

A stylized illustration of a syringe with a needle, set against a white circular background. This circle is part of a larger blue graphic composed of several overlapping circles of varying shades of blue, creating a modern, circular design.

Platelet-rich plasma injections for osteoarthritis of the knee

(Adapted from National Institute for Health and Care Excellence (NICE) information to the public. Published: 1 May 2014 www.nice.org.uk)

Special considerations

Please make sure you are well hydrated before the procedure. You cannot take non-steroidal anti-inflammatory drugs (e.g. Ibuprofen, Naproxen, Voltarol) during this treatment and for 2 weeks after the last injection. Local anaesthetic (to numb the joint) would not be used since it was shown to reduce platelet activity.

The procedure

Blood is taken from the arm and a liquid (plasma) containing mainly platelets are extracted from it.

Platelets are cell fragments that produce substances called growth factors, which are involved in the body's repair processes. The plasma is then injected into the knee joint. Ultrasound may be used to guide the needle.

Platelet-rich plasma injections aim to promote cartilage repair and relieve osteoarthritic symptoms, potentially delaying the need for joint replacement surgery. Platelets produce growth factors that are thought to stimulate chondrocyte proliferation, leading to cartilage repair.

Benefits

When NICE looked at the evidence, it decided that there is not enough evidence about how well this procedure works. This is why we will be monitoring your response with validated questionnaires.

Generally, studies showed the following benefits: Patients had improved symptoms and physical function after injections of platelet-rich plasma. The procedure seemed to improve symptoms for around 5–12 months after treatment. The symptoms came back faster in patients with more severe osteoarthritis.

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Risks

The studies showed that the risks of platelet-rich plasma injections included:
Fainting, dizziness, headache, nausea, stomach upset, sweating and increased heart rate in about a third of people at the time of treatment.

Pain and stiffness in the knee for up to 2 days in about 14% of patients.

Mild swelling or pain for less than 2 weeks in just over half of patients.

A warm sensation in the knee for less than a week in about 10% of patients.

Although rare, the infection is another possible risk.

References

1. <https://www.nice.org.uk/guidance/ipg491/evidence/overview-pdf-497218141>
2. Dai et al. Efficacy of Platelet-Rich Plasma in the Treatment of Knee Osteoarthritis: A Meta-analysis of Randomized Controlled Trials. *Arthroscopy*. 2017 Mar; 33(3): 659-670. Epub 2016 Dec 22.