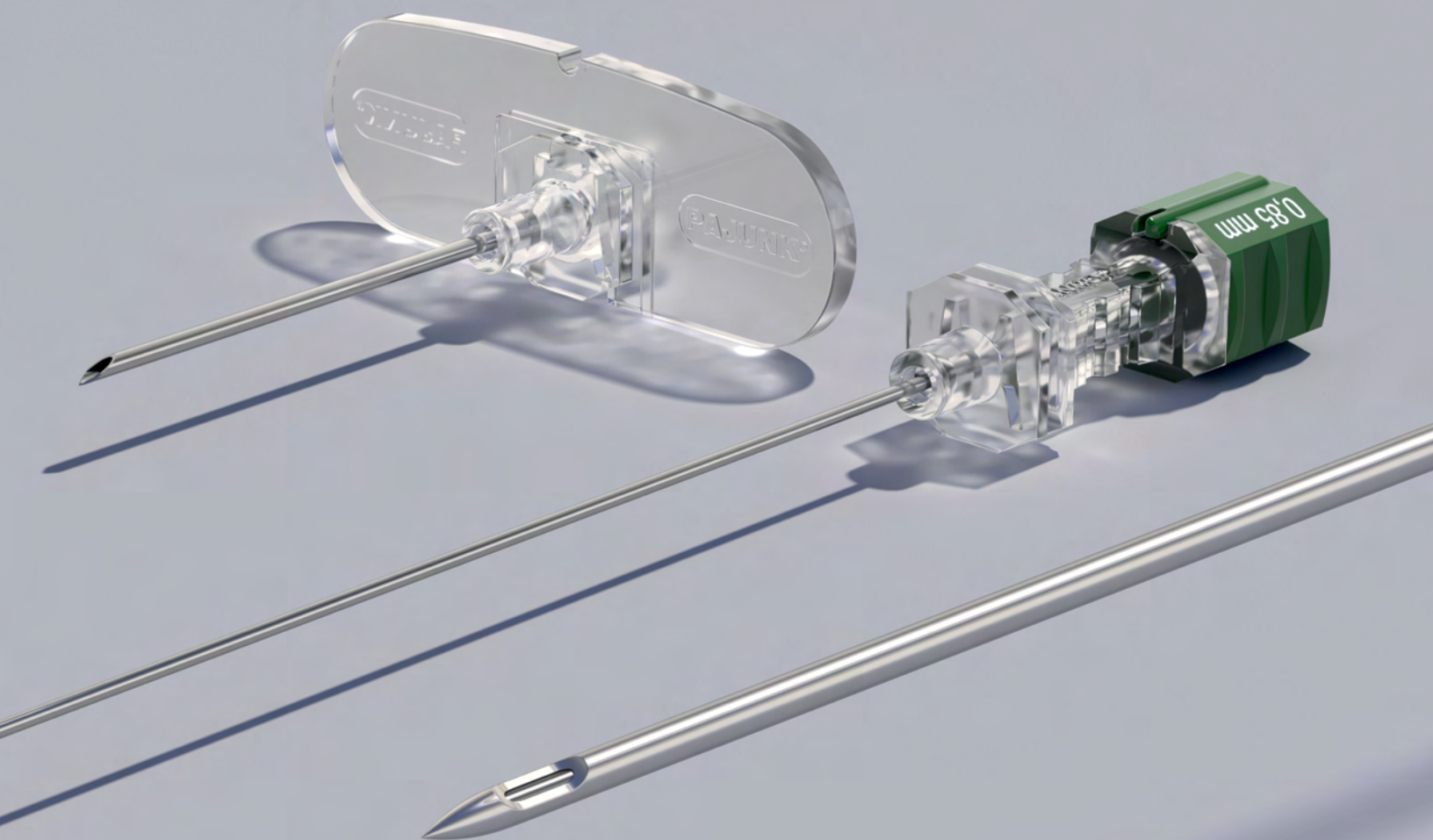


PAJUNK®



SPROTTE® Lumbar

*Needles for Atraumatic
Lumbar Puncture*



The Pioneer of Atraumatic Lumbar Puncture

Together with Pajunk, Prof. Sprotte developed the Sprotte, the first atraumatic needle for lumbar puncture. The secret of its success can be found in its unique tip geometry and basic architecture. This design, developed especially for the requirements of dural puncture, allows for an atraumatic puncture of the ligamentary structures and optimizes CSF flow while reducing the incidence of post-lumbar puncture headaches (PLPH).

→ Sprotte decreases complications of lumbar puncture and increases the safety of application, and the efficiency of diagnostics.



CLINICAL COMPARISON OF SPROTTE VS QUINCKE⁶

Sprotte: Evidence class 1, recommendation level A^{5,6,7,8}

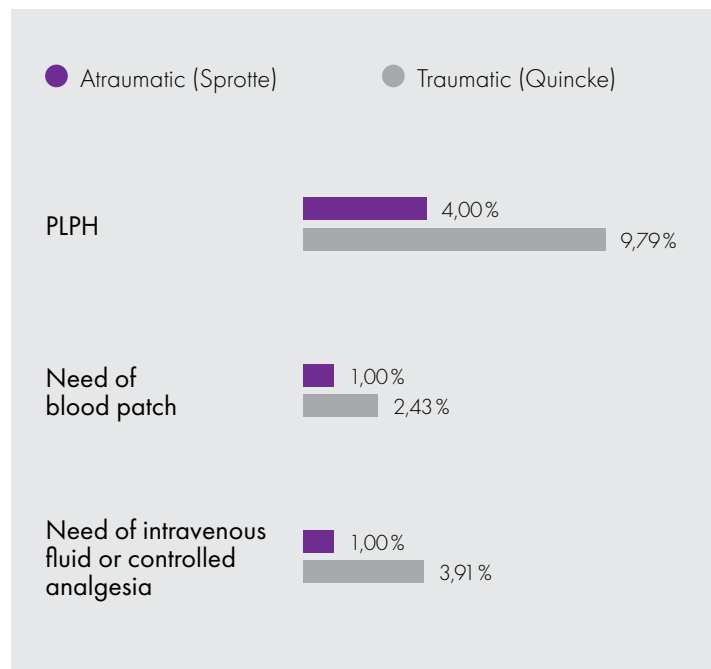
Sprotte – atraumatic needle

Leading technology for decreasing the incidence of post-lumbar puncture headaches.⁵



Quincke – cutting needle

One risk factor for post-lumbar puncture headaches is the use of a Quincke needle.⁶



STUDIES CONCLUSIONS

- ▶ Atraumatic lumbar puncture needles are safe to use^{1,2,4,5,6,7,8}
- ▶ Requires a minimal learning curve⁵
- ▶ Provides reliable results⁶
- ▶ Minimize side effects, complications, and recovery time²
- ▶ High-savings potential by minimizing process and treatment costs^{3,8}
- ▶ Increased efficiency³

It's time to change the needle.^{1,2,11}



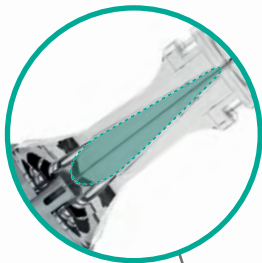
Highest Processing Quality

- High-quality stainless steel needle for increased stability
- Smoothly polished and burr-free surface and inner lumen designed for optimized gliding properties and CSF backflow
- Consistent feel and reliable performance

Magnifying Hub (Only NRFit®)

Clear, magnifying needle hub allows for easy visualization of blood or CSF.

- Easier detection of CSF flashback



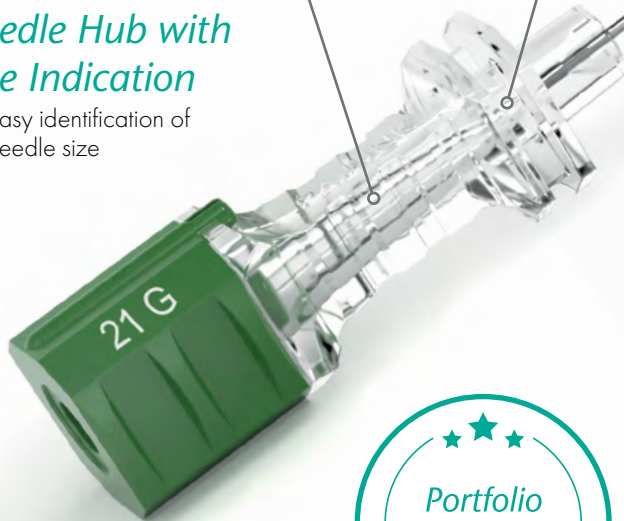
Needle Hub with Reduced Inner Space

- Designed for rapid detection of even the smallest quantities of CSF



Color-Coded Needle Hub with Size Indication

- Easy identification of needle size



Portfolio Excellence

- Wide needle range with different diameters and lengths
- Special designs for small and obese patients

Sprotte Needle

Sprotte Introducer



Introducer with Facet Tip

- Diameter and length perfectly matched to each lumbar needle size
- Minimal reduction of useable working length of the lumbar needle
- Funnel-shaped hub to reduce chance of lumbar needle tip damage during insertion

1. Davis, A.; Dobson, R.; Kaninia, S.; Giovannoni, G.; Schmierer, K. (2016): Atraumatic needles for lumbar puncture: why haven't neurologists changed? In *Practical neurology* 16 (1), pp. 1822. DOI: 10.1136/practneuro-2014-001055.
 2. Engedal, Thorbjørn S.; Ørding, Helle; Vilholm, Ole Jakob (2015): Changing the needle for lumbar punctures: results from a prospective study. In *Clinical neurology and neurosurgery* 130, pp. 7479. DOI: 10.1016/j.clineuro.2014.12.020.
 3. Tung, C. E.; Yuen, T. S.; Lansberg, M. G. (2012): Cost comparison between the atraumatic and cutting lumbar puncture needles. In *Neurology* 78, pp. 109113.
 4. Arevalo-Rodriguez, Ingrid; Muñoz, Luis; Godoy-Casasbuenas, Natalia; Ciapponi, Agustín; Arevalo, Jimmy J.; Boogaard, Sabine; Roqué I Figuls, Marta (2017): Needle gauge and tip designs for preventing post-dural puncture headache (PDPH). In *The Cochrane database of systematic reviews* 4, CD010807. DOI: 10.1002/14651858.CD010807.pub2.
 5. McLaughlin, Colleen A.; Hockenberry, Marilyn J.; Kurtzberg, Joanne; Hueckel, Rémi; Marlin, Paul L.; Docherty, Sharon L. (2014): Standardization of health care provider competencies for intrathecal access procedures. In *Journal of pediatric oncology nursing: official journal of the Association of Pediatric Oncology Nurses* 31 (6), pp. 304316. DOI: 10.1177/1043454214543019.
 6. Nair, Siddharth; Kozlars, Alex; Badhiwala, Jetan H.; Alhazzani, Waleed; Jaeschke, Roman; Sharma, Sunjay et al. (2018): Atraumatic versus conventional lumbar puncture needles: a systematic review and meta-analysis. In *The Lancet* 391 (10126), pp. 11971204. DOI: 10.1016/S0140-6736(17)32451-0.

Optimal Lateral Eye Size and Placement

- Unobstructed backflow, even if the eye is partially blocked by the arachnoid membrane
- Allows for quicker CSF flashback⁹

Lateral Eye

Burr-free, rounded atraumatic edges

- Optimized gliding properties
- Minimal chance of tissue coring and carry-over into the subarachnoid space¹⁰

Precision-Ground Metal Stylet

- Lateral eye closes precisely to minimize chance of tissue coring¹⁰
- Polished, rounded tip prevents abrasion on the inner needle tube

Atraumatic Tip Design

The ogive shaped tip significantly reduces the risk of PLPH and the rounded edges of the lateral eye minimizes trauma to the dura mater.

- Minimizes chance of PLPH^{1, 2, 4, 5, 6, 7, 8}
- Consistent tactile feedback

Manometer



Also available in **NRFit**[®]

7. Rochweg, Bram; Almenawer, Saleh A.; Siemieniuk, Reed A. C.; Vandvik, Per Olav; Agoritsas, Thomas; Lytvyn, Lyubov et al. (2018): Atraumatic (pencil-point) versus conventional needles for lumbar puncture: a clinical practice guideline. In BMJ, k1920. DOI: 10.1136/bmj.k1920.
 8. Zhong, Yi C.; Chandler, Alexander J.; Kagetsu, Nolan J. (2014): Technical compliance to standard guidelines for lumbar puncture and myelography: survey of academic neuroradiology attendings and fellows. In Academic radiology 21 (5), pp. 612-616. DOI: 10.1016/j.acra.2014.01.021.
 9. Bellamkonda, Venkatesh R.; Wright, Thomas C.; Lohse, Christine M.; Keaveny, Virginia R.; Funk, Eric C.; Olson, Michael D.; Loack, Torrey A. (2017): Effect of spinal needle characteristics on measurement of spinal canal opening pressure. In The American journal of emergency medicine 33 (5), pp. 769-772. DOI: 10.1016/j.ajem.2017.01.047.
 10. Puolakka, R.; Andersson, L. C.; Rosenberg, H. (2000): Microscopic Analysis of Three Different Spinal Needle Tips After Experimental Subarachnoid Puncture. In Regional Anesthesia and Pain Medicine 25 (2), pp. 163-169.
 11. Lavi R., Rowe J.M., Avivi I. Lumbar Puncture. It Is Time to Change the Needle, Eur Neurol, 2010, 64:1081-3

The Clear Choice in Lumbar Puncture

For decades clinicians performing lumbar punctures had to battle the issues of post lumbar puncture headache (PLPH). With the introduction of the atraumatic Sprotte needle the PLPH rates have been significantly reduced to allow for safer punctures and happier patients.

→ 40 years of evidence from high-quality research confirms: It's time to change the needle.^{1,2,3}

Is your traditional needle for lumbar puncture giving YOU headaches?

PLPH

NEEDLE BLOCKAGE

UNSECURE PLACEMENT

SIDE EFFECTS

FAILURE OF CSF FLOW

LONG RECOVERY TIME

HIGH COSTS



SPROTTE LUMBAR ADVANTAGES

- ▶ Increases application safety
- ▶ Minimizes chance of PLPH ^{1,2,4,5,6,7,8}
- ▶ Allows for quicker and optimized CSF flashback⁹
- ▶ Allows rapid detection of even the smallest quantities of CSF
- ▶ Minimizes chance of tissue coring
- ▶ Increases efficiency, reduces process and treatment costs ¹⁰



SPROTTE® Lumbar

Sprotte needle

| Size | Introducer with wings | Item no. Standard | NRFit® Item no. Magnifying hub | PU |
|-----------------------|-----------------------|-------------------|--------------------------------|----|
| 22G x 90 mm (3 1/2") | | 001151-30C | 001163-30C | 25 |
| 22G x 90 mm (3 1/2") | 30 mm (1 1/5") | 321151-30C | 321163-30C | 25 |
| 22G x 103 mm (4") | 40 mm (1 3/5") | 341151-30C | | 25 |
| 22G x 120 mm (4 3/4") | | 031151-30C | 031163-30C | 10 |
| 21G x 90 mm (3 1/2") | | 001151-31A | 001163-31A | 25 |
| 21G x 90 mm (3 1/2") | 30 mm (1 1/5") | 321151-31A | 321163-31A | 25 |
| 21G x 103 mm (4") | 40 mm (1 3/5") | 341151-31A | 341163-31A | 25 |
| 21G x 120 mm (4 3/4") | 40 mm (1 3/5") | 331151-31A | 331163-31A | 10 |
| 20G x 90 mm (3 1/2") | | 0001151-31 | 0001163-31 | 25 |
| 20G x 90 mm (3 1/2") | 30 mm (1 1/5") | 331151-31B | 331163-31B | 25 |
| 20G x 120 mm (4 3/4") | 40 mm (1 3/5") | 321151-31B | 321163-31B | 10 |

Sprotte introducer

without wings

| Size | Sprotte Size | Item no. | NRFit Item no. | PU |
|-----------------------|--------------|------------|----------------|----|
| 1.20 x 30 mm (1 1/5") | 20G | 061151-30L | 061163-30L | 25 |
| 1.00 x 30 mm (1 1/5") | 22G | 001151-30L | 001163-30L | 25 |

Manometer

| Size | Item no. | NRFit Item no. | PU |
|---------------------|------------|----------------|----|
| 3–34 cm H2O | 001151-38G | 001163-38F | 10 |
| Extension 20 cm H2O | 001152-38G | | 10 |

Specimen Vials

| Size | Item no. | PU |
|--------------------------------------|------------|----|
| 10cc specimen vial, 3-pack (sterile) | Painvial 1 | 3 |

Lumbar Puncture Support Tray

| Tray Description | Item no. | PU |
|---|----------|----|
| Povidone-Iodine Solution Pack, Prep Sponges (3), Clear Drape, Circular Fenestration Paper Towel, Gauze Pads (3), CSR Wrap, Syringe, 5ml, Luer Lock, Hypodermic Needle, 22G x 1-1/2", Hypodermic Needle, 25G x 1-1/2", Filter Straw®, 2", Needle Foam Block, Drug ID Label Set, Extension Tubing (100 mm), Adhesive Bandage, 5ml Ampule 1% Lidocaine HCl | TBLU119 | 15 |



Scan now!

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