Introduction

This book is rather different from most written on eating disorders. Its sole purpose is to provide assistance to health professionals in the understanding, treatment, and management of patients with eating disorders, particularly that part of their treatment that is best described as medical. It is concerned primarily with anorexia nervosa (AN), as this is the member of this group of illnesses that has the most serious medical manifestations, the greatest and longest lasting physical morbidity, and the highest mortality rate. However, relevant issues relating to the other eating or dieting disorders but not obesity, are also discussed.

The intended audience is predominantly medical practitioners, psychiatrists, physicians, pediatricians, and general practitioners – as one of them should always be responsible for the physical health of the eating disorder patient. It is envisaged that this book will also be helpful to other health professionals involved with these patients, particularly nurses, dietitians, and psychologists. The authors intend to produce another book on the same theme but aimed at patients, their families, and carers as well as other stakeholders such as schoolteachers and counselors.

This book is written partly as a reference textbook and partly as a manual for consultation. We suggest that the reader studies Chapters 1–5, leaving the other chapters until the need arises or in order to satisfy that most persistent of intellectual urges, their curiosity. The bibliography found at the back of the book leads the reader to those papers that the authors deem to be the most noteworthy on the various issues surrounding the medical management of eating disorders.

Despite the rather authoritarian and dogmatic format, the principal authors acknowledge the limitations of their expertise. They have between them more than 60 years of experience in treating eating disorder patients. Whatever success they may have had is because they have stood on the shoulders of those

who went before them. They trust that discussion and feedback on the book will improve their clinical practice in future.

Eating disorders are orphan conditions: everyone has opinions about them, but no discipline is willing to assume overall responsibility for their care. At one extreme, severe AN with cachexia, multiple nutrient deficiencies, blood and electrolyte abnormalities, and organ dysfunction is a serious physical disease with a chronic course and a high mortality rate. At the other, excessively restricted eating, obligatory exercise, and the occasional use of purging and vomiting are so common in many developed societies, particularly among young women and adolescent girls, as to be almost the norm. In between these extremes are the psychiatric illnesses of moderate anorexia nervosa, bulimia nervosa (BN), atypical or eating disorder not otherwise specified, and perhaps binge eating disorder. These are mental illnesses rather than physical diseases, although they may have serious physical manifestations.

The dichotomy between mental "illness" and physical "disease" implies an acceptance of a dualistic view of body and mind, or soma and psyche. The authors do not wish to endorse or refute this dualism. The opposition of dualism to physicalism was a topic of philosophical debate long before Descartes' influential writings in the fourteenth century, and it should remain so. Health care workers and clinicians are practical persons, and, as such, they are concerned with the practical issues of maintaining health and combating ill health, not with esoteric issues of ultimate reality. From a clinical viewpoint, both the unified and dualistic approaches have advantages. The unified view of body and mind is essential in that almost all of medicine is psychosomatic medicine; psychological factors influence physiological processes and may lead to somatic pathology; physical disease affects the mind both directly and indirectly. Thus, from a psychological perspective, we support a unified concept of body and mind. But in the real world of practice, we recognize that medicine and the health professions involve two complementary approaches: one is concerned with the anatomical structure and physiological processes of the body and their distortions. The other is concerned with the contents of mind, with emotion, and with behaviour and its motivation. The diligent health care worker keeps both in mind but is careful to distinguish in practice between that which requires physical treatment and that which requires psychological care. Perhaps nowhere else in medicine is the failure to make this distinction as disastrous as it is in respect to anorexia nervosa and its related illnesses. And, paradoxically, perhaps nowhere in medicine is it as important to run the two approaches in a complementary fashion. The therapist – or, better, the team of therapists – must be physician, nurse, and dietician, as well as psychiatrist, psychologist, and mental health nurse.

Clinicians treating patients with eating disorders have a complex task. First, they must identify and treat that physical disease that is caused by the dysfunctional behavior and that is manifest in the pathology of malnutrition, chemical disturbance, and organ dysfunction. Next, they must attend to the mental illness that may or may not have some physical basis (we do not know as yet). Third, they must provide help and support in respect to those aspects of these disorders that are best considered as reactions to the dilemma of controlling weight and shape in a society in which obesity has reached epidemic proportions and in which there are strong social pressures to be thinner than most people can achieve.

Good luck to those of you who have chosen to become involved in the management of these demanding patients. Please remember: eating disorders are legitimate illnesses. Those suffering from them deserve the same care and consideration as other sick people.

PART I

The medical perspective

Chapter 1

Definitions and epidemiology

1.1 Nutritional disease and disordered eating

Disordered eating behavior is a common cause of nutritional disorder. The term is used to indicate those instances in which the nutritional disturbance arises from the person's eating behavior rather than from physical or socioeconomic factors. Fasting for religious reasons or as a means of political manipulation are examples of the latter; only rarely do they cause major problems. In many countries, overeating has become the most common form of disordered eating, and its nutritional consequence, obesity, is a major problem area for public health. Disordered eating is not seen as an illness per se, and the response of health workers is to provide nutritional education and to encourage motivation in changing eating practices. Unfortunately, these efforts are often unsuccessful, and insufficient sympathy and assistance are available for those people whose eating is disordered.

Overweight and obesity

Overweight means that weight is higher than "normal," where "normal" may relate to a population norm or to the likelihood of disease. However, the excess weight may be due to excess fluid, muscle, feces, urine, clothing, intra-abdominal fluid, or pregnancy. "Obesity," on the other hand, means there is an excess of body fat. This excess usually results from a combination of increased caloric intake and decreased activity. Obesity is one of the major health problems of the developed world and is becoming much more common in developing nations. An increase in intra-abdominal fat is the primary cause of insulin resistance, which in turn leads to hypertension, high blood fats, diabetes mellitus, and atherosclerosis. The most common medical complications stemming from obesity are listed in Table 1.1.

Table 1.1. *Medical complications of obesity*

Cardiovascular
Hypertension
Atherosclerotic cardiovascular disease, including myocardial infarction
Ventricular hypertrophy and congestive heart failure
Cerebrovascular accident
Endocrine
Diabetes mellitus
Hyperlipidemia
Gastrointestinal
Gall bladder disease; risk increased further during rapid weight loss
Fatty liver, portal inflammation, and fibrosis – non-alcoholic steatohepatitis
Metabolic
Hyperlipidemia, especially hypertriglyceridemia
Gout
Skeletal
Degenerative osteoarthritis
Increased risk of hip fracture
Pulmonary
Sleep apnea
Obesity hypoventilation syndrome (Pickwickian syndrome)
Other medical
Increased cancer risk, especially breast, uterus, colon, prostate
Increased surgical risk

Obesity is not considered a psychiatric disorder because it is not associated with consistent behavioral and psychological features. However, psychological symptoms such as unhappiness and depression are often present, especially in women. There is a role for mental health input into the support and counseling of obese people, particularly children, before they are caught in a vicious cycle of stigma, decreased physical activity, and alternating overeating and attempted food restriction (dieting). Primary prevention of obesity is paramount because of the limited success of maintaining weight that is lost. Unfortunately, the eating disorder lobby and the obesity lobby may give contradictory messages to health professionals and the general public, one condemning dieting and food restriction and the other promoting them. A balanced approach to promoting healthy eating and exercise is required. Although this text will not focus on obesity, a basic knowledge of obesity helps in the understanding and treatment of patients with eating disorders.

Eating or dieting disorders

Eating disorders refer to those instances of disordered eating that are considered as illnesses because they are associated with a consistent cluster of behavioral and psychological features, imply a predictable course, and are seen by patients, their carers, and health workers as constituting a clinical problem requiring treatment. Because restricted eating, with or without reactive overeating, is involved in most cases, they might better be designated as dieting disorders. Because their characteristics are behavioral and psychological, they are included among psychiatric disorders.

There are two well-recognized syndromes of eating or dieting disorders: anorexia nervosa (AN) and bulimia nervosa (BN). Both are mental disorders included in the *Diagnostic and Statistical Manual* (DSM) IV (1994) and International Classification of Diseases (ICD)-10 (1992) classifications. AN is a disorder of low prevalence, often with a prolonged course, severe medical and psychiatric morbidity, and high mortality. BN is a disorder of rather higher prevalence, with a better prognosis and a shorter course. Both disorders are defined by diagnostic criteria that have changed over time, and this has contributed to difficulty in estimating their frequency.

There is a third category of people with eating disorders who do not fulfill the diagnostic criteria of AN or BN. They are grouped under the heading "atypical eating disorders" or "eating disorders not otherwise specified" (EDNOS). The term refers to a heterogeneous group of problems. It includes people with a milder form of AN or BN (so as to fall short of diagnostic criteria), those who have recovered partially from these illnesses, those who may progress to AN or BN, and truly atypical presentations as with hypochondriasis, mania, depression, and schizophrenia. Significant psychiatric symptomatology may coexist in this group, such as depression, anxiety, obsessionality, and substance misuse. The early identification and intervention of eating disorders involves recognition of people who are still at the atypical or EDNOS stage.

While some people with eating disorders do have nutritional problems as a result of their illness (the under- and malnutrition of AN, the obesity of some atypical eating disorders), others come to medical attention because of the associated psychiatric symptoms or the deleterious effects of specific behaviors, such as vomiting and purging.

Binge eating disorder (BED), which indicates bulimia without compensatory behaviors to prevent weight gain, is more common than AN or BN and is usually included in the EDNOS group. BED is associated with obesity and has a better prognosis than BN. BED may respond to psychological and dietary treatment.

Table 1.2. *Presentation of anorexia nervosa*

Deliberate loss of weight
Extreme reluctance to eat sufficient energy-rich foods to regain and maintain a normal, healthy state of nutrition
Characteristic psychopathology
Associated psychiatric symptoms
Associated physical dysfunctions

1.2 Demography and epidemiology

Eating disorders are associated with significant psychosocial and physical disability and impose a heavy burden on the community, particularly in girls and young women aged 15–24 years, where they rank in seriousness with depression, bipolar disorder, alcohol dependence, and harmful substance use. Depending on how strictly diagnostic criteria are applied, eating disorders may be seen either as high-prevalence conditions, usually of only moderate severity, or as low-prevalence conditions of major severity.

Anorexia nervosa

AN is a low-prevalence disorder, often with a prolonged course and with serious physical and psychiatric manifestations (Table 1.2). Females are ten times more likely than males to contract the disorder. The lifetime risk for females is reported variously to be between 0.2% and 0.5%. The figures are comparable with other serious, low-prevalence conditions, such as schizophrenia (lifetime risk of 1.0%) and insulin-dependent diabetes mellitus, which, despite their relatively low prevalence, have a major impact on health and health services because of their chronic course and serious nature.

Psychiatric and physical morbidity are prominent features of AN, which has the highest mortality rate of any psychiatric disorder. Studies of clinic populations have reported consistent findings of outcome and mortality. At five-year follow-up, only 75% of people with AN who have attended specialist clinics are even partially recovered, 20% have become chronic, and 5% have died. At 20-year follow-up, about 80% are recovered, 15% have died, and 5% remain chronic. These levels of chronicity and cumulative mortality indicate the need for long-term continuing care. People with AN are more than 30 times more likely to die as a result of suicide than the general population, and deliberate suicide accounts for more than half of all deaths from AN. Chronic AN confers

a degree of disability similar to that of chronic schizophrenia. Milder forms of the illness that do not get to the point of requiring specialist treatment have a far better outcome.

There is a marked gender bias, with more than 90% of cases being female. Despite anecdotal reports, there is no good evidence that the proportion of males is increasing. However, there is evidence that the range of age of onset is becoming wider, with more prepubertal children and older people being affected. Suggested reasons as to why AN is more common in females include physiological mechanisms (the effects of estrogen and zinc on neurotransmitters, and the fact that weight gain and excessive fatty tissue associated with puberty are more prominent in girls) and psychological factors (higher levels of concern about weight and shape and their importance for self-esteem in females). AN is no longer predominantly a disorder of middle-class people, although it may have been so 50 or 100 years ago. In developed societies today, it is distributed fairly evenly between the social classes; it is also found in developing countries.

Diagnostic criteria of anorexia nervosa

The clinical features of AN are easily recognized, and the diagnosis is usually made with high reliability between clinicians. The diagnostic criteria of the two major classificatory systems in current use, DSM IV and ICD-10, are very similar. All of the following signs and symptoms listed in the World Health Organization's (WHO) ICD 10th edition are required for the diagnosis:

- The patient's body mass index (BMI) is 17.5 or less, or body weight is maintained at least 15% below the expected or average body weight for the patient's age and sex. If the patient is prepubertal, then the expected weight gain does not occur during the growth period. (Calculation of BMI is discussed below.)
- Weight loss is self-induced and/or sustained through the avoidance of "fattening" foods and through the utilization of other weight-loss tactics.
- Body image distortion and a morbid dread of fatness, such that the patient imposes an unhealthy and unreasonably low weight threshold on themselves.
- There is evidence of endocrine disorder in the form of amenorrhea among women and loss of sexual desire and potency among men. There may also be elevated levels of growth hormone and cortisol, alterations to the metabolism of thyroid hormone, and abnormal insulin secretion.
- In prepubertal patients, puberty is delayed but is often completed normally after recovery.

Bulimia nervosa

BN is a clearly defined psychiatric disorder of moderate severity and with higher prevalence than AN. Between 1.1% and 4.2% of the population are affected. There is a bias towards females, although this is not as strong as in AN. Adolescent girls and young women are more vulnerable, but males and older females are also affected. It is a cause of major psychiatric morbidity. Depression is often prominent and may be intrinsic to the syndrome or a comorbid diagnosis. It is sometimes associated with various forms of personality disorder, with impulsive, dangerous behavior, and with substance abuse.

Atypical eating disorders or eating disorders not otherwise specified

Atypical eating disorders, or EDNOS, are poorly defined and underresearched. The prevalence of EDNOS has not been determined, but it is generally accepted that it is far more common than either AN or BN. Even a single subcategory of EDNOS, BED, which implies bulimia without compensatory behaviors, has been shown to be more common in women attending primary health care than either of the better-recognized disorders.

Boundary issues

While the boundaries between AN and BN and other eating disorders are defined clearly by the diagnostic criteria of the WHO and the American Psychiatric Association (APA) (see Tables 1.3–1.6), the boundary between atypical eating disorders (EDNOS) and "disordered eating" is unclear. The term "not otherwise specified" is easy to understand, i.e. not meeting criteria for the diagnosis of AN or BN. But when does an eating disorder differ from disordered eating? What makes it an illness, rather than an unhealthy behavior, like cigarette smoking?

How does one distinguish between an eating disorder patient (AN, BN, or EDNOS) and a person whose eating behavior is unusual and unhealthy (disturbed or disordered eating)? Eating disorders differ from disordered eating in that patients complain about their eating and seek help for it. However, this is a fairly dubious distinction, as many young women are secretive about their eating and weight concerns or regard them as "normal" even when they are clearly unhealthy. This confusion leads to the contradictory ways in which eating disorders are portrayed in the lay press. Dieting and weight loss rather than weight maintenance are promoted, especially for young women, although excessive emaciation is recognized as abnormal.