subject viewed videotapes of their baseline eating behavior compared to a model eating slower. As children may acquire their parents' eating behavior, group one included videotapes of a same-sex adult model. Group two included videotapes of the subjects.

Food habits/Eating rates/Children/Obesity/Behavior modeling/Role models/Video tapes/Behavior modification/Learning behavior.

29
External responsiveness to food and non-food cues among obese and non-obese children.
Sobhany, M.S; Rogers, C.S.
International journal of obesity; 1985. v. 9 (2) p. 99-106. ill., charts.
NAL: RC628.A102

Abstract: A study assessed the hypothesis that obese (relative to non-obese) children were less able to delay an immediate small gratification for a larger, delayed reward when exposed to food items (but not non-food items). The ability of preschool children to delay gratification was significantly less than that of school children. Obese preschool and school children had lower gratification delay scores for food items (candy, cupcakes) than comparable non-obese children. Delay scores for non-food items (toys, balloons, comic books) were similar for obese and non-obese children. Hence, the findings of this study support the hypothesis. (wz).

Food habits/Obesity/Preschool children/School children/Food preferences/Consumption patterns.

30
Factors influencing food consumption in the human infant.
Foman, Samuel J.
International journal of obesity; 1980. v. 4 (4) p. 348-350.
NAL: RC628.A102 F&N

Abstract: Human infants grow at an exceptional rate during their first year of life and especially in the first 4 months. The growth gain in those 4 months is very high in fat, producing a high energy cost of growth. Energy needs of the infant apart from growth requirements are low; 1/3 of total energy intake is accounted for by growth. Feeding studies of normal infants on 2 formulas of different caloric concentration indicated that after 6 weeks, babies were able to adjust caloric intake by taking less formula. Older babies fed very dilute formula were unable to compensate. Salt concentration and formula sweetness had no influence on food consumption. Babies showed no preference for either a high- or low-fat formula. A comparison of 388 breast and bottle-fed infants indicated a correlation between fatness at 112 days and fatness at age 8, but did not support the hypothesis that fatness in later life is related to type of feeding during infancy.

Infant feeding/Food consumption/Infant development/Bottle feeding/Breast feeding/Obesity/Caloric intake/Dietary factors/ Influences on nutrition.

31
Factors related to obesity in preschool children.
Patterson, R.E; Typpo, J.T.; Typpo, M.H.; Krause, G.F.
Journal of the American Dietetic Association; Oct 1986. v. 86 (10) p. 1376-1381. charts.
NAL: 389.8 AM34

Extract: The purpose of this research was to examine the following variables for their relationship to the prevalence of preschool obesity: familial aggregation of obesity, infant feeding practices, socioeconomic status, and parents' attitudes toward the use of food for non-nutritive purposes. Parents completed a biographical data form. Height, weight, and skinfold measurements were obtained from 94 preschool children and their biological parents. Both parents answered a Child Feeding Opinion Questionnaire. Anthropometric measurements were evaluated using percentile rankings from NHANES. On the assumption that subjects over the 75th percentile for triceps skinfold were overweight and those above the 90th percentile were obese, 23.4 per cent and 7.5 per cent of the children, 9.6 per cent and 5.3 per cent of the mothers, and 29.8 per cent and 10.6 per cent of the fathers were overweight or obese, respectively. Most parent-child anthropometric correlations were statistically significant. No statistically significant relationships were found between

infant feeding practices and childhood obesity. Mothers' educational level varied inversely with the children's weight for height. Mothers and fathers opposed the use of food for reward, punishment, soothing, or affection. The parents' child feeding attitudes had no obvious relationship with the children's anthropometric measurements.(author).

Obesity/Incidence/Preschool children/Infant feeding/Socioeconomic status/Food beliefs.

32
Factors within the physical environment associated with childhood obesity.
Dietz, William H.; Gortmaker, Steven L.
American journal of clinical nutrition; April 1984. v. 39 (4) p. 619-624. ill., charts.
NAL: 389.8 J824

Extract: The relationship of obesity to environmental factors such as season, region, and population density was examined in children studied during cycle II of the National Health Examination Survey. This survey selected 7119 children aged 6 to 11 year old from a representative noninstitutionalized sample of the United States population. The prevalence of obesity was significantly more in the Northeast Midwest than in the West and significantly more in large metropolitan areas than in areas with lower population densities. The prevalence of obesity was generally lowest in the summer and highest in the fall or winter. Each environmental variable was associated with 2- to 3-fold variations in the prevalence of obesity. The effect of region, population density, and season appeared independent of race and socioeconomic status. Similar relationships were found for superobesity. These results emphasize that environmental variables significantly affect the prevalence of obesity and could help account for the wide variations in prevalence that have been previously published. Understanding the mechanisms by which the environment affect childhood obesity may improve the effectiveness of community level interventions. (Author).

Obesity/Children/Environment/Skin fold thickness/School children/ Nutritional surveys/Health and nutrition examination survey (HANES).

33
Fatty liver and its fibrous changes found in simple obesity of children.
Kinugasa, Akihiko; Tsunamoto, Kentaro.; Furukawa, Nobuaki.; Sawada, Tadashi.; Kusunoki, Tomoichi.; Shimada, Nobuo.
Journal of pediatric gastroenterology and nutrition; June 1984. v. 3 (3) p. 408-414. ill., charts.
NAL: RJ446.J68

Extract: Of 299 obese children who visited the authors' obesity clinics, 36 were found to have elevated levels of serum transaminases by routine laboratory examination. Liver biopsy was carried out in 11 children. Based on the criteria of Adler and Schaffner (1979), the biopsy specimens were studied histologically. As a result, fatty liver (Group I) was observed in 3 patients, fatty hepatitis (Group II) in 2, fatty fibrosis (Group III) in 5, and fatty cirrhosis (Group IV) in 1. The duration of obesity, but not its degree, was considered to be related to the extent of fibrosis. Accordingly, it was concluded that the fatty liver of simple obesity in children may progress to liver cirrhosis and that childhood obesity should be treated as early as possible. (author).

Fatty liver/Obesity/Children/Metabolic disorders/Hepatitis/Cirrhosis/Blood analysis.

34
Fear of obesity: A cause of short stature and delayed puberty.
Pugliese, Michael T.; Lifshitz, Fima.; Grad, Gary.; Fort, Pavel.; Marks-Katz, Marjorie.
New England journal of medicine; Sept 1, 1983. v. 309 (9) p.513-518. ill., charts.
NAL: 448.8 N442

Abstract: A study was made of 14 children (5 girls, 9 boys; ages 9-17; selected from 201 children assessed for short stature, delayed puberty, or both) with a common pattern of delayed growth and sexual development due to a fear of obesity and its alleged consequences (poor physical attractiveness, health, and life span). Because of their fear of obesity, the children reduced their caloric intake and did not gain weight or grow normally. They iNgested only 32-91% of the recommended caloric intake for their age and frequently skipped meals. After nutritional and psychiatric counseling the children resumed a caloric intake adequate for their age and recovery occurred, as indicated by increased linear growth and sexual development. (wz).

Obesity/Height/Nutrition education/Eating disorders/Calorie-restricted diets/Caloric intake/Children/Puberty/Weight gain/Epidemiological studies.

35
Feeding practices in infancy and prevalence of obesity in preschool children.
Wolman, Patricia Giblin.
Journal of the American Dietetic Association; April 1984. v. 84 (4) p. 436-438. charts.
NAL: 389.8 AM34

Extract: Data presented in this article show that although breastfeeding is related to the timing of the introduction of solid foods, neither breastfeeding nor the introduction of solid foods in infancy appears to be related to obesity in preschool children. (author).

Infant feeding/Obesity/Breast feeding/Infant nutrition/Semisolid infant foods/Infants (To 2 years).

36
Fibrinolysis and body weight: fibrinolytic response to venous occlusion in obese children.
Coccheri, S.; Cacciari, E.; Fortunato, G.; Bergamachi, R.; Balsamo, A.
Advances in experimental medicine and biology; 1984. v. 164 p. 235-242.
NAL: QP901.A33

37
A group behavior modification approach to adolescent obesity.
Zakus, Gloria; Chin, Mary Lee.; Keown, Mary.; Hebert, Frederick.; Held, Mark.
Adolescence; Fall 1979. v. 14 (55) p. 481-490. charts.
NAL: HQ35.A3 F&N

Abstract: Obese adolescent girls who see control of problems as inside oneself can lose weight in a medical setting that employs behavior modification, nutritional principles, and peer group interaction. Subjects who score low (i.e., toward internalized perception of control) on the Rotter Internal-External Control of Reinforcement Scale are more likely to continue in the program and to lose weight. When losing weight, they tend to use behavior modification techniques more often and to eat a nutritionally more adequate diet. Group support does not appear to be of much benefit; girls who function more independently seem to do better in weight loss. Drop-outs from the program continue to gain weight.

Adolescents (12-19 years)/Females/Obesity/Behavior modification/Nutrition education/Nutritional assessment/Psychological aspects/Group dynamics/Weight loss.

38
Health hazards of obesity and weight control in children: A review of the literature.
Mallick, M. Joan.
American journal of public health; Jan 1983. v. 73 (1) p. 78-82.
NAL: 449.9 AM3J

Extract: A review of literature on the health hazards of obesity and weight control in children indicates: 1) methodological flaws tend to invalidate the assumption that obesity is a risk factor for this age group; 2) weight control by children and adolescents may cause a variety of health problems including retardation of growth, development, mental functioning, and reproductive capacity; and 3) preoccupation with weight control in this society makes it likely that weight control-related health problems are common phenomena. Further research into the short and long-term consequences of obesity and weight control is necessary before enlightened clinical practice in this area is possible. (author).

Health/Obesity/Weight control/Children/Growth/Development/Risk factors/Mental develcpment/Reproduction (Biology).

39
Help for the overweight child.
Wolff, Jurgen M.; 225 p.
New York: Stein and Day, 1978.
NAL: RJ399.C6W6, F&N

Abstract: Facts about the causes and penalties of being overweight, about nutrition and exercise, and abut other subjects relating to eating and weight control are combined with step-by-step procedures to give children good eating and exercise habits to make them slimmer, healthier, and happier. Written in nontechnical language, space is provided for parents to design a weight-loss and weight-control program to fit their child's needs. The advice and plan are based on the successful experience of clients of the Self-Management Schools in Los Angeles, California.

Obesity/Behavior modification/Exercise (Physiology)/Eating habits/Workbooks/Weight control/Weight loss.

40
A High protein, low calorie liquid diet in the treatment of very obese adolescents: Long-term effect on lean body mass.
Brown, Marilyn R.; Klish, William J.; Hollander, Joshua.; Campbell, Mary Ann.; Forbes, Gilbert B.
American journal of clinical nutrition; July 1983. v. 38 (1) p.20-31. ill., charts.
NAL: 389.8 J824

Extract: The use of Optifast-70, a high protein liquid diet, when used in the range of 500 to 700 cal over 5 months in very obese adolescents, was associated with weight loss of 20-25% of initial weight, of which 70-75% of the loss was due to fat. No significant side effects were noted. Twenty-four hour electrocardiographic monitoring showed no significant changes, and linear growth continued. Lean body mass loss was 36% of the weight lost during the first 5 weeks, but was only 10% of the weight lost during the next few months. Two adolescent males had negative phosphorus and nitrogen balances over the first 4 weeks implying that males may have slightly higher phosphorus, nitrogen, and calorie requirements. (author).

Obesity/Adolescents (12-19 years)/Liquid protein diets/ Weight loss/Sex (Characteristics)/Risk factors.

41
Implications and treatment of adolescent obesity.
Dietz, W.H. Jr.
Clinical nutrition; May/June 1985. v. 4 (3) p. 103-108. charts.
NAL: RM216.M342

Abstract: An overview of adolescent obesity addresses its incidence, natural history, its effect on adult morbidity, and its causes, diagnosis, treatment, and prevention. While adolescent obesity is the most prevalent morbid nutritional disease in the US, therapeutic effects have produced a low rate of short-term remission. It is argued that epidemiologic and clinical data indicate that family interactions appear to be the best vehicle for prevention and that television viewing may be the most logical behavior to select for adolescent behavior modification. The results of various weight reduction regimens for adolescents also are discussed.(wz).

Obesity/Adolescents/Nutrition/Eating habits/Behavior modification/Diagnosis/Disease prevention/Therapeutic diets.

42
Infant growth and obesity in Samoa.
Nutrition reviews; Aug 1986. v. 44 (8) p. 265-267.
NAL: 389.8 N953, FNC

Abstract: A discussion of recent reports on infant growth and obesity incidence in American Samoa concludes that the birth weight and growth of Samoan infants are greater than for infants of other countries, regardless of feeding regimen or rural-urban differences. This relatively rapid prenatal and postnatal growth in weight is consistent with the reported incidence of overweight in Samoan childhood and adult life. Genetic influences in these observations are postulated.(wz).

Infant development/Birth weight/Obesity/Genetic factors/Infant feeding.

43
Infant nutrition and the development of obesity.
Mellies, Margot; Glueck, Charles.
Textbook of gastroenterology and nutrition in infancy
Emanual Lebanthal; p. 709-718. ill., chart.
New York: Raven Press, 1981.
NAL: RJ446.T4 F&N B-2934/5

Abstract: Basic information on etiologic factors (genetic, environmental, psychological-neurological), physical measurements, endocrine and metabolic aspects, and treatment of obesity in infants is presented for the physician and nutritionist. While birth weight appears not to correlate well with weight later in childhood, weight gain during infancy is a better predictor of subsequent overweight than parental weight. In girls, who have normal weight gain during the 1st year but become overweight before age 10, heredity and lack of physical activity are important predictors of overweight; appetite and family size principally affect boys of the same category. Seven metabolic derangements characteristic of obesity are discussed, including decreased sodium and water clearance, reduced glucose and fatty acid oxidation, and altered fatty acid metabolism. While skinfold thickness is considered the most reliable indicator of fatness, infant skinfold measurements are difficult, especially in breast-fed infants. A recent attempt to prevent obesity development during infancy through use of a modified diet, beginning at 3 months and/or 13 pounds, showed positive results in decreased overweight by age 3, but further study is needed before widespread recommendations can be made. (wz).

Obesity/Etiology/Infants (To 2 years)/Birthweight/Weight gain/ Carbohydrate modifications/Skinfold measurements/Indicators/ Exercise (Physiology)/Longitudinal studies.

44
Influence of persistent obesity in children on cardiovascular risk factors: The Bogalusa Heart Study.
Aristimuno, Gerardo G.; Foster, Theda A.; Voors, Antonie W.; Srinivasan, Sathanur R.; Berenson, Gerald S.
Circulation; May 1984. v. 69 (5) p. 895-904. ill., charts.
NAL: RC681.A1C8

Abstract: The effect of the persistence of obesity and leanness was studied over a 5-year period (1973, 1976, and 1978) in 2,230 children (ages 2.5-14 in 1973) using measurements of triceps skinfold thickness, body fat indices, lipid and lipoprotein levels, and blood pressure. The children were grouped across 7 percentile (P) intervals of triceps skinfold thickness, with cardiovascular Risk factor variables assessed over the 5-year period. Pairwise comparison of the data revealed that obese and very obese children had significantly higher systolic blood pressures, while children in the highest P interval (at or above 85 P) had significantly greater diastolic blood pressures. These differences widened and diverged over the 5-year study period. The obese and very obese children showed a marked decline in alpha-lipoprotein cholesterol and an increase in pre-beta-lipoprotein cholesterol over the study period. Triglyceride levels remained higher in these children throughout the study, but the levels declined in non-obese children. The results indicate skinfold thickness measurements over time to be a useful predictor of potential adult cardiovascular disease. (wz).

Cardiovascular disorders/Obesity/Children/Anthropometric measurements/Risk factors/Longitudinal studies/Regional surveys/Epidemiological studies/Clinical investigations.

45
Interrelationships of glucose and protein metabolism in obese adolescents during short-term hypocaloric dietary therapy.
Dietz, W.H. Jr; Wolfe, R.R.
American journal of clinical nutrition; Sept 1985. v. 42 (3) p. 380-390. ill., charts.
NAL: 389.8 J824, FNC

Extract: We studied the interrelationship of nitrogen balance (N-bal) and rates of glucose appearance (Ra), determined isotopically using U-13C-glucose, in 14 obese adolescents consuming either (1.5 g protein and 1.0 glucose)/kg ideal body weight/day or an isonitrogenous diet made isocaloric with fat. Nitrogen balance was significantly more positive with added glucose. Changes in plasma insulin, free fatty acids, or beta-hydroxybutyrate did not reliably predict N-bal. The Ra of glucose decreased significantly on both diets, but was significantly lower after the addition of fat. A significant correlation of N-bal with Ra was observed only in the absence of dietary

glucose. Insulin levels correlated with N-bal only in the presence of dietary glucose. Nitrogen balance in the absence of dietary carbohydrate may be a consequence of net peripheral protein catabolism that is not directly mediated by the need for gluconeogenic precursors. (author).

Obesity/Therapeutic diets/Calorie-restricted diets/Carbohydrate metabolism/Glucose/Protein metabolism/Adolescents/Nutrient-nutrient interactions.

46
Is there a transient, obesity-related hypertension of adolescence?.
Stickler, G.B.
Clinical pediatrics; Nov 1986. v. 25 (11) p. 573-574.
NAL: RJ1.C55, FNC

Abstract: A technical commentary raises the question of Appropriateness for diagnosing overweight children with diastolic blood pressure above the 95th percentile as having hypertension, noting literature reports recommending that such children be considered as having an obesity-related elevated blood pressure. It is argued that, while it has been recommended that caution be exercised in labeling children as hypertensive because of psychosocial and economic implications and that the term "high normal blood pressure" be used, it is not clear whether this approach will avoid the development of symptoms that appear in association with being labeled "hypertensive." It is concluded that the difficulty in the appropriate choice of terminology and of treatment requires further definition and evaluation.(wz).

Hypertension/Obesity/Adolescents/Diagnosis/Blood pressure.

47
A longitudinal study of body fatness in childhood and adolescence.
Zack, Paul M.; Harlan, William R.
The Journal of pediatrics; July 1979. v. 95 (1) p. 126-130. ill., charts.
NAL: RJ1.A453

Abstract: Data from the United States Health Examination Surveys were analyzed to determine changes in body fatness between childhood and adolescence. A sample of 2,177 children was examined using precise anthropometric measurements in body Cycle II (6 to 11 years) and Cycle III (12 to 17 years) of these surveys. The interval between examinations was three to four years. Adiposity was measured as skinfold thickness and correlations between childhood and adolescent adiposity were explored. High rank-order correlations were found between the two

examinations for each race-sex group. The relationship between childhood and adolescent fatness was independent of stature, skeletal and sexual maturation, and economic status. Childhood fatness was the most predictive factor for adolescent fatness, suggesting that the potentially obese adolescent can be identified during childhood.

Body composition/Obesity/Children/Adolescents (12-19 years)/ Anthropometric measurements/Adipose tissue/Skinfold measurements/ Weight/Socioeconomic status/Sex (Characteristics).

48
Modified fasting in obese adolescents. (editorial).
Pencharz, Paul B. Nutrition research; Jan/Feb 1983. v. 3 (1) p. 5-7.
NAL: TX341.N88.

Abstract: Important dietary considerations concerning proper and safe fasting by obese adolescents are discussed with respect to recent research findings. Until they complete puberty, adolescents are more sensitive to caloric restriction than adults, and they need a higher protein intake (2.5 g animal protein/kg/day). No differences in weight loss or nitrogen balance were observed between fat and carbohydrate when both were used as the non-protein dietary energy source, indicating that a diet based on either is acceptable. Adolescents, however, appear to prefer the fat-supplemented modified diet. Total body potassium in fasting obese adolescents should be monitored by hospital clinics. (wz).

Fasting/Adolescents (12-19 years)/Obesity/Food restrictions/ Fat-controlled diets/Potassium/Caloric intake.

49
Nutrient intake patterns and nutritional status with regard to relative weight in early infancy.
Vobecky, Jitka S.; Vobecky, Josef.; Shapcott, Dennis.; Demers, Pierre-Paul.
American journal of clinical nutrition; Nov 1983. v. 38 (5) p. 730-738. ill., charts.
NAL: 389.8 J824

Extract: To examine whether or not obesity in later life is related to feeding practice in early infancy, daily nutrient intake was studied in relation to relative weight in a cohort of 170 healthy infants from birth to 3 years of age. Dietary records were made monthly for the first 6 months and at 3-month intervals thereafter, always covering the week preceding anthropometric measurements. The frequency distribution of relative weight varied according to age and sex; the infants did not remain in

the same relative weight group during the observed period. When comparing the relative weight at 6 and 36 months, the coefficients of correlation were rather weak for both sexes (r=0.33 and 0.35). There were no significant differences in the history of breast-feeding according to relative weight. The mean energy intake per kg of body weight was always lower in infants with relative weight above 105% of expected weight and fats and carbohydrates were consumed less in the same group. There were no differences in protein intake according to relative weight, although this intake was always higher than the recommended nutrient intake. Daily intake of zinc was comparable in all weight groups. Results indicate that the infants with above-average relative weights did not consume greater quantities of principal nutrients. The results, therefore, do not support the hypothesis that implicates overfeeding in early infancy as a major cause of obesity in later life. (author).

Nutrient intake/Hyperphagia/Infants (To 2 years)/Obesity.

50
Nutrition statements of the National Health and Medical Research Council.
Journal of food & nutrition; 1986. v. 42 (3) p. 146-147. charts.
NAL: 389.9 AU73

Abstract: The One-hundredth Session of the Australian National Health and Medical Research Council resulted in the incorporation of the recommended dietary intakes for the following nutrients: magnesium, iron, calcium and vitamin A. A table of acceptable weights-for-height was recently adopted and definitions for obesity and overweight were proposed. Infant feeding was considered regarding the marketing of unconventional foods for infants and the discouragement of the use of skim milk and goat milk. Hair analysis techniques marketed by commercial businesses for nutritional assessment were criticized as scientifically unacceptable by the Council.(lsp).

Government/Recommended dietary intakes/Obesity/Infant feeding/ Skim milk/Goat milk/Hair analysis.

51
Nutritional aspects of obesity in infancy and childhood. Committee on Nutrition.
Pediatrics; Dec 1981. v. 68 (6) p. 880-883.
NAL: RJ1.P42

Abstract: The etiological complexity of obesity makes prevention and treatment difficult. In children, diagnosis is complicated by extreme variations of body composition. Comparison of triceps and subscapular skinfold thicknesses to age/sex standards is a fairly

reliable adiposity indicator in children. Child obesity prevalence rates vary from 6-13%, depending on age, sex, and various demographic factors. Obesity in adulthood seems to be more strongly correlated to occurrences of obesity in late childhood and adolescence than in prenatal states or infancy; both genetic and environmental factors are significant. New data suggest a constant turnover of adipocyte precursors that become mature fat-filled cells through overfeeding, which can be reduced in volume but probably not in number. Adipose organ geometry seems most sensitive before age 2 and again during the adolescent growth spurt. Child obesity treatment should be based on a nutritious diet supporting lean tissue growth while holding adipose mass constant. Child obesity prevention efforts should be tempered by the following considerations: no single measure is safe and effective in all cases; use of low-fat milk may increase risk of excess renal solute loads; optimal nutrition in infancy should be encouraged; regular exercise habits should be encouraged; and short-term intervention may be ineffective for those destined by nature or nurture to become obese. (cj).

Infants (To 2 years)/Children/Adolescents (12-19 years)/ Obesity/ Etiology/Diagnosis/Treatment/Hereditary factors/ Environmental factors/Disease prevention.

52
Nutritional needs of the female adolescent.
Morgan, Brian L.G.
Nutrition and health; 1984. v. 6 (5) p. 1-6. charts.
NAL: TX341.N88 F&N

Abstract: An overview article addresses the specific nutritional requirements of female adolescents and common nutritional problems found in the adolescent diet. Topics include normal nutrient requirements; iron deficiency and needs; nutrient needs of the female athlete; and nutritional problems associated with fad diets, adolescent obesity, and anorexia nervosa. Specific guidelines For nutrient intakes, and disease prevention and therapy are included. (wz).

Nutrient requirements/Adolescents/Women/Risks/Obesity/Anorexia nervosa/Disease prevention/Therapy/Reviews/Guidelines/Diet planning.

53
Obesity in 10-year olds: An epidemiologic study.
Vuille, Jean-Claude; Mellbin, Tore.
Pediatrics; Nov 1979. v. 64 (5) p. 564-572. ill., charts.
NAL: RJ1.P42

Abstract: The importance of several factors in the origin of childhood obesity were investigated using a multifactorial pathogenetic model. Following a longitudinal study of 972 children from 7 to 16 years of age, 550 subjects were selected at age 10. Information was obtained from the parents by questionnaire. Children's food habits, appetite, physical activity, social conditions and parental heights and weights were examined using multiple regression analysis. Heredity and physical inactivity are best able to explain obesity in girls, while appetite and environmental conditions are most significant in boys. During early school years (ages 7-10) inactive children without siblings who are from lower class families are most likely to become obese. In the absence of all of the risk factors, obesity does not occur. A child with a high risk score still has a 50% chance of not becoming obese.

Obesity/Epidemiology/Etiology/Exercise (Physiology)/Child nutrition/School children (6-11 years)/Statistical analysis/Food habits/Appetite/Socioeconomic influences/Hereditary factors/ Environmental factors.

54
Obesity in boys : the distinction between fatness and heaviness.
Griffiths, M.; Rivers, J.P.W.; Hoinville, E.A.
Human nutrition: clinical nutrition; July 1985. v. 39C (4) p. 259-269. ill., charts.
NAL: TX341.H8

Abstract: A longitudinal anthropometric study of 2350 preschool boys revealed no definitive association between obesity (triceps skinfolds) and the development of heaviness (weight-for-height ratios). The results of this study indicate that in childhood obesity studies it is important to identify 3 categories: children who are heavy but not fat; children who are fat but not heavy; and children who are both fat and heavy. The study results are statistically summarized and their implications are discussed.(wz).

Obesity/Preschool children/Anthropometric dimensions/Body weight/ Skin folds/Longitudinal studies.

55
Obesity in childhood.
Edited by E. Cacciari, Z. Laron (and) S. Raiti. 248 p., ill.
New York: Academic Press, 1978.
NAL: RJ399.C6O2 F&N; B-3038

Abstract: Recurrent topics, such as long-range therapy and the psychological problems of the obese child, are re-examined for practicing physicians and researchers concerned with childhood obesity. Thirty-two papers cover a wide variety of topics concerning diagnosis, cause, and factors to consider in treating obese children. Obesity is frequently associated with endocrine-metabolic function changes which affect patient mortality and morbidity. Problems associated with the cardiovascular system and the endocrine pancreas, coupled to therapy constraints, have implicated obesity as a major health concern, especially in well-developed countries. An explanation was sought for self-maintenance of obesity in: adipose tissue alterations during early childhood; endocrine and metabolic control of caloric homeostasis; and in hypothalmic control of energy balance. Non-genetic obesity has increased in recent decades; preventive obesity actions are needed to arrest this trend. (WZ).

Reference materials/Obesity/Children/Adolescents (12-19 years)/
Diagnosis/Metabolic studies/Treatment/Hereditary factors/
Psychological aspects/Environmental factors.

56
Obesity in childhood.
Gracey, Michael.
Food and nutrition notes and reviews; July/Sept 1979. v. 36 (3)
p. 139-140.
NAL: 389.9 AU73

Abstract: Obesity is becoming increasingly prevalent in affluent societies due to several factors including overconsumption of empty calorie foods. In a study of 551 Australian high school students, 17% of boys and 21% of girls were overweight, yet energy intakes were below Dietary Allowances. This suggests that these teenagers may be less active. Since 27% of girls and 17% of boys were regular smokers, those students were exposed to a second risk factor of coronary heart disease. These findings demonstrate the failure of health education programs. Treatment regimens are often ineffective in childhood obesity, even when combined treatment of diet with exercise is offered. Group

therapy clinics provide nutrition education plus behavior modification; however initial weight loss is often regained and initial motivation declines.

Obesity/Children/Affluent nations/High-caloric diets/High school students/Caloric intake/Risk factors/Treatment.

57
Obesity in the pediatric patient.
Merritt, Russell J.
Nutrition & the M.D; Nov 1979. v. 5 (11) p. 1-2.
NAL: TX341.N8 F&N

Abstract: Pediatricians are concerned about the increasing numbers of obese children, who are becoming obese at increasingly younger ages. Obesity has been linked to several health disorders, and many obese children grow up to become obese adults. Obesity in children is discussed in terms of physical definition, medical causes, parental and socioeconomic influences, psychological factors, genetic and environmental aspects, and dietary therapy. Prevention of obesity by diet and exercise is recommended.

Obesity/Children/Parental influence/Socioeconomic influences/ Psychological aspects/Hereditary factors/Environmental factors/ Diet therapy/Nutritional intervention/Exercise (Physiology).

58
Obesity in urban black adolescents of high and low relative weight at 1 year of age.
Johnston, Francis E.; Mack, Robert W.
American journal of diseases of children; Sept 1978. v. 132 (9) p. 862-864. charts.
NAL: 448.8 AM38

Extract: The prevalence of obesity was determined in 798 9 to 15-year-old Philadelphia subjects who had either a high (plus 1 SD) or a low (minus 1 SD) relative weight at 1 year of age. During the adolescent years, obesity was assessed by the triceps skin-fold thickness and by the relative weight, using national reference standards from the US Health Examination Survey. The prevalence of obesity for the high relative weight group at 1 year of age was three to four times higher than in the lower relative weight group at 1 year of age. Compared with all urban

youth of this age range, regardless of their status at 1 year of age, it is estimated that the risk ratio associated with a high relative weight at 1 year of age is approximately 1.6.

Obesity/Urban population/Negroes/Adolescents (12-19 years)/ Weight/Infants (To 2 years)/Anthropometric measurements/ Risk factors.

59
Obesity prognosis: Longitudinal study of children from the age of 6 months to 9 years.
Shapiro, Leona R.; Crawford, Patricia B.; Clark, Marjorie J.; Pearson, Dorothy L.; Raz, Jonathan; Huenemann, Ruth L.
American journal of public health; Sept 1984. v. 74 (9) p.968-972. ill., charts.
NAL: 449.9 AM3J

Extract: The development of body fatness and leanness is examined in an ongoing prospective nutrition and growth study. Individual skinfold thickness, relative weights, weight gains, activity levels, and caloric intakes were examined at seven ages between 6 months and 9 years. Changes in body fatness in this group of children provide evidence that the obese infant usually does not become the obese child. Weight gain in infancy is also a poor predictor of 9-year old obesity. Changes from obese to non-obese or lean are often not linear. There is evidence that impending or actual obesity begins at ages 6 to 9 years with some predictability provided as early as age 2 years for girls, age 3 years for boys. (author).

Obesity/Risks/Anthropometric dimensions/Children/Infants/ Prediction/Body fat/Longitudinal studies.

60
Obesity, child-feeding attitudes, and reactive eating: An intergenerational study.
Rogers, Cosby S.; Canady, Helen.; Wentworth, Jane.
Home economics research journal; Jan 1980. v. 8 (3) p. 173-183. charts.
NAL: TX1.H63

Abstract: A study of 221 college women using the Child-Feeding Opinion Questionnaire (CFOQ) evaluated the relation by body fat to anxiety-related overeating and to their own and their mothers' child-feeding attitudes. Attitudes of both mothers and daughters toward the use of food as a reward, punishment, soothing agent or expression of affection, did not correlate with body fat as measured by skinfold thickness, nor to anxiety-related overeating scores of daughters as measured by a six-item scale. Reactive eating scores were not related to obesity in these women. These

data, therefore, do not give support to the view that parent's use of food as a psychological tool can result in anxious overeating and consequent obesity in children. However, child-feeding attitudes of mothers had a low positive correlation with attitudes of their daughters. In this study, child-feeding attitudes do not appear to be etiological factors in adult obesity, although additional longitudinal data is needed.

Obesity/Food attitudes/Food habits/Hyperphagia/Anxiety/Stress/ Affective behavior/Skinfold measurements/Rewards/ Psychological needs /Etiology/Compulsive eating/Mother-child relations/Psychological aspects.

61
Obesity: Prevention is the treatment.
Mogan, J.
Patient education and counseling; 1984. v. 6 (2) p. 73-76.
NAL: R727.3.P37

Abstract: Recent findings concerning the etiology of obesity which might guide health-care providers in preventing obesity are reviewed and discussed. Attention is given to the cause of obesity, its prevention in infancy, and food habits in early childhood, later childhood, adolescence, and adulthood with respect to weight reduction and obesity prevention measures. The advantages and disadvantages of diet, anorectic drugs, exercise, and behavior modification are discussed. (wz).

Obesity/Disease prevention/Therapy/Behavior modification/Eating habits/Infants/Children/Adolescents/Adults/Literature reviews.

62
Onset of obesity in a 36 year birth cohort study.
Braddon, F.E.M; Rodgers, B.; Wadsworth, M.E.J.; Davies, J.M.C.
British medical journal; Aug 2, 1986. v. 293 (6542) p. 299-303. charts.
NAL: 448.8 B77

Abstract: Data on the change in prevalence of obesity with age and for individual differences in the course and pattern of obesity are presented from a longitudinal study designed to assess the predictability of childhood obesity in adult life for a large cohort of children who were followed from birth to 36 years of age. The study revealed that only 21 per cent of the obese 36-year-olds were obese at age 11. The implications of the

observed inaccuracy in the prediction of adult obesity from childhood obesity and the need for developing preventive measures are discussed.(wz).

Obesity/Children/Adults/Prediction/Longitudinal studies.

63
Optimal dietary therapy for obese adolescents: Comparison of protein plus glucose and protein plus fat.
Dietz, W.H. Jr; Schoeller, D.A.
The Journal of pediatrics; Apr 1982. v. 100 (4) p. 638-644. charts.
NAL: RJ1.A453

Extract: Nitrogen balance in 6 obese boys and 3 obese girls was studied during 2 nonconsecutive 3-week dietary periods. The diets consisted of 1.5 g meat protein/kg ideal body weight (IBW)/day plus 1.0 g glucose/kg IBW/day, or an isonitrogenous diet made isocaloric with fat. Each dietary period was preceded by a controlled 5-day diet designed to achieve weight maintenance. The first dietary period was followed by a one-month period of re-equilibrium. The addition of carbohydrate to protein produced a significantly better cumulative nitrogen balance than protein plus fat. Significant nitrogen losses persisted throughout the entire dietary period of protein plus fat in 3 patients, but were observed in only one patient during the protein plus glucose diet. Serum albumin concentrations were unchanged on both diets. Transferrin values decreased only with the protein plus fat diet. The observation of prolonged nitrogen losses in one subject on the protein plus glucose diet and the limited experience with highly restrictive diets in obese adolescents emphasize that such diets must be used with caution and monitored carefully. (author).

Obesity/Adolescents (12-19 years)/Weight loss diets/Experimental diets/Protein-fat-carbohydrate modifications/Nitrogen balance.

64
Overgrowth: Energetic significance in relation to obesity.
James, W.P.T; Sahakian, B.J.
Nutrition and child health; p. 25-53. ill., charts.
NAL: RJ206.N818, F&N B-3161

Abstract: Childhood prevalence of obesity, hereditary and metabolic bases of obesity, and the concept of energy balance in obesity are reviewed. The results of animal experimentation on the ob/ob mouse (which exhibits both hyperphagia and an increased metabolic efficiency connected with obesity) and its brown adipose tissue metabolism are considered in detail. Non-shivering thermogenesis (NST) in humans is also treated, since it has been

recognized that brown adipose tissue in the newborn child plays an important role in maintaining body temperature. Tests of the relationship of NST to obesity (conducted in obese and lean females under a limited food intake to avoid weight gain) showed that obese subjects had a similar metabolic response to noradrenaline which was only half that of lean subjects; this paralleled results obtained in animal studies. It is possible that brown adipose tissue metabolism is responsible for NST in adult humans as well as in adult rodents. Further, the sequence of changes in energy expenditure does not exclude the hyperphagic child or adult, but (as with the ob/ob mouse) it is important to distinguish between altered metabolic efficiency and hyperphagia. Additional factors in the interrelation of energy intake and obesity are discussed. (wlz).

Overnutrition/Energy requirements/Obesity/Hyperphagia/Brown fat/ Thermogenesis/Adults/Children/Demonstrations (Animal)/ Human nutrition research.

65
Overnutrition and obesity in childhood as a potential risk for chronic degenerative diseases in later life.
Spahn, U.; Plenert, W.; Hesse, V.; Knoll, G.; Petrich, E.
Bibliotheca nutritio et dieta; 1982. (31) p. 61-74. ill.
NAL: 389.9 B47

66
Pancreatic polypeptide responses to protein meal challenges in obese but otherwise normal children and obese children with Prader-Willi syndrome.
Zipf, W.B.; O'Dorisio, T.M.; Cataland, S.; Dixon, K.
The Journal of clinical endocrinology and metabolism; Nov 1983. v. 57 (5) p. 1074-1080.
NAL: 448.8 J8294

67
Parent-child obesity and cardiovascular risk factors.
Epstein, Leonard H.; Wing, Rena R.; Kuller, Lewis.; Becker, Dorothy.
Preventive medicine; May 1983. v. 12 (3) p. 437- 446. ill., charts.
NAL: RA421.P684

Abstract: Body weight and child-parent risk factor relationships were analyzed in a sample of 75 obese children (ages 6-12) and parents from 77 families enrolled in a child weight-control program. This analysis revealed that the children's cholesterol and triglyceride levels were related to parental lipid levels, independent of the children's body weights. Child blood pressure

strongly correlated with body weight, but not with parental blood pressure. High density lipoprotein cholesterol levels correlated negatively with weight in both female children and their mothers. Implications of these risk patterns are discussed relative to risk intervention approaches. (wz).

Obesity/Cardiovascular disorders/Risk factors/School children (6-11 years)/Preventive medicine/Preventive nutrition/ Mother-child relations/Weight loss/Weight control/ Blood analysis.

68
The pre-school child: Diet, growth and obesity.
Morgan, Jane.
Journal of human nutrition; Apr 1980. v. 34 (2) p. 117-130. ill., charts.
NAL: 389.8 N959

Abstract: Although it has been assumed that infantile obesity results from certain infant feeding practices, the etiology of childhood obesity is complex. Family, genetic and other factors besides over-nutrition in infancy may be involved. Uncertainties exist in 3 areas: dietary intake data are unrelated to growth parameters; anthropometric measurements cannot identify obesity due to excess adiposity; and the relationship of energy intake, energy expenditure and growth is unclear. Longitudinal studies fail to demonstrate a correlation betweer food intake and body weight; overeaters are as likely to be underweight as small eaters. Body weight, length, or skinfold thickness cannot assess under or overweight in infants. Weight gains may actually be increases in lean body tissue. Skinfold thickness may be unrelated to total body fat, and height: weight ratios may not be adequate indices of adiposity. Activity, the energy cost of growth, resting metabolic rate, mechanisms of energy expenditure, and the efficiency of energy utilization reflect great individual variation in young children. Obesity factors during the preschool stage may be very different at other stages in the child's life.

Obesity/Dietary factors/Growth/Preschool children (2-5 years)/ Infant feeding/Etiology/Individual differences/Food intake/ Anthropometric measurements/Energy expenditure/Energy balance/ Longitudinal studies.

69
Prevention of obesity and weight control in children.
Journal of food & nutrition; 1981. v. 38 (3) p. 97-101 .
NAL: 389.9 AU73

Abstract: Obesity in children and infants is reviewed, along with obesity treatment approaches and prevention measures. While there

is a lack of agreement on the precise role of infant feeding and whether infantile obesity predisposes the infant to later obesity, it is clear that infant overfeeding should be avoided. Mothers should be encouraged to use non-nutrient stimulation (affection) and should be introduced to infant exercise practices. Major concerns of childhood and adolescent obesity are its potential long-term health, social, psychological, and economic consequences. Better treatment results are obtained with young children if energy restriction is designed to limit further weight gain while height is allowed to increase. Behavioral therapy offers another treatment mode, where its goal is to eliminate food as a primary source of reward or comfort. Also, regular exercise or physical activity should be incorporated into a child obesity therapy program. Prevention is best addressed through nutrition education at the age of 5-6. Modification of eating habits and adequate clinical monitoring appears to best for control, treatment, and prevention of childhood obesity. (wz).

Obesity/Weight control/Children/Energy requirements/Mother-child relations/Behavior modification/Exercise (Physiology).

70
Prospective studies on adipose tissue development in man.
Sjostrom, Lars; William-Olsson, Tom.
International journal of obesity; 1981. v. 5 (6) p. 597-604. ill.
NAL: RC628.A102 F&N

Abstract: Prospective data developed in longitudinal studies of changes in fat cell number of 19 obese women are reported and evaluated in concert with the results of prior longitudinal studies of infants and obese versus non-obese school girls. Based on an assessment of the data, an hypothesis for short and long term changes of body fat in terms of fat cell weight and number is proposed. The study results indicated that fat cell number may increase and decrease in adults. Mechanisms by which fat cells could be removed are not described, although one possibility would be the domination of the fat storing system by the lipolytic enzymes of aging fat cells. This would result in vacant fat cell ghosts which could probably be handled by phagocytosis. (wz).

Adipose tissue/Fat cells/Obesity/Females/Adults/Infants (To 2 years)/School children (6-11 years)/Longitudinal studies.

71
Protein-sparing diet for severely obese adolescents: Design and use of an equivalency system for menu planning.
Bell, Louise; Chan, Linda; Pencharz, Paul B.
Journal of the American Dietetic Association; Apr 1985. v. 85 (4) p. 459-464. charts.
NAL: 389.8 AM34

Extract: A protein-sparing, low-energy diet is suitable treatment for severely obese adolescents. The dietary regimen requires adequate protein and fluid, plus nutrient supplements. Meal planning is simplified by the use of a protein equivalency system developed for this diet. Recent experience with 21 adolescents resulted in satisfactory weight control. (Author).

Obesity/Adolescents/Therapeutic diets/Proteins/Energy intake/ Weight reduction/Diet planning.

72
Reducing adolescent obesity through a school health program.
Botvin, G.J; Cantlon, A.; Carter, B.J.; Williams, C.L.
The Journal of pediatrics; Dec 1979. v. 95 (6) p. 1060-1062. charts.
NAL: RJ1.A453

Abstract: Behavior modification techniques were used in a weight reduction program involving 119 overweight adolescents in a school setting. A health profile of each student was obtained before and after testing. Students were divided into experimental or control groups. Experimental students participated in ten sessions of behavior modification combined with exercise and nutrition education. Significant differences were observed between experimental and control students with respect to weight changes and body fat: 51% and 11% lost weight, and 73% and 43% had lower skinfold measurements in the experimental and control groups, respectively. These findings demonstrate the effectiveness of combining strategies in a school-based program to bring about weight loss through changes in eating habits, exercise patterns, and food selection

Adolescents (12-19 years)/Obesity/Behavior modification/Weight loss diets/Weight control/School health services/Nutrition education/Exercise (Physiology)/Nutrition programs/Skinfold measurements/Food habits/Food selection.

73
The Relation between glucose tolerance and insulin binding to circulating monocytes in obese children.
Kida, Kaichi.; Watanabe, Noriyoshi.; Fujisawa, Yoshiki.; Goto, Yoshinori.; Matsuda, Hiroshi.
Pediatrics; Oct 1982. v. 70 (4) p. 633-637. ill.
NAL: RJ1.P42

Extract: The quantitative relation between insulin binding to circulating monocytes in vitro, and glucose tolerance in obese children in vivo, is reported. Sixty-one obese children and 11 healthy control children participated. The oral glucose tolerance test was performed by giving them glucose (1.75 gm/kg of body weight) orally in the morning, and the binding of (I-125-labeled) insulin to circulating monocytes in vitro was measured prior to the oral glucose tolerance test. The glucose tolerance expressed as the sum of the plasma glucose values significantly correlated with the degree of overweight, and more highly with sum of the immunoreactive insulin values. Insulin binding to monocytes in vitro was inversely correlated with the degree of overweight. Furthermore, the plasma glucose values were inversely correlated significantly with insulin binding to monocytes in vitro. These data suggest that the decrease of insulin receptors might be 1 cause for the impairment of the glucose tolerance associated with obesity in children. (author/wz).

Obesity/Children/Glucose tolerance/Carbohydrate metabolism/ Clinical tests/Insulin/Human nutrition research/ Immunological methods.

74
The relationship between elevated blood pressure and obesity in black children.
Lynds, Barbara Gentry; Seyler, Suzanne Klopp.; Morgan, Brenda Martin.
American journal of public health; Feb 1980. v. 70 (2) p.171-173. ill.; charts.
NAL: 449.9 AM3J

Abstract: Obesity in children may be a factor leading to adult hypertension. Elementary school black children were tested for blood pressure, height and weight. Children with elevated blood pressure, both diastolic and systolic, were 3 times as likely to be obese as the total population.

Blood pressure/Obesity/Negroes/School children (6-11 years)/ Hypertension/Health hazards/Risk factors.

75
Relationship of changes in obesity to serum lipid and lipoprotein changes in childhood and adolescence.
Freedman, D.S; Burke, G.L.; Harsha, D.W.; Srinivasan, S.R.; Cresanta, J.L.; Webber, L.S.; Berenson, G.S.
Journal of the American Medical Association; July 26, 1985. v.254 (4) p. 515-520. ill., charts.
NAL: 448.9 AM37, FNC

Abstract: A 5-year longitudinal study of the relationship of changes in triceps skin-fold thickness (TSFT) to changes in the levels and profiles of serum lipids (cholesterol, triglycerides, lipoproteins) is reported for a group of 1598 children who were examined initially at 5-12 years of age. Positive age independent correlations were found between TSFT changes and serum level changes of total cholesterol, triglycerides, and low-density and very-low-density lipoprotein cholesterol, while weaker (but significant) inverse relationships were found between TSFT changes and serum changes of high-density lipoprotein cholesterol. The implications of these and related findings are discussed. (WZ).

Obesity/Lipid metabolism/Longitudinal studies/Children/Adolescents/Cholesterol/Lipoproteins/Triglycerides/Blood composition/Anthropometric dimensions.

76
Response disinhibition in obese--adolescent females.
Johnston, Janice L.; Miles, J. Elizabeth.; Barham, Richard M.
International journal of obesity; 1982. v. 6 (4) p. 323-326. charts.
NAL: RC628.A1O2 F&N

Abstract: The response disinhibition (R-D) hypothesis, offering a theoretical explanation of psychological processes involved in the development of the obese state, is tested by comparing the Einstellung effect for cognitive rigidity (CR) between 33 obese-adolescent and 35 normal adolescent females (ages- 14-20). A form of CR was demonstrated by significantly more of the obese than the normal subjects in solving a set of mathematical problems. Hence, these results support the R-D hypothesis which proposes that obese-adolescent females experience difficulty in halting an on-going response. Chi-square tests of independence were used to assess the study results. (wz).

Obesity/Adolescents (12-19 years)/Females/Cognitive processes.

77
"Risk factors" in coronary heart disease - a childhood concern.
Crittenden, I. Hunter.
The Journal of school health; Apr 1979. v. 49 (4) p. 210-212.
NAL: LB3401.J6

Abstract: An "epidemic" of atherosclerotic cardiovascular disease and substantial dietary hypercholesterolemia in children exists. Evidence is insufficient to conclude that dietary alteration can reduce risk potential in the pediatric population. Yet prevention is the primary means to reduce coronary heart disease. Prudence would point to a diet to lower serum lipid concentration beginning in Early childhood. Smoking should not be started, and smokers should stop. High blood pressure should be detected early. Obesity should be corrected by diet and exercise.

Atherosclerosis/Cardiovascular disorders/Smoking/Cholesterol/ Hypertension/Obesity/Exercise (Physiology)/Children/Risk factors.

78
Scholastic progress and nutritional status of elementary and high school students.
Albanese, Julette O'Rorke; Carroll, Lynne.; Albanese, Anthony A.
Nutrition reports international; Oct 1984. v. 30 (4) p. 817-824. ill.
NAL: RC620.A1N8

Extract: The prevalence of obesity is now recognized as a world-wide nutritional problem not only in affluent countries but also in many underdeveloped countries. It appears to be excessively frequent in the U.S. at all economic levels especially so in children throughout their school years - and beyond. In a previous study we found by nomographic analyses a close correlation between poor scholastic achievement and obesity or overweightness in boys and girls during their grammar school years. Subsequently, we expanded the study to include high school students and the application of both M A T and S A T tests. Nomographic analyses of 73 high school boys showed that 34% were overweight and scored an average of 610 on their verbal and mathematic S A T tests. Of the 83 girls 12% were overweight and scored an average of 425 on their verbal and mathematic S A T tests. It should be noted that the S A T scores of the underweight boys and girls approximated those students with normal body weight. It is evident from these results that obesity and overweightness are major untoward factors in the learning

progress of these students and that improvement in scholastic achievement could be realized by implementation of corrective dietary measures as Soon as they are detected. (author).

Nutritional state/Primary education/School children/Obesity/ Surveys/Achievement/Academic achievement/High school students/Achievement tests.

79
Serum lipoprotein profile in Japanese obese children.
Tokunaga, Katsuto.; Ishikawa, Katsunori.; Sudo, Hiroshi.; Matsuzawa, Yuji.; Yamamoto, Akira.; Tarui, Seiichiro.
International journal of obesity; 1982. v. 6 (4) p. 399-404. ill.
NAL: RC628.A102 F&N

Abstract: The lipoprotein pattern was determined in obese school children to assess the possibility of covert hyperlipidemia being associated with a decrease in high-density lipoprotein (HDL). The obese children were found to have a lower HDL-cholesterol (HDLC) level, a higher very-low-density lipoprotein (VLDL) plus low-density lipoprotein (LDL) cholesterol level, and a notably higher (VLDL plus LDL)-cholesterol/HDL cholesterol ratio than non-obese control children. The observed linear correlation between total serum cholesterol (TSC) and the (VLDL plus LDL)-cholesterol/HDL cholesterol ratio in the obese children showed that the HDL cholesterol increase was unassociated with a TSC increase. In the non-obese children, TSC did not parallel the (VLDL plus LDL)-cholesterol/hdl cholesterol ratio, suggesting a co-increase of HDL cholesterol with LDL-cholesterol. Since increases in LDL and decreases in HDL represent 1 of the major atherosclerosis risk factors, obesity prevention during school age appears important for atherosclerosis prevention, even in normal lipidemic children. (wz).

Obesity/Lipoproteins/Atherosclerosis/Risk factors/Preventive nutrition/School children (6-11 years).

80
A study of the effects of three weight counseling techniques and one nutrition education technique on the weight, skinfold measures, and self concepts of black, urban, obese elementary school children.
Manchester, Carol Freshwater; 176 p.
Columbus: Ohio State University, 1977.
NAL: RC628.M3 F&N; C-2100

Abstract: The failure of conventional treatments for childhood obesity are examined and alternative school counseling and behavior modification approaches are suggested. Approximately 70,

predominantly female inner city black children, aged 5-13, participated in the study. Each was assigned to 1 of 7 groups. In addition, those from 10-13 years old were randomly assigned to either behavior modification or rational emotive education weight loss counseling. Those 5-9 years were given Gestalt Awareness counseling. In each instance, nutrition education accompanied the therapy. The majority of students regained their weight after counseling treatment ended. While there were no significant weight changes as a result of the 3 treatments, students who received behavior modification counseling demonstrated slightly greater weight changes. No one lost or gained more than 5 pounds during their 5 week treatment period.

Obesity/School children (6-11 years)/Behavior modification/ Weight loss/Nutrition education/Research/Counseling/Rational Behavior Training (RBT)/Negroes.

81
Subcutaneous fat and nutrition in the first year of life.
Gagnon, G.; Brault-Dubuc, M.
Nutrition reports international; Apr 1979. v. 19 (4) p. 541-551. charts.
NAL: RC620.A1N8

Abstract: Obesity is a problem of increasing concern, and the feeding pattern of the new-born may be a determinant of infant obesity. Feeding patterns and caloric intake of 228 infants were studied in relation to skinfold thickness measures at one year of age. The type of feeding (breast or bottle), the age when the child was introduced to solid foods, and the frequency of meals did not produce significant differences in skinfold thicknesses. The authors conclude that more research is necessary to determine the influence of feeding pattern or caloric intake on later obesity. The activity factor should also be considered.

Subcutaneous fat measurements/Skinfold measurements/Infant feeding/Caloric intake/Breast feeding/Semisolid infant foods/ Milk/Obesity/Frequency of feeding.

82
Sweet preference and body fatness: neonatal data.
Grinker, J.A; Gropman-Rubin, J.; Bose, K.
Nutrition and behavior; 1986. v. 3 (3) p. 197-209. ill., charts.
NAL: QP141.A1N86

Extract: An examination of studies relating sensory responsiveness (for sweet detection and recognition threshold, as well as preference) fails to reveal systematic differences in the response of obese compared to nonobese individuals. Also, studies

report food consumption data that fail to show a direct linear relationship between sweet or sugar intake and body weight in normal-weight and obese individuals. Recent studies have, however, reported an enhanced fat-carbohydrate preference in the obese as compared with normal-weight individuals. The current study reports sucking responses to a variety of sucrose solutions (0.0612m-0.5m) by neonates from families with or without maternal obesity. No significant differences in any sucking parameters were seen in spite of increased birth weight and fatness in infants of obese mothers. These results from the "preobese" are in agreement with earlier data reporting no enhanced sweet preference in obese individuals. The possibility of different feeding strategies once infants receive solid foods by obese and normal-weight mothers was also examined.(author).

Obesity/Food preferences/Sweet tasting compounds/Infants/ Sucking/Maternal nutrition.

83
Unwarranted dieting retards growth and delays puberty.
Nutrition reviews; Jan 1984. v. 42 (1) p. 14-15.
NAL: 389.8 N953

Abstract: Examination of 14 children (ages 9-17) as outpatients to an endocrinology unit over a 2-year period revealed no organic problems despite 12 having short stature and 2 having delayed puberty. Diminished weight gain was followed by a fall-off in height 1-4 years later. Seven of the subjects had pubertal delay and all had retarded bone ages. Once a suitable diet was established, accelerated height growth occurred a few months after weight gain was established in all subjects in whom the epiphyses had not fused. All patients evidenced a caloric intake deficiency, poor eating habits, and a low protein intake. Recovery occurred without recourse to psychotherapy. Many of their preconceived ideas about eating, obesity, and health persisted in their families. However, reestablishment of a normal dietary pattern did not result in subsequent obesity. The cause and effect relationship found in this study may be another variant of anorexia nervosa. (wz).

Growth/Food beliefs/Nutritional intervention/Children/Obesity/ Diet improvement/Food habits/Clinical investigations/Behavior modification/Puberty.

84
Where do the heaviest children come from? A prospective study of white children from birth to 5 years of age.
Dine, Mark S.; Gartside, Peter S.; Glueck, Charles J.; Rheines, Larry.; Greene, Gail.; Khoury, Philip.
Pediatrics; Jan 1979. v. 63 (1) p. 1-7. ill., charts.
NAL: RJ1.P42

Abstract: A prospective follow-up study, from birth to age 5, of height, weight, and weight/height indices in 582 white children was carried out in a suburban private pediatric practice. There were significant correlations between height, weight, the ratio of height to weight, the ponderal index, and the Quetelet index achieved during the first year of life, and that attained at age 5 years. Breast-fed and bottle-fed infants did not differ in weight and weight/height indices. Additional findings.

Anthropometric measurements/Growth/Weight gain/Breast feeding/Bottle feeding/Infants (To 2 years)/Preschool children (2-5 years)/Height-weight ratio/Obesity.

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