

# Polaris Valve

The Polaris Valve is a reliable, adjustable valve. Unlike other [adjustable pressure valves](#) (except the Miethke ProGAV valve), the Polaris cannot be accidentally re-adjusted by an external magnetic field <sup>1)</sup>  
<sup>2)</sup> <sup>3)</sup> <sup>4)</sup> <sup>5)</sup>

Can be safely used for treatment of neonatal hydrocephalus. Prevention of late overdrainage syndromes with these valves needs a longer follow-up <sup>6)</sup>.

No interactions with the iPad 3 with Smart Cover <sup>7)</sup>.

<sup>1)</sup>

Allin DM, Czosnyka M, Richards HK, Pickard JD, Czosnyka ZH. Investigation of the hydrodynamic properties of a new MRI-resistant programmable hydrocephalus shunt. Cerebrospinal Fluid Res. 2008 Apr 21;5:8. doi: 10.1186/1743-8454-5-8. PubMed PMID: 18426562; PubMed Central PMCID: PMC2365935.

<sup>2)</sup>

Chari A, Czosnyka M, Richards HK, Pickard JD, Czosnyka ZH. Hydrocephalus shunt technology: 20 years of experience from the Cambridge Shunt Evaluation Laboratory. J Neurosurg. 2014 Jan 3. [Epub ahead of print] PubMed PMID: 24405071.

<sup>3)</sup>

Nakashima K, Nakajo T, Kawamo M, Kato A, Ishigaki S, Murakami H, Imaizumi Y, Izumiyama H. Programmable shunt valves: in vitro assessment of safety of the magnetic field generated by a portable game machine. Neurol Med Chir (Tokyo). 2011;51(9):635-8. PubMed PMID: 21946726.

<sup>4)</sup>

Nakashima K, Oishi A, Itokawa H, Fujimoto M. [Effect of magnetic fields from home-use magnetic induction therapy apparatuses on adjustable cerebrospinal fluid shunt valves]. No Shinkei Geka. 2010 Aug;38(8):725-9. Japanese. PubMed PMID: 20697146.

<sup>5)</sup>

Inoue T, Kuzu Y, Ogasawara K, Ogawa A. Effect of 3-tesla magnetic resonance imaging on various pressure programmable shunt valves. J Neurosurg. 2005 Aug;103(2 Suppl):163-5. PubMed PMID: 16370283.

<sup>6)</sup>

Martínez-Lage JF, Almagro MJ, Del Rincón IS, Pérez-Espejo MA, Piqueras C, Alfaro R, Ros de San Pedro J. Management of neonatal hydrocephalus: feasibility of use and safety of two programmable (Sophy and Polaris) valves. Childs Nerv Syst. 2008 May;24(5):549-56. Epub 2007 Oct 9. PubMed PMID: 17924120.

<sup>7)</sup>

He Y, Murphy RK, Roland JL, Limbrick DD Jr. Interactions between programmable shunt valves and the iPad 3 with Smart Cover. Childs Nerv Syst. 2013 Apr;29(4):531-3. doi: 10.1007/s00381-013-2053-4. Epub 2013 Feb 20. PubMed PMID: 23423659.

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