

Even rare conditions are given top priority here and are operated on with a high degree of expertise

The Department of Neurosurgery at Duisburg Hospital, part of the Wedau Hospitals group, has many years of proven experience in treating neurosurgical illnesses, including the severest of cases. This wealth of expertise was established by the department's first Senior Consultant, Professor Bettag, and his successor, Professor Werner Hassler. Professor Martin Scholz has been Senior Consultant since October 2009. A respected specialist in microsurgery and endoscopy, he is building on the tradition laid down by his predecessors.

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The department is one of Germany's largest neurosurgical departments, serving patients from Duisburg and the surrounding area, other regions of Germany as well as many Arab countries, Russia and other countries of the former Soviet Union. The latest operating technologies are used in the department, such as a special mouth-controlled surgical microscope that ensures that both of the surgeon's hands are free to perform the operation at all times.

The three operating theatres, fitted with state-of-the-art equipment, are used for microsurgery and endoscopy. As well as common neurosurgical conditions, the department treats a high number of rare illnesses.

Vascular neurosurgery employs modern videoangiography and micro-Doppler sonography to operate on conditions including spinal fistulas, haemangioblastomas, angiomas, complex aneurysms and EC/IC bypasses.

Paediatric neurosurgeons collaborate closely with the paediatrics department to operate in cases such as calvarial deformities and hydrocephalus – including in children under the age of two – using neuroendoscopic procedures and navigated HD technology. Special attention is paid to ensuring that children in particular are exposed to as little radiation as possible during their treatment by using MRI and ultrasound scans and not CT, i.e. without X-rays. Specific neurosurgical diseases that occur in children are encephalocele, spinal lipoma, neurocytoma and many other rare conditions.

Neuro-oncology – neurosurgery for the treatment of cancer – deploys cutting-edge medical technologies such as neuronavigation, intraoperative ultrasound and 5-ALA, a technique in which a fluorescent material is used to indicate the edges of a tumour in the head so that it can be removed more precisely. Special ultrasound technology shows up blood vessels in the head, helping to prevent cerebral infarctions and bleeding. Working with the haematology & oncology department and the radiotherapy unit, the Department of Neurosurgery prepares an individual treatment plan for each patient that draws on the latest research.

In neurosurgery, disorders affecting the area in or behind the eye socket or in the base of the skull present a particular challenge because it is often difficult to access them

surgically. Professor Hassler has become renowned worldwide for his publications on surgery in the eye socket. During operations, standard and endoscopic techniques are used as well as a technique in which the affected area of the head is accessed from the opposite side. Spinal neurosurgery at Duisburg Hospital stands out for its combination of advanced microsurgery and interdisciplinary collaboration.

For example, treatment of a slipped disc in the cervical spine involves drilling a hole into the vertebral body from the side as far as the origin of the nerve so that the trapped nerve root can be released. Highly complex operations such as this are performed by an interdisciplinary team of specialists working in the disciplines of neuroradiology, general surgery, thoracic surgery, vascular surgery and traumatology.

Duisburg Hospital is an academic teaching hospital and forms part of the University of Duisburg-Essen. It is situated amid woodland in the beautiful southern suburbs of Duisburg. Despite its focus on high-tech medicine, Duisburg Hospital gives high priority to patient-oriented care in which all the necessary steps are clearly explained to patients and in which their fears and concerns are discussed.