

PagLab Protocols

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Carotid artery and jugular vein catheterization in rats.

Rats will be food restricted for 12h prior to surgery. Sterile instruments and operating area will be used. Rats will be shaved (neck and back between shoulder blades) and the shaved regions wiped with betadyne. Rats will then be anesthetized with an IP injection of pentobarbital sodium (initial dose of 50 mg/kg; supplemental doses of 15 mg/kg as needed). Following loss of pedal and corneal reflexes a 2 cm incision is made on the ventral aspect of the neck. The left carotid artery and right jugular vein are isolated. Flow through the vessel is occluded by placing forceps underneath it. Loose ligatures are placed around each vessel, a small incision is made in the vessel and a catheter (0.023" I.D., Clay Adams) is inserted and advanced to either the aortic arch (~3 cm for a 300 g rat) or the vena cava (~2 cm for a 300 g rat). Catheters are secured by tightening the ligatures and the catheter is flushed with saline and filled with heparinized saline. The catheters are plugged and exteriorized on the dorsal aspect of the neck.

Postoperative treatment typically involves daily monitoring of the rats. If needed, children's Tylenol can be included in the drinking water.