Retinopathy of prematurity (ROP) is a potentially blinding disease affecting the retinas in premature infants. The retinas are the light-sensitive linings of the insides of the eyes. In infants born prematurely, the blood vessels that supply the retinas are not yet completely developed. Although blood vessel growth continues after birth, these vessels may develop in an abnormal, disorganized pattern, known as ROP. In some affected infants, the changes associated with ROP spontaneously subside. However, in others, ROP may lead to bleeding, scarring of the retina, retinal detachment and visual loss. Even in cases in which ROP changes cease or regress spontaneously, affected children may have an increased risk of certain eye (ocular) abnormalities, including nearsightedness, misalignment of the eyes (strabismus), and/or future retinal detachment. The two major risk factors for ROP are a low birth weight and premature delivery. ROP is a leading cause of visual impairment and blindness in infants in many industrialized and “middle-income” countries. As noted above, an increased incidence of ROP in the 1940s and 1950s was shown to be due to the use of high concentrations of supplemental oxygen in premature infants. The number of cases decreased with measures to monitor oxygen blood levels carefully. However, with modern advances in care and technology in neonatal intensive care units (NICUs), the incidence of ROP has increased as more premature infants of lower birth weights survive. Careful control of blood oxygen levels reduces the risk of ROP without compromising measures necessary to sustain life. Again, supplementary oxygen alone does not appear to be sufficient for the development of ROP. (For more, see “Causes” above.)