

improved brain function and visual acuity when compared with those receiving formula without DHA and AA ([Tai, Wang, and Chen, 2013](#)). Sources for LCPUFAs include egg yolk lipid, phospholipids, and triglycerides. There do not appear to be any adverse effects associated with LCPUFA supplementation in preterm infants with respect to the incidence of bronchopulmonary disease, necrotizing enterocolitis, or other conditions of prematurity ([Kleinman and Greer, 2014](#)).

The US Food and Drug Administration regulates the manufacture of infant formula in the United States to ensure product safety. Standard cow's milk-based formulas are sold as low iron and iron fortified; however, the American Academy of Pediatrics states only the iron-fortified formulas meet the requirements of infants ([Kleinman and Greer, 2014](#)).

There are four main categories of commercially prepared infant formulas: (1) **cow's milk-based formulas**, available in 20 kcal/fl oz as liquid (ready to feed), powder (requires reconstitution with water), or a concentrated liquid (requires dilution with water); (2) **soy-based formulas**, available commercially in ready-to-feed 20 kcal/fl oz powder and concentrated liquid forms, commonly used for children who are lactose or cow's milk protein intolerant; (3) **casein- or whey-hydrolysate formulas**, commercially available in ready-to-feed and powder forms and used primarily for children who cannot tolerate or digest cow's milk- or soy-based formulas; and (4) **amino acid formulas**.

The American Academy of Pediatrics Committee on Nutrition recommends the use of soy protein-based formulas for infants with galactosemia and hereditary lactose intolerance and when a vegetarian diet is preferred ([Kleinman and Greer, 2014](#)). For infants with documented allergies caused by cow's milk, extensively hydrolyzed protein formula should be considered, because up to 14% of these infants also have a soy protein allergy. Some researchers have speculated that exclusive use of soy formula in infants may adversely affect their endocrine, reproductive, and immune systems. This concern is related to isoflavones in soy and possible alteration in sexual maturity, immune response, and thyroid function ([Barthold, Hossain, Olivant-Fisher, et al, 2012](#); [Chen and Rogan, 2004](#); [Greim, 2004](#)). Others report no long-term untoward effects from the ingestion of isoflavones in soy formula