

Treating plantar fasciitis by injecting a patient's own blood into the painful area of the foot

NICE 'HealthTech guidance' advises the NHS on when and how new procedures can be used in clinical practice.

This document is about when and how injecting a patient's own blood into the painful area of the foot can be used in the NHS to treat people with plantar fasciitis. It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence).

This HealthTech guidance makes recommendations on the safety of a procedure and how well it works. An interventional procedure is a test, treatment or surgery that involves a cut or puncture of the skin, or an endoscope to look inside the body, or energy sources such as X-rays, heat or ultrasound. The guidance does not cover whether or not the NHS should fund a procedure. Decisions about funding are taken by local NHS bodies (primary care trusts and hospital trusts) after considering how well the procedure works and whether it represents value for money for the NHS.

NICE has produced this guidance because the procedure when used for people with plantar fasciitis is quite new. This means that there is not a lot of information yet about how well it works and which patients will benefit most from it.

This document is written to help people who have been offered this procedure to decide whether to agree (consent) to it or not. It does not describe plantar fasciitis or the procedure in detail – a member of your healthcare team should give you full information and advice about these. The document includes some questions you may want to ask your doctor to help you reach a decision. Some sources of further information and support are on page 8.

What has NICE said?

Although there is evidence to say that this procedure is safe, there are still uncertainties about how well it works. If a doctor wants to treat plantar fasciitis by injecting a patient's own blood into the painful area of the foot, they should make sure that extra steps are taken to explain the uncertainty about how well it works, as well as the potential risks of the procedure. This should happen before the patient agrees (or doesn't agree) to the procedure. The patient should be given this document and other written information as part of the discussion. There should also be special arrangements for monitoring what happens to the patient after the procedure.

NICE has encouraged doctors to consider asking patients to take part in a research study (called a clinical trial) looking at how well this procedure works compared with other treatments that are already being used for plantar fasciitis. Research should describe which patients are offered the procedure, how long patients have had symptoms and any treatments they have already tried. The research should also look at how well the procedure reduces patients' pain and improves their use of the affected foot.

Other comments from NICE

Plantar fasciitis usually goes away without treatment, and this made it difficult to tell how much the procedure has helped patients. The treatments this procedure was compared with did not help NICE to decide if this procedure worked, and the procedure was often used at the same time as other treatments.

The procedure should only be considered for patients who still have symptoms despite other treatments.

This procedure may not be the only possible treatment for plantar fasciitis. Your healthcare team should talk to you about whether it is suitable for you and about any other treatment options available.

Treating plantar fasciitis by injecting a patient's own blood into the painful area of the foot

The medical name for this procedure is 'autologous blood injection for plantar fasciitis'.

The procedure is not described in detail here – please talk to your doctor for a full description.

Plantar fasciitis occurs when the tissues between the heel and the middle of the foot becomes inflamed. This usually happens because of overuse or injury, and it causes pain underneath the heel and the sole of the foot. Plantar fasciitis usually gets better, either on its own or with the help of rest, pain-relieving and anti-inflammatory medication, orthotics (support devices), physiotherapy and stretching. If these don't work, other treatments may be tried, such as corticosteroid injections, extracorporeal shockwave therapy (in which shockwaves are passed through the skin to the affected area) and sometimes surgery.

In autologous blood injection, a small amount of blood is taken from the patient and 2–3 ml injected into the area around the affected tissue. Sometimes the blood is separated into red blood cells and platelets (cell fragments that produce substances called growth factors) before injecting 2–3 ml of the sample containing mainly platelets. The patient is usually given a local anaesthetic before the procedure. Ultrasound may be used to check the needle is put in the right place.

The aim is to supply the tissues in the foot with growth factors that promote the healing process. Sometimes another procedure called 'dry needling' is done first, in which a needle is passed repeatedly through the tissue to disrupt the fibres and cause bleeding. The injection is sometimes carried out by 'peppering' (inserting the needle, injecting some of the blood, pulling the needle back but not all the way out of the skin, and then pushing the needle back in to inject more blood in a

slightly different place). Patients should be advised to avoid high-impact activities (such as running) for about 2 weeks and to do stretching exercises. The procedure may be repeated if needed.

What does this mean for me?

If your doctor has offered to treat your plantar fasciitis by injecting your own blood into the painful area of the foot, he or she should tell you that NICE has decided that although the procedure is safe there are uncertainties about how well it works. This does not mean that the procedure should not be done, but that your doctor should fully explain what is involved in having the procedure and discuss the possible benefits and risks with you. You should only be asked if you want to agree to this procedure after this discussion has taken place. You should be given written information, including this document, and have the opportunity to discuss it with your doctor before making your decision.

NICE has also decided that more information is needed about this procedure. Your doctor may ask you if details of your procedure can be used to help collect more information about this procedure. Your doctor will give you more information about this.

You may want to ask the questions below

- What does the procedure involve?
- What are the benefits I might get?
- How good are my chances of getting those benefits? Could having the procedure make me feel worse?
- Are there alternative procedures?
- What are the risks of the procedure?
- Are the risks minor or serious? How likely are they to happen?
- What care will I need after the procedure?
- What happens if something goes wrong?
- What may happen if I don't have the procedure?

You might decide to have this procedure, to have a different procedure, or not to have a procedure at all.

Summary of possible benefits and risks

Some of the benefits and risks seen in the studies considered by NICE are briefly described below. NICE looked at 8 studies on this procedure.

How well does the procedure work?

Three studies (involving 64, 45 and 100 patients) reported that the procedure and the other treatments studied all improved foot pain, tenderness or how well the foot worked. In the study of 64 patients, 6 months after patients were treated with injection of their own blood or with corticosteroid injection, pain improved overall in both groups. Three patients in each group had no change in their pain. Foot tenderness also improved in both groups.

In the study of 45 patients, at 6 months after the procedure, patients reported that their pain had improved. Pain reduced in patients treated with injection of their own blood, in patients treated with corticosteroid injection, and in patients treated by peppering. There were also improvements in how well the foot worked in all patients. Ten patients treated by blood injection and 7 patients treated with the peppering procedure needed a third blood injection. Of those treated with corticosteroid injection, none required a third injection.

The study of 100 patients assessed how the foot worked and whether pain improved. Results at 6 months after the procedure were 'excellent' or 'good' in 15 patients treated with injection of their own blood, in 13 patients treated with a local anaesthetic and peppering, in 20 patients treated with corticosteroid injection, and in 22 patients treated with corticosteroid injection and peppering.

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that the main aims of the procedure are to reduce heel pain and improve how well the foot works.

Risks and possible problems

The study of 64 patients reported that all patients found the injection painful. After the procedure, 16 of the patients treated with their own blood and 4 of the patients treated with corticosteroid injection needed painkillers, ice or both to help with the pain. On average the pain lasted 7 days for patients treated with their own blood, and 5 days for patients treated with corticosteroid injection.

A study of 60 patients treated with either injection of their own blood or corticosteroid injection and a study of 25 patients treated with injections of their own blood both reported no problems with the procedure.

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that possible problems with the procedure include rupture of the connective tissue, damage to the nerves and blood vessels around the connective tissue, infection, and bruising.

More information about plantar fasciitis

NHS Choices (www.nhs.uk) may be a good place to find out more.

For details of all NICE guidance on plantar fasciitis, visit our website at www.nice.org.uk

About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider how well an interventional procedure works and how safe it is, and ask the opinions of expert advisers. HealthTech guidance applies to the whole of the NHS in England, Wales, Scotland and Northern Ireland. Staff working in the NHS are expected to follow this guidance.

To find out more about NICE, its work and how it reaches decisions, see www.nice.org.uk/aboutguidance

This document is about 'autologous blood injection for plantar fasciitis'. This document and the full guidance aimed at healthcare professionals are available at guidance.nice.org.uk/HTG298

The NICE website has a screen reader service called Browsealoud, which allows you to listen to our guidance. Click on [Accessibility](#) at the bottom of the NICE homepage to use this service.

We encourage voluntary organisations, NHS organisations and clinicians to use text from this document in their own information about this procedure.

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