PRP Stem Cell Joint Repair reduces inflammation

PRP Stem Cell injections initially cause inflammation which increases circulation, delivery of nutrients, and elimination of waste from the area of injection

Interestingly, however,

PRP Stem Cell Therapy

will then commonly calm inflammation

in that joint region to below the levels

previous to the injection procedure.

This has been verified in research studies.

CONCLUSIONS: In an inflammatory environment, MSCs secrete factors which cause multiple anti-inflammatory effects

-- van Buul GM, Villafuertes E, Bos PK, Waarsing JH, Kops N, Narcisi R, Weinans H, Verhaar JA, Bernsen MR, van Osch GJ. Mesenchymal stem cells secrete factors that inhibit inflammatory processes in short-term osteoarthritic synovium and cartilage explant culture. Osteoarthritis Cartilage. 2012 Oct;20(10):1186-96. doi: 10.1016/j.joca.2012.06.003. Epub 2012 Jul 5.

CONCLUSION: This co-culture model assessed 2 different PRP preparations and their anti-inflammatory effects over time on human OA cartilage and synovium. Both had a significant anti-inflammatory effect on gene expression

-- Osterman C, McCarthy MB, Cote MP, Beitzel K, Bradley J, Polkowski G, Mazzocca AD. Platelet-Rich Plasma Increases Anti-inflammatory Markers in a Human Co-culture Model for Osteoarthritis. Am J Sports Med. 2015 Jun;43(6):147484. doi: 10.1177/0363546515570463. Epub 2015 Feb 25.

CLINICAL RELEVANCE: The anti-nociceptive and anti-inflammatory activities of PRP support its use in OA joints to reduce pain and modulate the disease process.

-- Sundman EA, Cole BJ, Karas V, Della Valle C, Tetreault MW, Mohammed HO, Fortier LA. The anti-inflammatory and matrix restorative mechanisms of platelet-rich plasma in osteoarthritis. Am J Sports Med. 2014 Jan;42(1):35-41. doi: 10.1177/0363546513507766. Epub 2013 Nov 5.

CLINICAL RELEVANCE: Platelet-rich plasma releasate counteracts effects of an inflammatory environment on genes regulating matrix degradation and formation in human chondrocytes. Platelet-rich plasma releasate decreases NFκB activation, a major pathway involved in the pathogenesis of OA. These results encourage further study of PRP as a treatment for OA.

-- van Buul GM, Koevoet WL, Kops N, Bos PK, Verhaar JA, Weinans H, Bernsen MR, van Osch GJ. Platelet-rich plasma releasate inhibits inflammatory processes in osteoarthritic chondrocytes. Am J Sports Med. 2011 Nov;39(11):2362-70. doi: 10.1177/0363546511419278. Epub 2011 Aug 19.

So,

PRP Stem Cell Therapy makes inflammation,

***and*,**

PRP Stem Cell Therapy reduces inflammation.

How is this possible?

Our speculation is that this

can possibly be explained by the fact that

the inflammation felt before PRP Stem Cell injections

is usually chronic, complaining yet not productive.

The inflammation right after injections

is greater, more meaningful,

leading to something productive.

The inflammation after injection

starts a month-long cycle

with a purposeful beginning, middle and end.

Perhaps participation in this meaningful new process

reduces the chronic complaining inflammation.

This is just a theory.

This theory is supported by a similar effect of exercise.

“Although exercise is pro-inflammatory while you’re doing it, during the rest of the time it leaves you better off by reducing inflammation, and after all you live most of your life not exercising,” Stephen Kritchevsky, professor of gerontology and geriatric medicine at Wake Forest School of Medicine

New York Times 12/27/19
Tackling Inflammation to Fight Age-Related Ailments
by Jane Brody

Conclusions:

Each of our injection procedures is inflammatory,

but just briefly.

After that brief rise of inflammation,

PRP Stem Cell Therapy reduces inflammation.

However, the real goal is not this anti-inflammatory effect,

but rather the permanent repair of joint structures.