

Posterior ischemic optic neuropathy

Posterior [ischemic optic neuropathy](#) (PION): may follow surgery (surgical PION). ¹⁾

Usually in the setting of shock, rarely following spine surgery in the prone position

Risk factors

- surgery in the [prone position](#) (can cause periorbital edema, and rarely, direct pressure on the orbit)
- lack of tight glycemic control
- use of [Trendelenburg position](#).
- [Hemodilution](#) or overuse of [crystalloid](#) vs. [colloid](#) (blood) fluid replacement
- prolonged [hypotension](#)
- cellular [hypoxia](#)
- decreased renal perfusion
- male gender: odds ratio (OR) = 2.53
- obesity: by clinical assessment or BMI ≥ 30 OR = 2.83
- use of Wilson's frame: OR = 4.30
- length of anesthesia: OR = 1.39 per hour
- EBL: OR = 1.34 per liter
- use of colloid as a percentage of nonblood replacement: less certain (small difference). OR = 0.67 per 5% colloid ²⁾.

¹⁾

Hayreh SohanSingh. Ischemic optic neuropathy. Prog Retin Eye Res. 2009; 28:34-62

²⁾

Postoperative Visual Loss Study Group. Risk factors associated with ischemic optic neuropathy after spinal fusion surgery. Anesthesiology. 2012; 116: 15-24

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Last update: **2024/06/07 03:00**

