

INFANT'S FEEDING: A COW'S MILK-BASE FORMULA

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Розглянуто питання штучного годування немовлят за допомогою продуктів, створених на основі коров'ячого молока.

Recent surveys indicate a decline in both initiation and continuation of breast-feeding. Most normal full-term infants who are not breast-fed receive a cow's milk-base formula; very few receive fresh cow's milk. Milk-free formulas, including soy and hydrolyzed casein formulas, are fed to infants who do not tolerate milk.

Nutrients secreted in human milk vary and reflect individual biochemical variability among women, the diet consumed, the stage of lactation, and the length of time the mother has breast-fed.

Both human milk and cow's milk are complex liquids containing more than 200 components in the fat-soluble and water-soluble fractions.

Human milk provides similar amounts of water and approximately the same amount of energy as does cow's milk. The nutrient sources of the energy are, however, different. Protein supplies approximately 7% of the kcalories in human milk and 20% of the kcalories in cow's milk; the carbohydrate lactose supplies approximately 42% of the kcalories in human milk and 20% of the kcalories in cow's milk. The percentage of kcalories supplied by fat is similar in both milks.

Casein and whey constitute the protein in both human milk and cow's milk. Amounts of whey protein are similar in each.

The amino acid composition of human milk meets the needs of the neonate with an immature enzyme system, whereas that of cow's milk may be inappropriate.

The total fat content of human milk is similar to that of cow's milk. Saturated fatty acids predominate in cow's milk.

Both cow's milk and human milk contain lipoprotein lipase in the cream fraction that is stimulated by serum and inhibited by bile salts. Human milk contains an additional lipase that is stimulated by bile salts and contributes significantly to the hydrolysis of milk triglycerides. These enzymes contribute significantly to higher percentage absorption of human milk fat as compared with butter fat.

Various combinations of milks, supplements and semisolid food can provide an adequately nourishing diet for infants. A lot of properly constructed infant formulas are marketed that have been proved to support normal growth and development in infants.