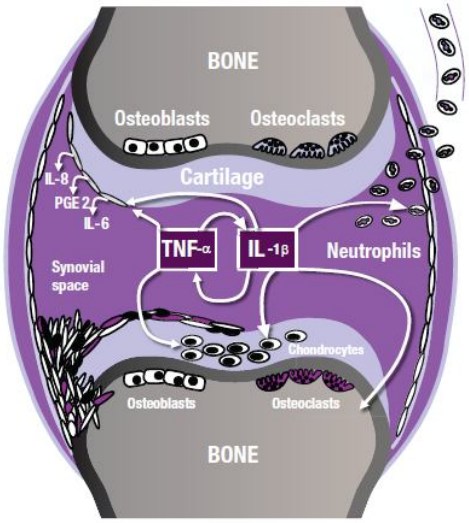
New therapeutic perspectives

PRP is a physiological source of both inhibitors of metalloproteinases (TIMPs, a2 macroglobulin), responsible for the degeneration of collagen, and of inhibitors of ADAMTS, responsible for the degeneration of cartilage aggrecans.

The topical application of PRP has an anti-inflammatory effect that expands the therapeutic area.



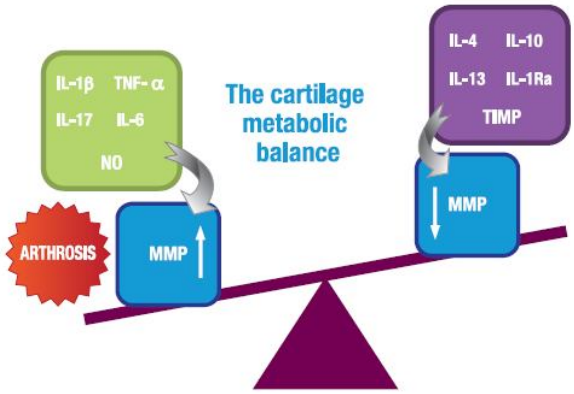
Sostanze ad azione condrolesiva

Substances with chondrolesive activity

- Metalloproteinases (collagenase, elastase, stromelysin)
- Plasminogen activators (t-PA, u-PA), plasmin
- Cathepsins B and D
- Arylsulfatase
- Phospholipase A2
- Prostaglandin E2
- Reactive oxygen species
- P substance
- IL-1, IL-6, IL-17
- TNF-a

MyCells® PRP: reparative action substances and inhibitors of cartilage degradation

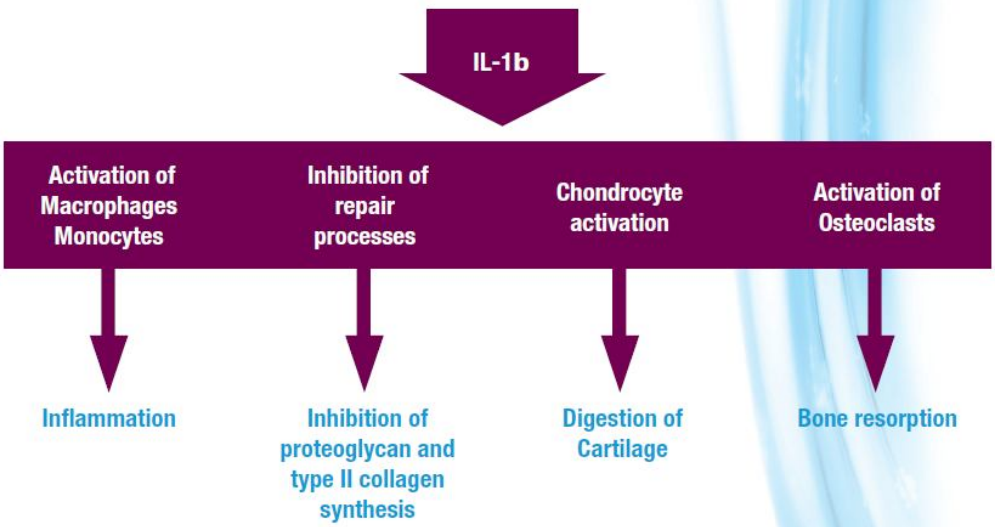
- GROWTH FACTORS:
  IGF-1, IGF-2, TGF-a, PDGF, BFGF
- TIMP1, TIMP2, TIMP3
- PAI-1 and PAI-2
- Alpha 1 antitrypsin
- Alpha 2 macroglobulin
- IL-1 Ra
- IL-4, IL-10, IL-13



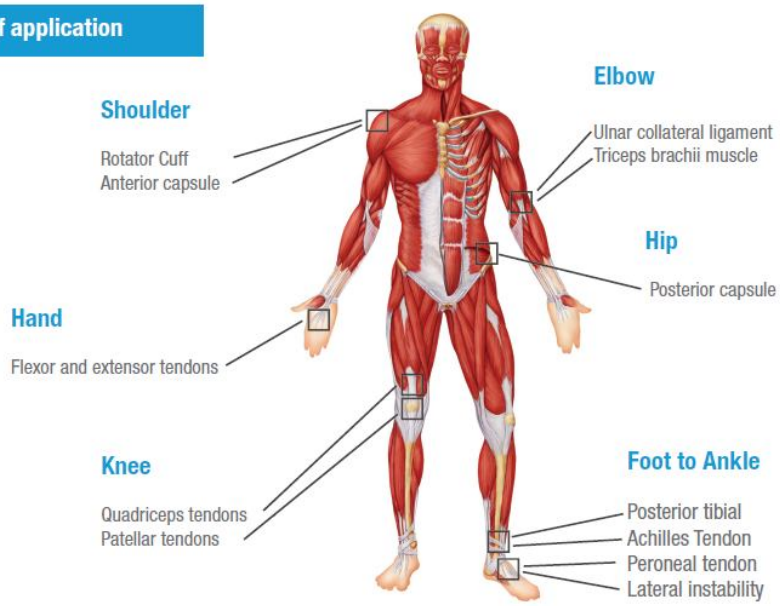
MyCells® PRP for the treatment of tendon, muscle and cartilage disorders

Depending on the production method used, the PRP can vary both in terms of platelet concentration, and in erythrocyte contamination, but especially in the content of leukocytes.
It's important to select the appropriate PRP depending on the application and the clinical end-point.
Leukocyte contamination may decrease the effectiveness of treatment with PRP (1, 2). A significant increase of interleukin 1 (IL-1) was observed in PRP contaminated by leukocytes (1, 3); on the contrary, the platelets release low concentrations of IL-1.
It is well known that the IL- 1 induces the expression of other inflammatory cytokines (4, 5) such as tumour necrosis factor a (TNFa) and increases the production of metalloproteinase, which is capable of degrading the collagen.
Scientific evidence shows the etiopathological role of interleukin, both in cartilage pathologies such as osteoarthritis, arthritis and rheumatoid arthritis (6, 7, 8, 9), and in degenerations and in tendon lesions (6, 7, 11) and muscle lesions (12, 13, 14).
Several authors indicate as optimal the use of PRP that is free of leukocytes in injection therapy - in particular, in muscle injuries, stressing the proven harmful effect of neutrophils that result in increased damage (13).
Platelets, in addition to releasing growth factors with regenerative effect, are also able to bring substances that inhibit the interleukin such as: TIMP and a-2 macroglobulin (6).
The effect of MyCells ® PRP is not only regenerative but it is also a powerful anti-inflammatory, through the inhibition of the critical factors in inflammatory processes (15, 16).
The set of data reported in the literature indicate as optimal the use of pure MyCells PRP, uncontaminated by neutrophils.

IL-1b plays a fundamental role in the degenerative processes of the cartilage



Field of application



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Ordering Guide

Codes	MyCells® DESCRIPTION
PPK1	MyCells® System for Autologous PRP - KIT of 1 PPT tube (1 tray of 1pcs)
PPK2	MyCells® System for Autologous PRP - KIT of 2 PPT tubes (1 tray of 2pcs)
PPK4	MyCells® System for Autologous PRP - KIT of 4 PPT tubes (2 trays of 2pcs)
PPK3.1	Package of 40 PPTs + needle and safety filter
	ACCESSORIES
RE-CENT	Centrifuge
VORTEX	Vortex

Storage: room temperature (18°C-25°C)
Shelf-Life: 18 months
Sterilization: gamma rays

Certifications

All the components of the MyCells® PRP kit have been approved and certified:

- CE Class IIA 1023 for therapeutic use
- ISO 13485
- FDA 21-CFR-880.5860

CE 0123

MYCELLS