

## Research on effectiveness of Stem Cell Therapy for knee osteoarthritis

- Doctors from Oxford University suggest in their research that “In bone and cartilage repair, stem cells are expected to replace the damaged tissue.”<sup>1</sup>
- Doctors in China found stem cells increases cell proliferation of chondrocytes (grew cartilage cells) and stopped bone destruction.<sup>2</sup>
- Doctors at Tehran University reported in the *International journal of rheumatic diseases*, published by Oxford in the UK that stem cell injections provided long-term (5+ years) repair in knee osteoarthritis patients.<sup>3</sup>
- In one of the most cited research studies, doctors in Iran found that six months after stem cell treatments, patients displayed an increase in cartilage thickness, extension of the repair tissue over the subchondral bone and a considerable decrease in the size of edematous subchondral patches (damage).<sup>4</sup>
- Researchers found that stem cells introduced into damaged joints could signal the start of remodeling and healing by talking to cells in the damaged joint. The stem cells communicated with the surrounding tissue to help themselves navigate to the site of the wound and differentiate themselves into the material to build bone.<sup>5</sup>
- In the latest study, stem cells have showed promising results in relieving pain and reducing inflammation in patients with more advanced osteoarthritis, helping many halt the progression of the disease and the need for joint replacement.<sup>6</sup>

## Research on effectiveness of Platelet-Rich Plasma Therapy (PRP) for knee osteoarthritis

Recently numerous studies have appeared on the effectiveness of PRP in treating knee osteoarthritis:

- Doctors in Spain suggest that PRP injections improved pain three months after the final treatment and to be more effective in lower osteoarthritis grades than Hyaluronic Acid.<sup>7</sup>
- In comparing PRP to hyaluronic acid injections, doctors at Rush University Medical Center say that one reason PRP is more effective is the anti-inflammatory elements in blood platelets.<sup>12</sup>
- Researchers in China agree, saying that the current evidence indicates that, compared with hyaluronic acid and saline, intra-articular PRP injection can have more benefit in pain relief and functional improvement in patients with symptomatic knee osteoarthritis at one year postinjection.<sup>13</sup>
- In the *Journal of sports medicine and physical fitness* doctors suggest:” that one shot of PRP injection, decreased joint pain more and longer-term, alleviated the symptoms, and enhanced the activity of daily living and quality of life in short-term duration in comparison with cortisone”.<sup>8</sup>
- In the medical journal *Arthroscopy*, doctors indicated that in 12 month follow up PRP injection resulted in significant clinical improvements in osteoarthritic knees.<sup>9</sup>

- Doctors in Italy are suggesting that because of the many convincing studies on the benefits of PRP for knee osteoarthritis, doctors should be aware and make patients aware of this appealing alternative for the treatment of cartilage lesions and osteoarthritis.<sup>10</sup>

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