



**FIG 22-4** **A**, Cleft lip (CL) repair at 16 weeks old. Note the elbow restraints. **B**, CL 3 weeks after surgical repair. (Photos courtesy of E. Danks.)

Cleft lip and palate (CL/P) is more common than CP alone and varies by ethnicity. The occurrence is 1 in 750 births in whites, 1 in 500 births in Asians, 1 in 300 births in American Indians, and 1 in 2500 births in African Americans ([Tinanoff, 2016](#)). CL/P tends to be more common in males, and isolated CP occurs more frequently in females.

## **Etiology**

Cleft deformities may be an isolated anomaly, or they may occur with a recognized syndrome. CL/P and CP are distinct from isolated CP. Clefts of the secondary palate alone are more likely to be associated with syndromes than are isolated CL or CL/P.

Most cases of CL and CP have multifactorial inheritance, which is generally caused by a combination of genetic and environmental factors. Researchers do not yet know which gene(s) are responsible for clefting or to what extent environmental factors impact the developing structures. Exposure to teratogens such as alcohol,