

Book Reviews

Obesity and related diseases. J. S. Garrow. Churchill Livingstone, Edinburgh, U.K. 1988, £36.50. ISBN 0-443-03798-1. Pp. 340.

Obesity and weight control: The health professional's guide to understanding and treatment. Reva T. Frankle and Mei-Uih Yang. Aspen Publishers, 1988, \$52.50. ISBN 0-87189-869-1. Pp. 480.

There was a time when studies of human obesity focused on the psychology of overeating, dealing with such concepts as externality and dietary restraint. These days major advances in obesity research seem to come from molecular biology, epidemiology, genetics, nutrition and public health. Human obesities are increasingly viewed as a complex metabolic disorder of varying etiology and a major risk factor for diet-related chronic disease.

The 1982 Vassar Workshop on the Classification of Obesities was in part responsible for this shift in research emphasis. That landmark meeting addressed clinical applications of animal models, bringing into focus the multifactorial nature of human obesity. Following animal studies, human obesities were also seen as falling along a continuum, ranging from those that were familial or genetic to those that were largely diet-induced. The Vassar Workshop, and the subsequent 1985 NIH Consensus Development Conference, placed obesity in a more biological setting, recognized the importance of population-based studies, and helped to set research agenda for the decade.

We now recognize that there are multiple forms of human obesity. Diverse lines of research can therefore coexist. For example, adoption studies showing that some forms of obesity may have a genetic basis do not necessarily conflict with studies showing that other obesities can be diet-induced. Studies on individual variation show further that ontogeny of disease can also play a part, with metabolic changes occurring after multiple cycles of yo-yo dieting. One practical consequence of such new insights is that research patients are no longer recruited simply because they are overweight. Increasing attention is paid to the family history of obesity, the age at onset and the amount and distribution of body fat. Regarding treatment issues, most researchers and practitioners also agree that obesity is a complex metabolic disease deserving sophisticated professional care.

Why is it then that advances in research have not been followed by a revolution in treatment? Books aimed at the health professional and the general public still portray obesity as a problem of overeating and willpower, curable by a combination of exercise and adherence to a sensible low-calorie diet. Behaviour modification is promoted as the way to unlearn bad dietary habits, bring overeating under control and eliminate snacking between meals.

The gap between theory and practice has now been filled by two new books, which offer an overview of the latest in research together with some ideas for treatment. The concept is certainly sound. Health care professionals need to know more about the biological basis of obesity, while basic scientists should recognize the clinical realities of

dealing with obese patients. The hope, as always, is that advances in research will find applications in the diagnosis and treatment of different types of human obesity.

Obesity and Related Diseases (J. S. Garrow) is an updated and revised edition of *Treat Obesity Seriously*, first published in 1981. Intended as a critical view of the whole field of human obesity, it is an engaging, if sometimes opinionated, account of many key studies in the area. The author begins with the health implications of obesity, discussing the definition, prevalence and epidemiology of the disease. This is followed by a detailed review of measurement of body composition, energy intake and expenditure and a discussion of the etiology of obesity in man. A review of treatment possibilities and practical treatment strategies includes sections on diabetes, hypertension, pregnancy and childhood. The extensive reference section has been carefully brought up to date, and there is a brief Appendix listing energy and protein content of common foods.

Dr Garrow, a participant and speaker at the Vassar Workshop, recognizes that obesity is a matter of degree. However, one might take issue with his classification scheme, which does not resemble anyone else's. Obesity is defined on the basis of the Quetelet (or Body Mass) index—more properly an index of overweight than a measure of excess body fat. Normal-weight people (BMI 20–24.9) are classified as having Grade O obesity—not in itself a particularly useful concept. Grade I obesity is defined as BMI range 25–29.9; Grade II obesity as BMI range 30–40, while Grade III obesity exceeds BMI 40. While it can certainly be argued that medical complications increase with rising BMI values, these cutpoints seem somewhat arbitrary. In comparison, the definition of obesity adopted by the National Institutes of Health is based on BMI > 27.8, which roughly corresponds to the 85th percentile cutpoint by body weight.

Although suggested treatment options vary with the grade of obesity, the cornerstone of Dr Garrow's weight reduction therapy is the conventional balanced reduced-calorie diet (800–1200 kcal). Starvation diets are not recommended under any circumstances, while very-low-calorie diets are a possible strategy only for the most obese individuals (Grade III). Dr Garrow's own low-cost version of a low-calorie liquid diet is to drink three pints of whole-fat milk per day. He also shows inexplicable fondness for jaw wiring and waist cords, while casting doubts on the usefulness of anorectic and thermogenic agents, surgery and physical activity.

Obesity and Related Diseases makes lively reading since it is peppered with regular assaults on conventional wisdom. However, this iconoclastic approach sometimes goes a bit far. For example, in addressing the problems with the obese patients' food records, Dr Garrow states that the habitual intake of obese patients is almost impossible to measure. Although few people would disagree with that statement, more might take issue with the ancillary opinion that all 24-h diet histories are useless and with the implicit characterization of HANES diet records as a large database of bunk. Similarly, researchers studying animal models might possibly disagree with the expressed view that studies of small laboratory rodents have sometimes retarded progress in understanding human obesity.

Obesity and Weight Control (Frankle and Yang) espouses a multiple view of human obesity provided by some of the leading experts in the field. Research issues covered include mechanisms of appetite and body-weight regulation, body composition measures, energy regulation and metabolism, endocrine factors and biologic adaptation to starvation. Since the book is primarily intended to aid practitioners, it is largely devoted to a comprehensive review of treatment strategies. These include chapters on assessment, popular diets, nutritional counseling, behavior modification and eating management, exercise, pharmacotherapy and surgery as well

as weight maintenance and relapse prevention. The section of weight control in the life cycle is especially valuable. It is often forgotten that different treatment strategies apply in childhood and adolescence, during pregnancy and for adults and the elderly. The volume closes with a reviews of obesity in relation to major diet-related chronic diseases: cardiovascular disease, cancer and type II diabetes.

The multiplicity of viewpoints (an accurate reflection of state of the art research) is presented here at the cost of slight overlap. The definition of obesity is again one case in point, since no two authors seem to do it alike. Obesity is variously defined in terms of 20% excess body weight, excess body mass index or triceps skinfold, and with reference to ideal weight (Metropolitan Life), standard weight, or the 85th percentile cutpoints from the NHANES data. Although all these methods are in current use, how helpful are they to the health professional? Luckily, the editor (Frankle) takes the eminently sensible view, recommending weight reduction to people with excess body weight of 20% or more in the Metropolitan Height and Weight tables, using the midpoint of the range for a medium built person. Sensible, yes, but hardly high-tech.

The authors of both volumes recommend a multidisciplinary treatment plan, built around a balanced reduced-calorie diet, behaviour modification and exercise. While this may not sound revolutionary, the current belief that the type of therapy should be determined not so much by the amount of overweight but by the nutritional needs and health status of the individual is certainly novel. A further innovation would be to determine weight reduction goals not according to some abstract notion of ideal body weight but with reference to the health and past weight history of the patient. Research is moving towards the characterization of different types of human obesity. When are we going to have to have specialized treatment modalities targeted at each subgroup?

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