

Neurosurgical instruments

An outstanding neurosurgical practice is not only based on the surgeon's skills, but also in great extent on the equipment's accuracy.

Depending on the exact indication the professional intends to treat, the equipment requirements might differ, but just like in general surgery, there are a few instruments any neurosurgeon will need to correctly perform an invasive procedure.

These instruments are often derived from general surgery tools; the determining criteria of neurosurgical instruments is their high-level precision, the one [intrinsic feature](#) shared by all tools that find application in neurosurgery. This is a very important aspect for the positive result of the surgery.

Among neurosurgical instruments, surgical micro scissors, micro forceps and micro needleholders crafted from high quality stainless steel are common: the ones used in neurosurgery usually have either round or flat spring handles, often serrated, for a secure handling with both left and right hand. In general, their overall length varies from 140 to 300mm. To close the skull after the surgery, the surgeons usually use either mesh plates, burr hole plates or any other plates and screws. These plates and screws are made from titanium and are permanent implants. They are available in 3 different systems. 1,2 mm, 1,6 mm and 2,0 mm in order to always have the suitable size and strength of implant depending on it's application.

A very important role also belongs to the different types of cervical and lumbar retractors to ensure a good and small access to the operating field. They allow surgeons best visibility and handling by performing the surgery. Kerrison punch and rongeurs of different shape and length are used for cervical or lumbar surgeries.