

Surgical staple



Surgical **staples** are specialized staples used in surgery in place of **sutures** to close **skin wounds** or connect or remove parts of the bowels or lungs. The use of staples over sutures reduces the local inflammatory response, width of the wound, and time it takes to close.

Sealing incisions with **sutures** and **staples** is the gold-standard of **wound closure**; however, biological glues have challenged this technique. While neurosurgical wounds, particularly those made in the dura, are less dynamic and under less fluid pressure than those of the pulmonary and cardiovascular system, biological glues that increase the reliability and resilience of these closures would significantly reduce morbidity from postoperative cerebrospinal fluid leak. Currently, the only Food and Drug Administration (FDA) approved dural sealant is DuraSeal (Integra, Waltham, Massachusetts), a polyethylene glycol hydrogel, which has both cranial and spinal formulations, and has been demonstrated to be safe and effective ¹⁾.

¹⁾

Cosgrove GR, Delashaw JB, Grotenhuis JA, Tew JM, Van Loveren H, Spetzler RF, Payner T, Rosseau G, Shaffrey ME, Hopkins LN, Byrne R, Norbash A. Safety and efficacy of a novel polyethylene glycol hydrogel sealant for watertight dural repair. J Neurosurg. 2007 Jan;106(1):52-8. PubMed PMID: 17236487.

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Last update: **2024/06/07 02:57**

