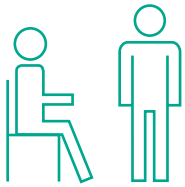
MIETHKE GRAVITATIONAL VALVES – DESIGNED TO GIVE YOU CONFIDENCE

B|BRAUN
SHARING EXPERTISE

The critical issue in shunt technology is the posture-dependent hydrostatic pressure change. Hydrocephalus shunts with gravitational units can overcome the posture-dependent effects of gravity, reduce complications of overdrainage and have shown positive results with good clinical outcomes and significant reductions of overdrainage events (1).

With gravitational valves the optimal pressure for both supine and upright position can be set.

Supine position:
Gravitational valve does not add to valve opening pressure



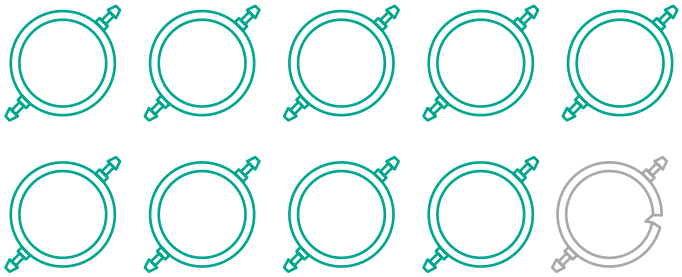
Upright position:
Gravitational valve increases valve opening pressure

Gravitational valves (GV) improve patient outcomes compared to differential pressure valves (DP) (1).

Symptom improvement >2 points on Kiefer-Scale.

Daily improvement rated good/very good on Black-Scale.

AVOID REVISIONS (2)



Valve survival rates up to 90% at 12 months.

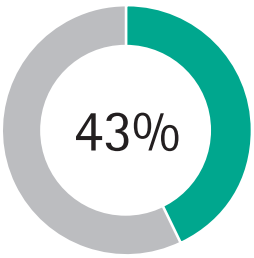
BENEFIT FROM PRIMARY IMPLANTATION (3)

22%

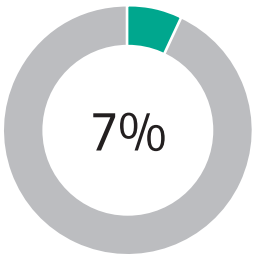
higher survival of gravitational valves after **primary** vs secondary implantation

Patients with hydrocephalus benefit from early treatment with gravitational valves.

AVOID COMPLICATIONS (4)



Overdrainage rate with **conventional** valves



Overdrainage rate with **gravitational** valves

Implanting a gravitational valve avoids one additional overdrainage complication in about every third patient.

MIETHKE GRAVITATIONAL VALVES

Ti

Made from Titanium
for high MRI- and biocompatibility

Extremely small valve

Protected against reprogramming
up to 3 Tesla

Rigid housing
unsusceptible to subcutaneous pressure

(1) Tschan CA, Antes S, Huthmann A, Vulcu S, Oertel J, Wagner W. Overcoming CSF overdrainage with the adjustable gravitational valve proSA. Acta Neurochir (Wien) 2014 156:767-776; discussion 776

(2) Sprung C, Schlosser HG, Lemcke J et al. The adjustable proGAV shunt: a prospective safety and reliability multicenter study. Neurosurgery 2010 66:465-474

(3) Gebert AF, Schulz M, Schwarz K, Thomale UW. Long-term survival rates of gravity-assisted, adjustable differential pressure valves in infants with hydrocephalus. J Neurosurg Pediatr 2016 17:544-551

(4) Lemcke J, Meier U, Müller C, Fritsch M, Kehler U, Langer N et al. Safety and efficacy of gravitational shunt valves in patients with idiopathic normal pressure hydrocephalus: a pragmatic, randomised, open label, multicentre trial (SVASONA). J Neurol Neurosurg Psychiatry 2013 84(8):850-857

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