

NeuroVR™

The world's most advanced virtual reality neurosurgery simulator

Elevate neurosurgery training to a new level

- See lifelike renderings of brain tissue, blood vessels and tumors
- Hear realistic sounds from instruments
- Feel tactile feedback at your fingertips



The future of neurosurgical training

Today's neurosurgery residents face time restrictions in acquiring technical skills and proficiencies before they operate on real patients. Practicing neurosurgeons are challenged to meet the growing certification requirements and master new techniques. With NeuroVR, both residents and surgeons can practice open cranial and endoscopic brain surgery skills and procedures in a realistic training environment.

NeuroVR replicates an open neurosurgical procedure, including the stereoscopic view and ergonomics of an operating room microscope. The simulator captures objective metrics on technique, performance, and completion time. With modules ranging from fundamental instrument handling to tumor resection and meningioma, NeuroVR allows self-directed practice in a risk-free environment, resulting in reduced medical errors and better patient outcomes.



Features

- Extensive range of exercises derived from actual patient images
- User-friendly graphical interface with touchscreen
- Adjustable ergonomic design
- Switch between stereoscopic microscope view and 2D indirect endoscopic view
- Realistic scope lens blurring and rinsing
- Primary instrument set with realistic handles
- Automatic recognition as you switch instruments during the exercise
- Immediate and cumulative metrics to track proficiency goals
- Performance feedback includes procedure duration, errors and instrument force

Modules available with NeuroVR

Instrument handling

- Suction
- Ultrasonic aspirator
- Bipolar forceps
- Microscissors

Fundamental skills

- Burr hole selection
- Endoscopic ventricular landmarks
- Endoscopic ventricular test
- Endoscopic nasal navigation
- Nasal debridement
- Hemostasis (3 cases)
- Tumor debulking (4 cases)
- Tumor resection (2 cases)
- Fiber exposure and cutting
- Aneurysm exposure



Endoscopic surgery

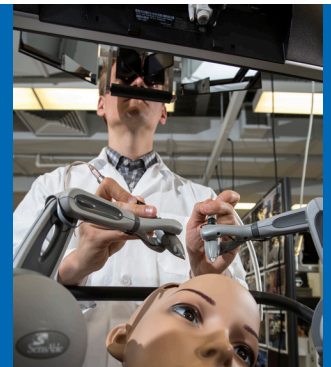
- Sphenoid ostium drilling
- Ethmoidectomy
- ETV floor perforation

Microsurgery

- Meningioma (3 cases)
- Glioma

About NeuroVR

In 2008, the National Research Council of Canada initiated the NeuroTouch – now known as NeuroVR – research project in collaboration with teaching hospitals throughout Canada. Since 2012, a growing number of early adopters have validated training scenarios and published validation studies. In 2016, CAE Healthcare partnered with the NRC to become the exclusive worldwide distributor for NeuroVR.



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