

Solution of
low molecular
weight peptides from
hydrolyzed collagen



Injectable solution
of low molecular weight

peptides (LWPs) from

hydrolyzed collagen for the

reinforcement and structural renewal of the

extra-cellular matrix of connective tissues



Collagen accounts for over 30% of the total protein content in humans and constitutes the fundamental structural element of connective tissues such as bone, cartilage, ligaments, and tendons. It consists of three long amino acid chains wrapped in a compact triple helix. Its structural unit - tropocollagen - has a molecular weight slightly below 300 kDa and it contributes with copies of itself to the formation of collagen fibers, protein structures with a weight of tens of millions Dalton.

During the physiological process of tissue renewal, collagen degrades and frees amino acid sequences of various molecular weights, called peptides.

The shorter peptide chains (with lower molecular weight) are the first to be exploited to counteract matrix degradation, limiting lytic enzyme activity and stimulating new collagen synthesis.

For several years, researchers and doctors have understood the role of these peptides in the tropism of connective tissue and, in particular, of the cartilage. Many studies have shown that LWPs can significantly improve symptoms and functionality of joints and peri-articular structures, protecting their tissue matrix from excessive degradation, reinforcing and stimulating its renewal.



#### REINFORCEMENT OF THE EXTRA-CELLULAR MATRIX

**Peptys** is a new Class III medical device, which contains low molecular weight peptides **(LWPs)** obtained from **natural collagen** subjected to a process of hydrolytic degradation of its chains and subsequent dimensional filtration of the **peptides**.

#### INNOVATIVE FORMULA

Its special and innovative formulation also includes chemically stable **vitamin C and magnesium** to protect the peptide structure during the sterilization process of the device.

PEPTYS IS A READY-TO-USE SOLUTION COMPOSED OF PEPTIDES WITH A MOLECULAR WEIGHT OF ABOUT 3 KDA, AVAILABLE IN TWO DIFFERENT CONCENTRATIONS OF 2 MG / ML AND 5 MG / ML.



# **VITAMIN C**

It is a fundamental cofactor in the collagen biosynthesis process and it exerts a strong antioxidant activity



# **MAGNESIUM**

It promotes cell adhesion and cartilage formation

#### **COMBINED LWPs ACTION**

**Peptys** with its LWPs provides specific amino acid sequences of the collagen structure at the injection site, useful for the structural and functional recovery of **joints**, **tendons and muscles**.

The structural reinforcement action promptly exerted by the peptides helps to **quickly relieve symptoms and to recover the functionality of the connective tissues**, e.g., improving joint mobility, reducing inflammation, and offering rapid and prolonged pain relief.

# Reinforcement of cartilage and matrix of all connective tissues

thanks to collagen peptides which directly support and restructure the extra-cellular matrix.

## **Pro-regenerative action**

through the synthesis of new collagen. It promotes the synthesis of type II collagen and other components of the cartilage structure, such as hyaluronic acid and glycosaminoglycans, inside the articular environment.

## Protection of cartilage

from thinning, counteracting its degradation and promoting viability of chondrocytes.

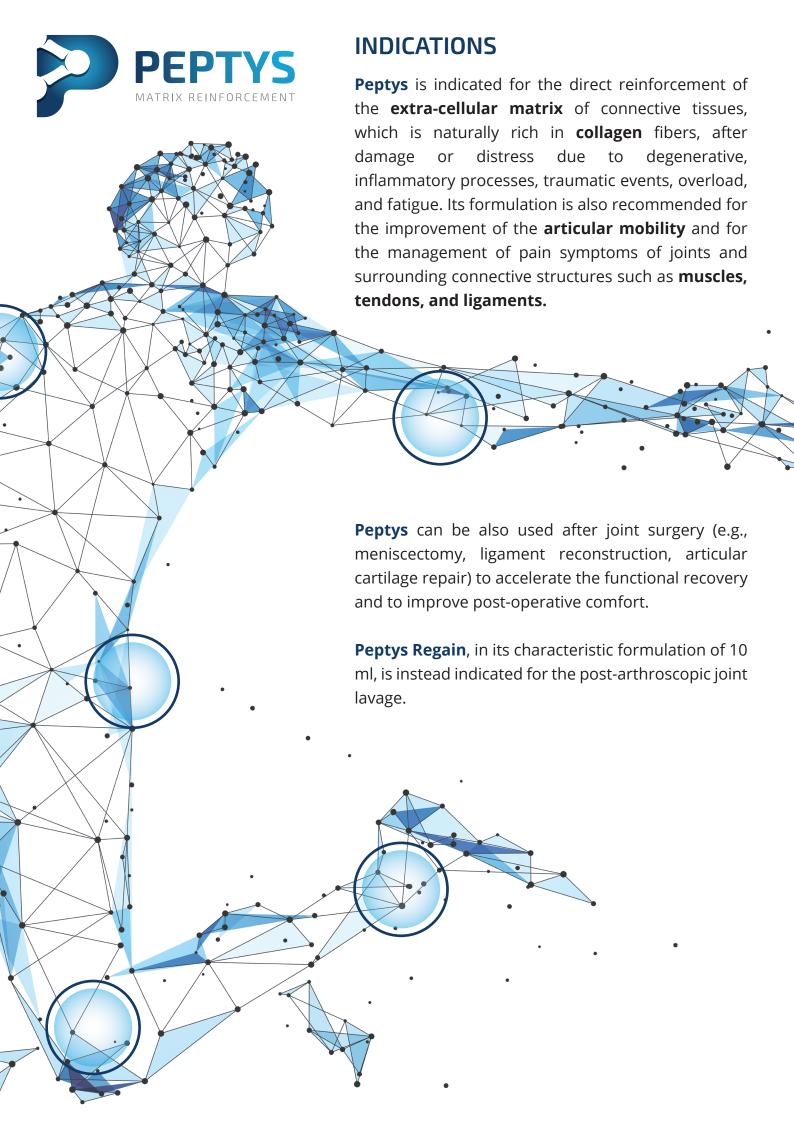
#### **Reduction of inflammation**

affecting tendons and other joint structures, thanks to the natural action of contrasting lytic enzymes.

## **Reduction of pain**

and consequent improvement of joint function.





## SUGGESTED THERAPEUTIC TREATMENTS

## Intra-articular injection

PEPTYS 2 mg/ml - 2 ml

PEPTYS 5 mg/ml - 2 ml

Cycle of three injections:

One injection.

day 1, day 15 and day 45.

## Intra-tendinous-ligamentous injection

It is recommended to perform the procedure under ultrasound guidance, injecting part of the product directly at the injury site and the rest in the peri-lesional area, below the tendon sheath.

PEPTYS 2 mg/ml - 1 ml

PEPTYS 5 mg/ml - 1 ml

Cycle of three injections:

One injection.

day 1, day 21 and day 42.

## Intra-muscular injection

PEPTYS 2 mg/ml - 1 ml

PEPTYS 5 mg/ml - 1 ml

Cycle of two injections:

One injection.

day 1, day 10.

## **PEPTYS** MATRIX REINFORCEMENT

**PEP-21** PEPTYS® 2 - 2 mg/ml, 1 ml.

**PEP-22** PEPTYS® 2 - 2 mg/ml, 2 ml.

**PEP-51** PEPTYS® 5 - 5 mg/ml, 1 ml.

**PEP-52** PEPTYS® 5 - 5 mg/ml, 2 ml.



PEP-110 PEPTYS® Regain - 1 mg/ml, 10 ml.







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