

and cardiac output and blood flow to the ascending aorta was about 200 mL/kg/min (2). Although blood flow in the descending aorta was not known, it was presumed to be much less than blood flow in the ascending aorta. Therefore, blood flow in the descending aorta was much less than fetal blood flow in the lamb. Flow through the descending aorta and the common iliac artery in the fetal and neonatal rat is not known. The diameter of the infrarenal aorta decreased from 0.67 to 0.36 mm 1 d after birth in this study. This change corresponds to decreased blood flow to 16% of the fetal flow, according to the theoretical formula.

Changes were rapid and completed in a day or two after birth in the rat. Although these changes in aortic size have not been studied in human neonates, they are presumably slower in the human because of slower growth and closure of fetal channels. For example, the ductus arteriosus closes about 15 h or more after birth in human neonates (2) and closes about 1 h after birth in neonatal rats (7). Body weight doubles within 3 mo after birth in human infants and within 5 d of age in neonatal rats (15).

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