



# PROFESSIONAL SOLUTIONS IN EARLY INTERVENTION ORTHOPEDIC CARE



# PRODUCT SERIES

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## BIOPORT® TRICOMBO

36 mg hyaluronic acid per syringe  
67.5 mg chondroitin sodium sulfate  
67.5 mg N-acetylglucosamine  
Only one injection per treatment

## BIOPORT® CROSSLINK 2%

60 mg hyaluronic acid  
90 mg chondroitin sodium sulfate per syringe  
Only one injection per treatment



## BIOPORT® PLUS 1,5%

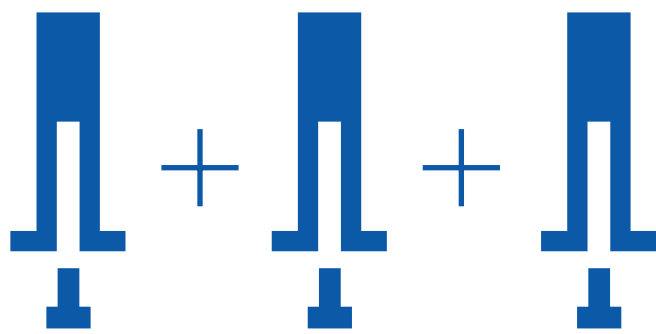
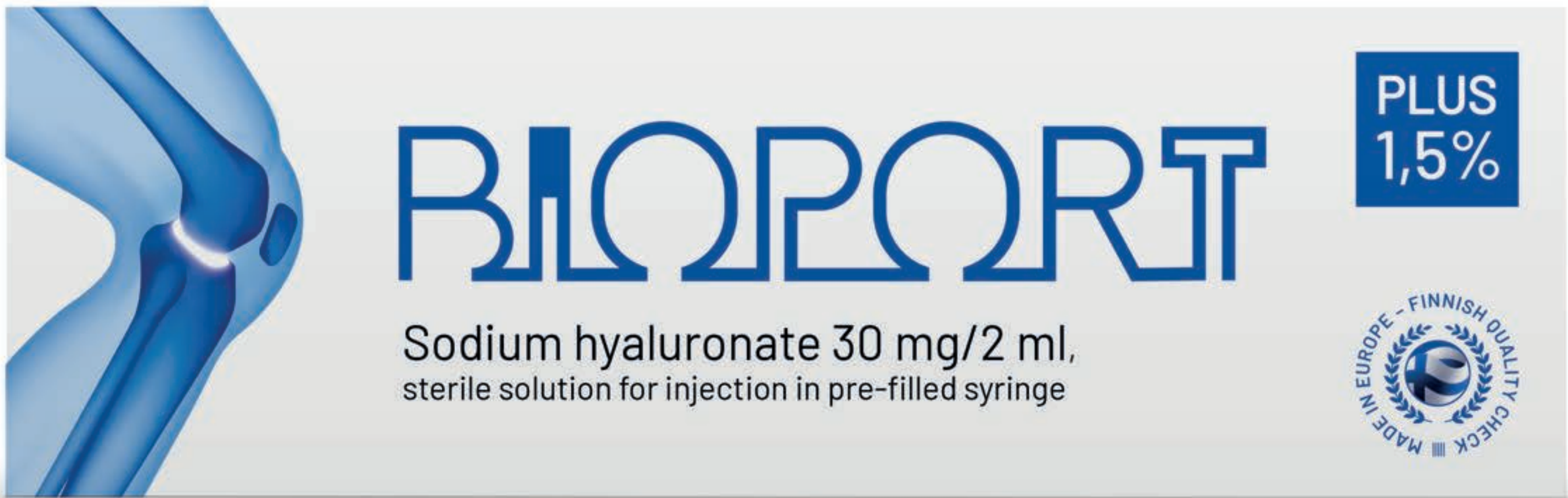
30 mg hyaluronic acid per syringe  
Three injections per treatment

## BIOPORT® LINEAR 80

80 mg hyaluronic acid per syringe  
Only one injection per treatment

# BIOPORT® PLUS 1,5 %

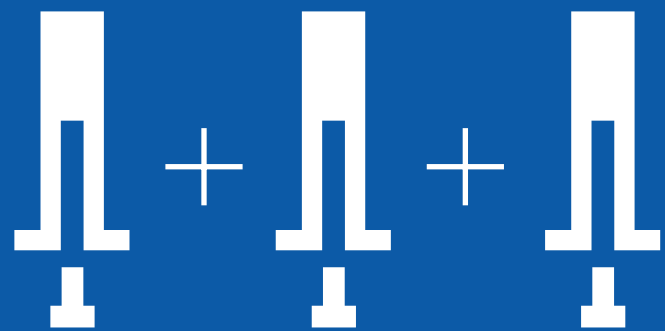
It replaces or reinforces the synovial fluid in the joints and is recommended for symptomatic treatment of synovial joint degeneration, including bone and joint inflammation.



30 mg hyaluronic acid  
per syringe (15 mg / ml)  
2 ml pre-filled syringe

|                          |                                          |
|--------------------------|------------------------------------------|
| Composition              | Sodium hyaluronate                       |
| Concentration            | 30 mg/2ml<br>1.5%                        |
| Administration total     | 3 syringes, 1 week apart from each other |
| Average molecular weight | 1.8-2.6 MDa                              |

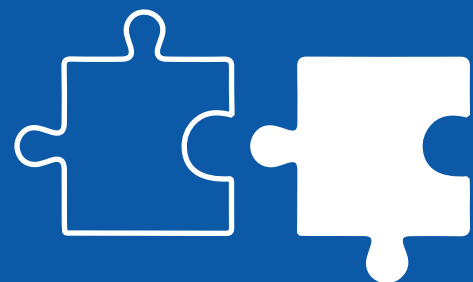
# BIOPORT® PLUS 1,5% | PROPERTIES



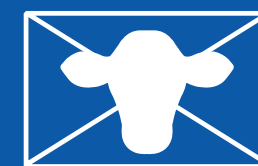
Three injections per treatment



Highly purified 30 mg hyaluronic acid per syringe



Highest degree of compatibility with properties of synovial fluid



Free from animal proteins



Delivered in pre-filled glass syringe Becton Dickinson



# BIOPORT® PLUS 1,5 %

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## SODIUM HYALURONATE

In medical devices containing sodium hyaluronate for the viscoelastic supplementation of the synovial fluid, it is very important for the gel to imitate to the highest extent the synovial fluid and to be as close as possible to its properties, degrading as hard as possible in the joint.

## INDICATION

- As a viscoelastic supplement or a replacement for synovial fluid in human knee joints
- For symptomatic treatment of knee osteoarthritis

## EFFECT

- Lubricant and mechanical support
- Improvement of joint mobility

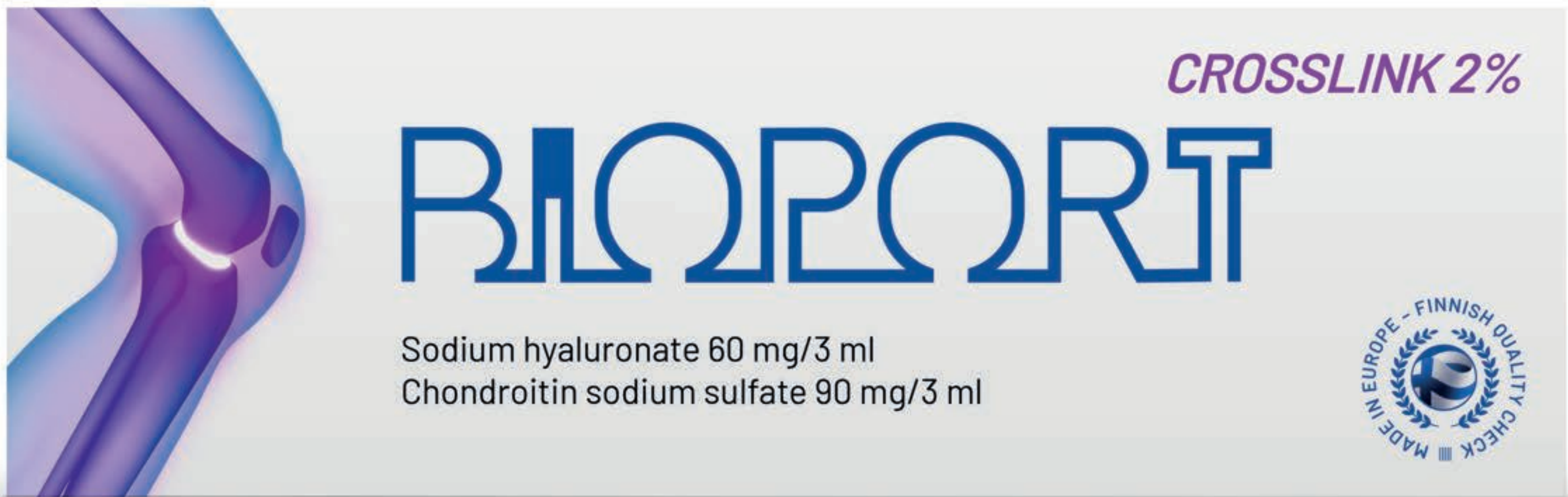
## APPLICATION

Depending on the degree of discomfort, about one injection per week, about 3 injections per treatment course. The effect can be sustained over a period of about 6 months.



# BIOPORT® CROSSLINK 2%

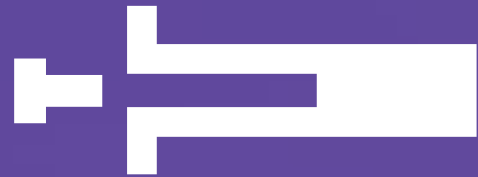
It is a sterile viscoelastic solution for intra-articular injection, the two cross-linked biological polymers, sodium hyaluronate and chondroitin sodium sulfate involves.



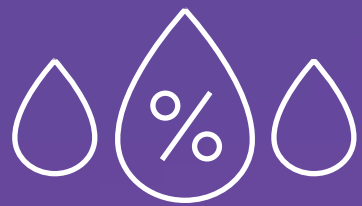
60 mg hyaluronic acid  
per syringe (20 mg / ml)  
90 mg chondroitin sodium  
sulfate (30 mg / ml)  
3 ml pre-filled syringe

|                                                     |                                                   |
|-----------------------------------------------------|---------------------------------------------------|
| Composition                                         | Sodium hyaluronate,<br>Chondroitin sodium sulfate |
| Concentration                                       | 60 mg/90 mg/3ml<br>2%/3%                          |
| Administration total                                | 1 syringe at 6 months                             |
| Average molecular weight                            | 3MDa                                              |
| Elasticity mode G' in rest 0,5 Hz / running 2,5 Hz. | 242 Pa / 468 Pa                                   |
| Viscosity mode G" at rest/running                   | 180 Pa/220 Pa                                     |

# BIOPORT® CROSSLINK 2% | PROPERTIES



Only one injection per treatment



Highly concentrated: 60 mg hyaluronic acid per syringe with chondroitin for cartilage tissue



Delivered in pre-filled glass syringe Becton Dickinson



# BIOPORT® CROSSLINK 2%

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## CHONDROITIN SULFATE

Protects the cartilage and decreases inflammatory activity in the region affected by osteoarthritis (OA).Contributes to physical cross-linking of the hyaluronate chains being binded thereto in a 1:1 ration, increasing in this way the properties of sodium hyaluronate.

## INDICATION

- As a viscoelastic supplement or as a replacement for the synovial fluid in the knee joint
- For the symptomatic treatment of mild to severe knee osteoarthritis

## EFFECTS

- Pain relief
- Improvement of joint mobility
- Protection of the cartilage

## APPLICATION

A single injection of the product restores the protection of the joint through good lubrication and shock absorption and leads to a significant improvement in symptoms.



# BIOPORT® TRICOMBO | NEW

It is a biological matrix in the form of a sterile, viscoelastic solution containing Sodium hyaluronate and Chondroitin sodium sulfate – two physically cross-linked agents, highly purified polymers and N-acetylglucosamine (NAG), a natural amino acid.



36 mg hyaluronic acid per syringe (16 mg / ml)  
67.5 mg chondroitin sodium sulfate (30 mg / ml)  
67.5 mg N-acetylglucosamine (30 mg / ml)  
pre-filled single use syringe of 2.25 ml

|                                                     |                                                              |
|-----------------------------------------------------|--------------------------------------------------------------|
| Composition                                         | Sodium hyaluronate, Chondroitin sulfate, N-acetylglucosamine |
| Concentration                                       | 36 mg/67.5 mg/2.25 ml<br>1.6%/3%/3%                          |
| Administration total                                | 1 syringe at 6 months                                        |
| Average molecular weight                            | 3MDa                                                         |
| Elasticity mode G' in rest 0,5 Hz / running 2.5 Hz. | 250 Pa / 490 Pa                                              |
| Viscosity mode G" at rest/running                   | 190 Pa/275 Pa                                                |

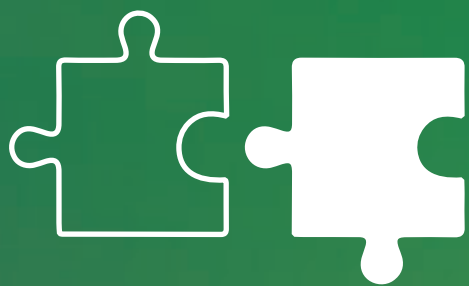
# BIOPORT® TRICOMBO | PROPERTIES



Only one injection per treatment



Highly purified 36 mg hyaluronic acid per syringe



Highest degree of compatibility with properties of synovial fluid



Delivered in pre-filled glass syringe Becton Dickinson



## CHONDROITIN SODIUM SULFATE

Protects the cartilage and decreases inflammatory activity in the region affected by osteoarthritis (OA). Contributes to physical cross-linking of the hyaluronate chains being binded thereto in a 1:1 ratio, increasing in this way the properties of sodium hyaluronate.

## N - ACETYLGUCOSAMINE

Reduces cartilage degeneration and activates its regeneration processes. Glucosamine is an important precursor of glycoprotein and GAG synthesis

As for the cartilage, it is essential for the formation of hyaluronic acid, chondroitin sulfate, and keratin sulfate, which are – apart from collagen fibers – the most important components of the extracellular matrix of articular cartilage and synovial fluid.

Limited production of glucosamine reduces GAG synthesis so glucosamine supplementation can overcome this problem.

In this way it is attempted to improve the viscous solution in order to supplement the synovial fluid with an essential component in the restoration of articular cartilage.

## INDICATION

- As a viscoelastic supplement or as a replacement for the synovial fluid in the knee joint
- For the symptomatic treatment of mild to severe knee osteoarthritis

## EFFECT

- Pain relief
- Lubrication and mechanical support
- Protection and regeneration of the cartilage

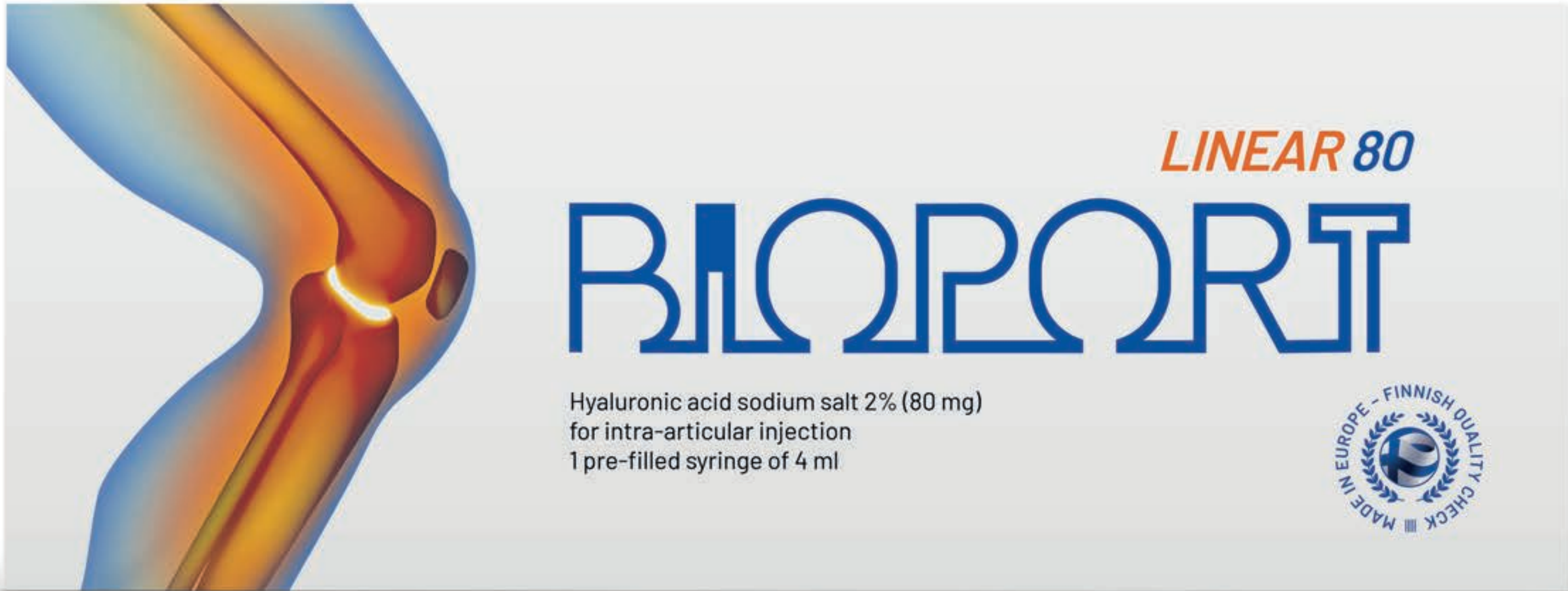
## APPLICATION

Administered in a **single injection**, restores good hydration and shock absorption in the joint and provides significant improvement in OA symptoms. Recommended to administer two treatments cycles per year, every 6 months.



# BIOPORT® LINEAR 80

Is a sterile, biodegradable, isotonic, injectable gel, for intra-articular use. BIOPORT® LINEAR 80 consists of medium chain (1.0-1.5 x 10<sup>6</sup> Dalton) hyaluronic acid, obtained from Streptococcus equi bacteria, formulated to a concentration of 20 mg/ml in a physiologic buffer. The product, improving the characteristics of the synovial fluid, exerts a protective action of the joints and helps the improvement of joint function and the reduction of pain symptoms.



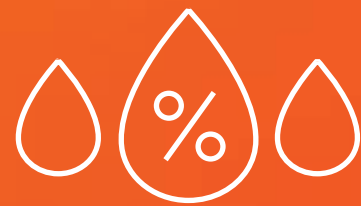
80 mg hyaluronic acid  
per syringe (20mg / ml)  
4 ml pre-filled syringe

|                          |                       |
|--------------------------|-----------------------|
| Composition              | Sodium hyaluronate    |
| Concentration            | 80mg/ 4ml/ 2%         |
| Administration total     | 1 syringe at 6 months |
| Average molecular weight | 1.5MDa                |
| Viscosity (cP)           | 150.000-290.000       |
| Osmolality (mOsm/kg)     | 270-330               |

# BIOPORT® LINEAR 80 | PROPERTIES



Only one injection  
per treatment



Highly concentrated:  
80 mg of linear hyaluronic  
acid per syringe



Delivered in pre-filled  
glass syringe Becton  
Dickinson



# BIOPORT® LINEAR 80

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## HYALURONIC ACID

- Hyaluronic acid with a constant molecular weight between 1,200 and 1,500 kD allows optimal diffusion within the cartilage cell, reducing the risk of painful swelling of the injection site
- Produced by Biofermentation of *Streptococcus equi* with no animal protein, it results in absolute purity, reducing the risk of allergens and inflammatory reactions to a minimum
- Native hyaluronic acid (not chemically modified)

## INDICATION

BIOPORT® LINEAR 80 is a synovial fluid substitute which, thanks to its viscoelastic and lubricant properties, promotes the restoration of rheological conditions of the joints, altered in degenerative or post-traumatic conditions. The product, improving the characteristics of the synovial fluid, exerts a protective action of the joints and helps the improvement of joint function and the reduction of pain symptoms.

## EFFECTS

- Reduces pain
- Improves joint function and joint stiffness
- May postpone joint replacement

## APPLICATION

A single injection of the product restores the protection of the joint through good lubrication and shock absorption and leads to a significant improvement in symptoms.



# BIOPORT



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