



Dura Substitution

Aesculap® Neuro-Patch™
& Lyoplast® Onlay

Dura Substitution

Biological and synthetic dura substitutes

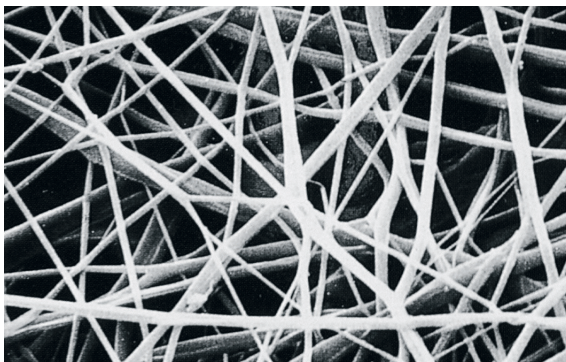
Dura substitutes are used to cover holes in the cerebral / cerebellar and spinal dura mater to restore a liquid-tight closure after neurosurgical interventions with dural incision. Aesculap offers three different dura substitutes: Lyoplant® Onlay and Neuro-Patch™. The high liquid-tightness of these implants supports the prevention of CSF leakage in neurosurgery. Lyoplant® Onlay is an Onlay dura substitute of bovine origin and enables a fast, easy and versatile application and a reliable treatment. Neuro-Patch™ is a synthetic suturable dura substitute.

Neuro-Patch™

Synthetic, suturable dura substitution



Neuro-Patch™ is a type of fine fibred microporous fleece manufactured from a highly purified polyesterurethane. The fine fibred microstructure supports the rapid infiltration of connective tissue cells. [5,9]



Indication:

- Neuro-Patch™ is used in neurosurgery as dura mater replacement

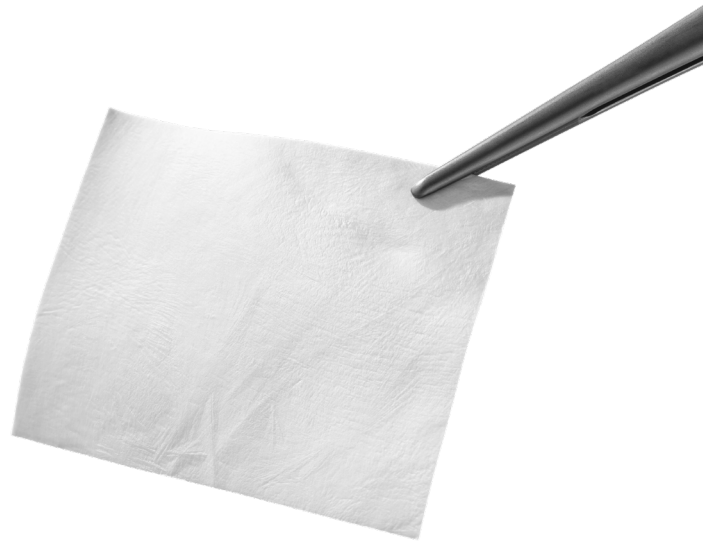
Advantages

- High liquid tightness of the implant prevents CSF leakages [1,2,3]
- Tissue tolerant [4,5]
- High tensile strength of the implant prevents suture pull out [2,6]
- Good suturability [2]
- Adaptable to anatomical structures [1,2,7]

Lyoplant® Onlay

Biological Onlay dura substitution

Lyoplant® Onlay is a biological, absorbable dura substitute consisting of a bilayer membrane, designed to provide high ease of use. The product stands out due to the fast application, the easy handling, the versatile usage, and the reliable treatment for the patient. [1-9]



CUT

- Lyoplant® Onlay can be cut in the required shape and size easily.

Onlay technique:

- The implant should overlap the dura defect by approx. 1 cm to ensure a high level of adhesion and a liquid-tight seal.

Suturing:

- The implant should be cut as closely as possible to the defect size.

REHYDRATE

- Ensure that the fleece-like, porous side (labeled 'DURA SIDE') is facing the dura.
- Which side has to face the dura should be identified before rehydration.
- Prior to implantation, Lyoplant® Onlay is placed in sterile saline solution or in another isotonic solution to ensure better suppleness and flexibility.

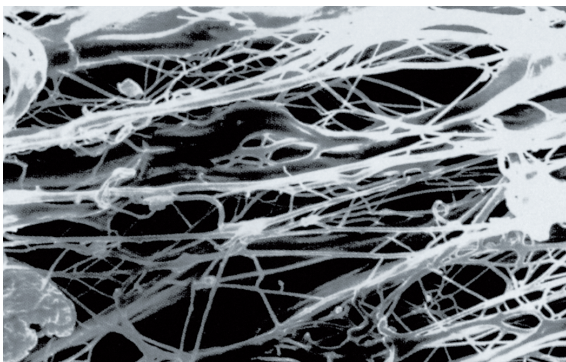
APPLY

Onlay technique:

- The implant simply has to be laid flat against the defect edges, ensuring that it is not taut.

Suturing:

- If required and if considered necessary by the user, Lyoplant® Onlay can be sutured in place. The implant should be fixed with non-absorbable suture material (polyester polypropylene), using atraumatic round-bodied needles.
- The implant can be sealed with fibrin glue.



Indication

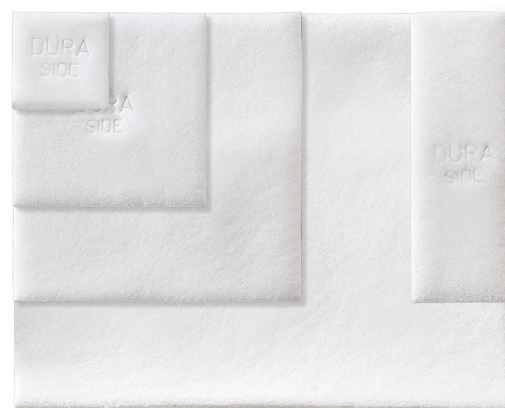
- Lyoplant® Onlay is indicated for the replacement and extension of connective tissue structure in neurosurgery.

Advantages

- Simple, time-saving Onlay application with the possibility to incorporate suture fixation if necessary. [1,2,4,6]
- One dura substitute for various indications. [2-5]
- High liquid tightness of the implant supports preventing CSF leakages. [1,2,4,5,9]
- High tensile strength of the implant prevents suture pull-out. [2,6,9]
- Integrates with the body's own connective tissue cells. [1,2]

Order Information

Size	Units	Article No. Neuro-Patch™	Article No. Lyoplant® *
12 x 14 cm	1	106 4002	–
6 x 14 cm	1	106 4010	106 6021
8 x 9 cm	1	106 4020	106 6030
6 x 8 cm	1	106 4029	106 6242
5 x 6 cm	1	106 4040	106 6050
4 x 10 cm	1	106 4037	106 6048
4 x 5 cm	2	106 4045	106 6064
2 x 10 cm	2	106 4053	106 6080
1.5 x 3 cm	2	106 4061	106 6102



* To improve smoothness and flexibility, Lyoplant® material is rehydrated prior to implantation.

Mode of application

To achieve tension-free embedding, Neuro-Patch™ and Lyoplant® Onlay should be cut as closely as possible to the defect size.

Neuro-Patch™ and Lyoplant® Onlay should be fixed with non-absorbable suture material (polyester, polypropylene). Additionally, it may be secured with fibrin glue.

Atraumatic round-bodied needles allow suturing without significant damage to the implant.

References

1. Clinical trial. Neulen, A et al. Evaluation of efficacy and biocompatibility of a novel semisynthetic collagen matrix as a dural onlay graft in a large animal model. Acta Neurochirurgica. 2011 July 9; 153(11):2241-2250.
2. Clinical trial. Greifzu F. Clinical Study report LYON study – Assessment of the performance of Lyoplant® Onlay for Duraplasty. 2019.
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4. Expert Report. Bode F. Expert report – Lyoplant® Onlay. 2016.
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