Health-threatening behaviors are those responses and life-style patterns that deleteriously affect physical well-being and establish risk for subsequent medical illness. Problems of this type are common within contemporary society: cigarette smoking, alcohol consumption, poor exercise habits, and high-cholesterol diets. Intervention to reduce these and similar risk factors is a primary therapeutic goal within behavioral medicine. Such efforts are classified as secondary prevention (Luiselli, 1987; Masek, Epstein, & Russo, 1981).

Many developmentally disabled persons engage in health-threatening behaviors. Typically, these consist of responses that are functionally controlled by organismic and operant variables. Responding of this type usually occurs at extremely high frequencies and persists for prolonged periods unless systematic treatment is introduced. In some cases, the resulting conditions can actually be life terminating. Oftentimes, multiple behaviors occur concurrently.

This chapter addresses the assessment and treatment of health-threatening behaviors in developmentally disabled individuals. It begins with a discussion of the crucial role of applied behavior analysis in determining the variables that maintain problematic responding and how this information is used to select an appropriate method of intervention. The major portion of the chapter consists of a review of treatment methodology for several health-threatening behaviors frequently encountered among handicapped populations. For each dysfunction, incidence rates are reported, treatment techniques are defined, and critical procedural guidelines are highlighted. A concluding section briefly summarizes several issues of relevant concern.

Functional Assessment Within Applied Behavior Analysis

The topic of behavioral assessment has been considered at length in the professional literature (Barlow, Hayes, & Nelson, 1984; Hersen & Bellack, 1981) and emphasized throughout chapters in this book. Proper behavioral assessment requires the operational definition of target responses, the design of a recording protocol, repeated measurement within clinically relevant settings, and accurate determination of reliability and validity. Adherence to these guidelines is essen-
tial to identify empirically the incidence of behavior before, during, and following intervention. In this way, the effects of treatment can be discerned objectively.

Another goal of behavioral assessment is to identify the variables that control and maintain the responses targeted for intervention. This process entails observing the client within varied setting conditions while focusing on events that precede and follow his or her behavior. By functionally analyzing sources of control, treatment programs can be formulated accordingly. There are several influences that can affect maladaptive responding.

**Organismic**

This category includes neuromuscular, anatomical, and biochemical influences, namely a person's physiology. As an example, problems in self-feeding, chewing, and swallowing food among many individuals with cerebral palsy can be linked directly to deficits of the motor response system. Similarly, a child with a cleft palate may experience feeding difficulties due to associated structural abnormalities. The severe behavioral pathology of self-injury is, at times, an outcome of organismic dysfunctions such as biochemical deficiencies in Lesch-Nyhan disease and increased pain thresholds in Riley-Day syndrome (Cataldo & Harris, 1982).

**Anxiety-Provoking Antecedents**

When environmental stimuli become paired with aversive experiences, those stimuli develop conditioned properties such that exposure to them can provoke anxious responding. Fears and phobias represent primary clinical disorders stemming from such conditioning. A phobia is manifested by increased physiological arousal when confronted with conditioned stimuli, followed by avoidance of these antecedents. Such “two-factor” learning (Wilson & O'Leary, 1980) is common in patients subjected to invasive, painful, or noxious medical procedures. The distress associated with such diagnostic and therapeutic approaches may result in problems such as avoidance of services (e.g., dental care), anticipatory discomfort (Redd & Andrykowski, 1982), and agitated behavior (Varni, 1983), to name a few.

**Sensory Reinforcement**

Some behavior disorders, most typically stereotypy, can be sustained by the sensory consequences they produce. Research by Rincover and associates (Rincover, 1978; Rincover, Cook, Peoples, & Packard, 1979), for example, has demonstrated that various forms of self-stimulation displayed by developmentally disabled children can be reduced dramatically by blocking or masking response-elicited sensory events. In one case, a child's object spinning that appeared to be reinforced by auditory stimulation was decreased by carpeting a tabletop such that accompanying sound was prevented. In another study, the visually reinforced finger and hand manipulation of two children was reduced to low levels when they wore blindfolds. Sensory reinforcing effects are also