

phenylalanine diet even though calcium, phosphorus, and magnesium intakes are higher than normal.

Nursing Care Management

The principal nursing considerations involve teaching the family regarding the dietary restrictions. Although the treatment may sound simple, the task of maintaining such a strict dietary regimen is demanding, especially for older children and adolescents. In addition, mothers of children with PKU may have to spend many hours preparing special foods, such as low-phenylalanine snacks. Foods with low phenylalanine levels (e.g., vegetables, fruits, juices, and some cereals, breads, and starches) must be measured to provide the prescribed amount of phenylalanine. High-protein foods, such as meat and dairy products, are eliminated from the diet. The sweetener aspartame (NutraSweet) should be avoided because it is composed of two amino acids, aspartic acid and phenylalanine, and if used will decrease the amount of natural phenylalanine that is prescribed for the day. However, medications that use aspartame as the sweetener may be used if no other nonaspartame medications are available because the content of the artificial sweetener is minimal or can be counted in the total daily phenylalanine allowance.

Maintaining the diet during infancy presents few problems. Solid foods such as cereal, fruits, and vegetables are introduced as usual to the infant. Difficulties arise as the child gets older. Studies show a gradual decline in diet compliance with consequent increases in blood phenylalanine levels during early adolescence and young adulthood ([Channon, Goodman, Zlotowitz, et al, 2007](#)).

A decreased appetite and refusal to eat may reduce intake of the calculated phenylalanine requirement. The child's increasing independence may also inhibit absolute control of what he or she eats. Either factor can result in decreased or increased phenylalanine levels. During the school years, peer pressure becomes a major force in deterring the child from eating the prescribed foods or abstaining from high-protein foods, such as milkshakes and ice cream. Limitations of this diet are best illustrated by an example: a quarter-pound hamburger may provide a 2-day phenylalanine allowance for a school-age child.

The assistance of a registered dietitian is essential. Parents need a