

BMI for age for the patient.

$$\frac{\text{Weight in pounds} \div \text{Height in inches} \times 703}{\text{Height in inches}}$$

The initial assessment of obese children and adolescents should include screening to evaluate for comorbidities. The history is an important guide to determine the workup. A complete physical examination is important. Some areas to focus on include (1) skin for stretch markings and discolorations (e.g., acanthosis nigricans), (2) joints for swelling and evidence of pain, and (3) airway for evidence of obstruction and enlarged tonsils. Basic laboratory studies include a fasting lipid panel, fasting insulin level, fasting glucose hepatic enzymes, including gamma-glutamyl transferase (GGT), and in some institutions, hemoglobin A1c. Other studies, such as a polysomnogram (sleep study), metabolic studies, and radiographic evaluations, may be added based on the history and physical examination. These assessments may determine whether the patient needs a referral to specialty services for more focused evaluation and treatment, such as endocrinology (insulin resistance, diabetes), hepatology (elevated liver enzymes, NAFLD), orthopedics (Blount disease), or pulmonary medicine (sleep-disordered breathing, continuous positive airway pressure [CPAP]).

### **Therapeutic Management**

The best approach to the management of obesity is a preventive one. Early recognition and control measures are essential before the child or adolescent reaches an obese state. Health care providers need to educate families about the medical complications of obesity.

Currently, the only treatments recommended for children are diet, exercise, behavior modification, and in some situations pharmacologic agents, such as orlistat. The treatment of obesity is difficult. Many approaches do not achieve long-term success. The average individual only loses about 5% to 10% of his or her weight with available therapies. Losing weight can have a significant positive effect on many comorbidities, but unfortunately, the lost weight is frequently regained in a year or two. A number of