

SYNVISC® OR OSTENIL®

PATIENT INFORMATION BOOKLET

Ultrasound-Guided Knee Hyaluronic Acid Injection

Accurate placement. Informed choice. Personalised care.

A balanced guide to ultrasound accuracy, product choice, evidence, benefits, risks and aftercare

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About this booklet

This booklet explains ultrasound-guided hyaluronic acid injection for adults with symptomatic knee osteoarthritis. At JointClinics, Mr Kenan Dehne performs the knee injection using real-time ultrasound to guide the needle into the joint and help avoid surrounding tissues.

Important evidence context

NICE guideline NG226 states that intra-articular hyaluronan injections should not be offered to manage osteoarthritis. Published evidence and international recommendations are mixed. JointClinics therefore treats this as an individual shared decision after discussing the uncertain average benefit, cost, alternatives and the option of no injection. [\[1\]](#)

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At a glance

Treatment

Hyaluronic acid

Guidance

Real-time ultrasound

Clinician

Mr Kenan Dehne

Setting

Outpatient / same day

Products

Synvisc® or OSTENIL®

Current listed fee

£350 — confirm

Understanding knee osteoarthritis

Osteoarthritis affects the whole knee joint.

Changes can involve cartilage, bone, the menisci, ligaments, muscles and the synovium—the tissue lining the joint. Symptoms may include pain, stiffness, swelling and difficulty with walking, stairs, work, sleep or exercise.

The foundations of treatment

Information, tailored exercise and activity, and weight management where appropriate remain the core treatments. Medicines, walking aids, braces, injections and joint replacement may be considered according to symptoms, function, general health and personal goals. [\[1\]](#)



Figure 1: A healthy knee and a knee affected by osteoarthritis. Assessment—not this illustration—determines your diagnosis and options.

A symptom treatment, not a cure

Hyaluronic acid injection does not regrow cartilage, reverse arthritis or guarantee avoidance of knee replacement. The aim is symptom relief that may help some patients stay active and engage with rehabilitation.

What is hyaluronic acid injection?

Hyaluronic acid is naturally present in synovial fluid, where it contributes to lubrication and shock absorption. Injected hyaluronic acid products—sometimes called **viscosupplements**—are placed inside the knee joint with the aim of reducing osteoarthritis pain and stiffness and improving movement.

The injection is intended to be **intra-articular**, meaning inside the joint cavity. It is not a steroid and does not contain a local anaesthetic unless this is separately used for the procedure.

Synvisc® and OSTENIL® are not identical

Feature	Synvisc® formulations	OSTENIL® PLUS
Material	Hylan G-F 20, a cross-linked hyaluronan derivative.	Sodium hyaluronate 2% with mannitol.
Source	Produced from chicken combs; avian allergy must be discussed.	Produced by fermentation; no animal proteins.
Typical product schedule	Standard Synvisc®: three weekly 2 mL injections. Synvisc-One® is a separate single 6 mL formulation.	One 2 mL injection weekly for one to three injections.
Key placement warning	Do not inject outside the joint, into synovial tissues/capsule or a blood vessel.	Inject accurately into the joint; avoid blood vessels and surrounding tissues.

Mr Dehne will confirm the selected product, dose and number of appointments before treatment. Product availability, your medical history, previous reactions, allergies, knee findings and preferences may affect the choice. The current instructions supplied with the selected product take priority. [\[2\]](#) [\[3\]](#)

Do not assume every brand is interchangeable

Hyaluronic acid products differ in source, molecular structure, concentration, dose and recommended injection schedule. Confirm exactly which product is proposed and why.

Why ultrasound guidance matters

The clinical goal is to place the full dose inside the knee joint, where the product is intended to act. A landmark-guided injection relies on surface anatomy alone. Osteophytes, altered joint shape, body habitus, previous surgery, pain and swelling can make the pathway less predictable.

At JointClinics, Mr Kenan Dehne uses real-time ultrasound to identify the joint recess, see the needle approach and guide its tip into the intended intra-articular space. Ultrasound can also identify an effusion and support aspiration when appropriate.

The purpose of image guidance

See the joint, fluid
and nearby tissues



Guide the needle
in real time



Deliver the product
into the joint

Avoiding a misplaced or “wasted” injection

Why accurate placement is important

If hyaluronic acid is deposited outside the joint, it may not deliver the intended intra-articular effect—meaning some or all of an expensive treatment may effectively be wasted in surrounding tissues. Product instructions also warn that extra-articular or surrounding-tissue injection can be associated with local pain, swelling, inflammation or other reactions. Ultrasound guidance reduces this risk but cannot eliminate every procedural complication.

What the evidence shows about accuracy

A systematic review of 12 Level I studies found ultrasound-guided knee injections more accurate than blind or landmark-guided injection in every direct comparison. Reported ultrasound-guided accuracy was commonly around 91–100%, while several landmark-guided techniques achieved approximately 58–84%. A separate 2024 meta-analysis found better procedural pain, follow-up pain and function with ultrasound guidance, but included only four trials and only one hyaluronic acid trial. [\[4\]](#) [\[5\]](#)

Who may be considered?

Hyaluronic acid injection may be discussed with an adult who has knee osteoarthritis symptoms after a clinical assessment and who understands that the average benefit is uncertain. It may be considered when core non-surgical treatment has not provided enough relief, medicines are unsuitable or poorly tolerated, or a patient wishes to discuss a non-steroid injection option.

Suitability is not decided by age or an X-ray alone. Mr Dehne will consider the cause of pain, symptom pattern, examination, any relevant imaging, swelling, previous injections, medical conditions, medicines, allergies, activity goals, alternatives and expectations.

Treatment may be unsuitable or postponed if

Infection or skin problem

There is infection in the knee, an active illness, or infected or damaged skin near the injection site.

Product allergy

There is known hypersensitivity to hyaluronan or another ingredient. Synvisc® requires specific discussion of avian, feather or egg allergy.

Inflammatory arthritis

OSTENIL® PLUS is not recommended for inflammatory joint diseases such as rheumatoid arthritis. A hot swollen knee needs assessment before any injection.

Pregnancy or breastfeeding

Safety has not been established or treatment is not recommended in pregnancy and breastfeeding.

Tell the team about anticoagulants, bleeding disorders, diabetes, immune suppression, previous injection reactions, significant leg swelling or circulation problems, recent surgery, planned dental or medical procedures, and all allergies. Never stop prescribed blood-thinning medicine without medical advice.

A swollen knee

If a significant effusion is present, aspiration may be recommended before injection. Ultrasound helps assess the fluid and guide aspiration and treatment.

What does the evidence show?

Research findings and professional recommendations are mixed. Some trials and product studies report symptom improvement in selected patients, while large placebo-controlled analyses find that the average additional benefit is small.

Major placebo-controlled review

A 2022 BMJ systematic review reported that 24 large placebo-controlled trials involving 8,997 randomised patients showed a small average reduction in pain that did not meet the authors' threshold for clinical importance. The review also reported more serious adverse events in viscosupplementation groups than placebo groups, although causality and interpretation have been debated. [6]

Guideline positions

Source	Position and meaning for patients
NICE NG226 (UK)	States that intra-articular hyaluronan injections should not be offered for osteoarthritis.
Other international guidance	Recommendations differ; some allow selected use after other options, reflecting variation in evidence interpretation, health systems and patient selection.
Product instructions	Describe intended use, dosing and safety but do not establish that every patient will benefit.

How JointClinics approaches this uncertainty

The injection is not presented as routine or guaranteed treatment. Mr Dehne will discuss the current NICE position, product information, likely alternatives, personal goals, cost and the possibility of no benefit before a decision is made.

When might any improvement be noticed?

If benefit occurs, it may develop gradually over several weeks rather than immediately. Duration varies. Some people report no worthwhile change. A response from a previous injection does not guarantee the same response to a repeat treatment.

Preparing for the appointment

The assessment confirms the diagnosis, suitability, product and injection plan. The team will review your medicines, allergies, general health, previous injections, knee surgery, current infection risk and any planned procedures.

Before treatment

- Confirm whether Synvisc®, Synvisc-One® or OSTENIL® PLUS is planned and how many injections are proposed.
- Tell the team about avian, egg or feather allergy before a Synvisc® product is used.
- Report fever, illness, dental infection, skin damage, redness or infection near the knee.
- Provide a complete medicine list, including anticoagulants, antiplatelet drugs, diabetes medicines and supplements.
- Wear loose clothing that gives easy access to the knee. Arrange transport if advised.
- Ask what the fee includes and confirm the current price before booking.

Current JointClinics listing

The website currently lists ultrasound-guided hyaluronic acid injection at £350. Product choice, number of injections, assessment, aspiration and follow-up can affect what is required. Confirm the current total and inclusions with JointClinics.

Consent discussion

Before treatment, you should understand the uncertain average benefit, NICE guidance, product-specific risks, extra-articular placement risk, alternatives, cost, aftercare and what will happen if the injection does not help. This booklet supports—but does not replace—the consent discussion.

The ultrasound-guided injection

The appointment is usually an outpatient procedure. Mr Kenan Dehne performs the knee injection using real-time ultrasound and aseptic technique.



Figure 2: Ultrasound assessment and real-time needle guidance.

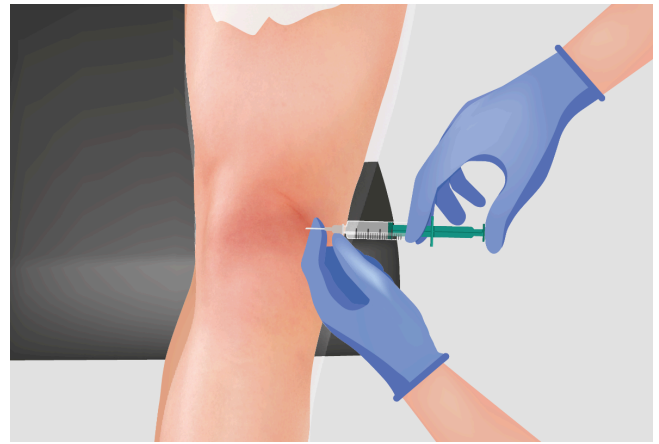


Figure 3: Injection into the knee joint under sterile conditions.

Typical steps

1

Final safety check

Your identity, knee, product, allergies, medicines, infection risk and consent are confirmed.

2

Ultrasound assessment

The joint recess, fluid, anatomy and planned needle pathway are identified.

3

Skin preparation

The skin is cleaned and local anaesthetic may be used. A significant effusion may be aspirated.

4

Real-time guided injection

Mr Dehne watches the needle approach on ultrasound and places the selected product into the intended joint space.

5

Observation and discharge

A small dressing is applied. You can normally leave the clinic the same day with written aftercare advice.

During the injection

You may feel pressure or brief discomfort. Tell Mr Dehne immediately if you feel severe pain, tingling, faintness, breathing difficulty or another unexpected symptom.

Aftercare and follow-up

Your individual instructions and the selected product's leaflet take priority. Temporary soreness, fullness, warmth or swelling can occur after an intra-articular injection.

First 48 hours

Activity

Keep activity gentle. Avoid strenuous or high-impact exercise and prolonged weight-bearing for approximately 48 hours unless advised otherwise.

Injection site

Keep the site clean and follow the dressing and bathing instructions provided by the clinic.

Comfort

Use only pain relief that is safe for you and agreed with your clinician, pharmacist or usual doctor. A cool pack wrapped in cloth may help if advised.

Driving and work

Return depends on discomfort, mobility, your job and any advice given. Do not drive if you cannot control the vehicle safely.

Follow-up

Benefit, if any, may be gradual. Record changes in pain, stiffness, walking, sleep and activity rather than judging the injection from one day. Contact the clinic if symptoms are not settling as expected or if you are unsure about progression.

Continue the whole treatment plan

Injection should not replace appropriate strengthening, activity, weight management, medicines or other agreed osteoarthritis care. If symptoms remain severe, further assessment—including discussion of joint replacement—may be appropriate.

Benefits, limitations and alternatives

The intended benefit is reduced knee osteoarthritis pain and stiffness and improved movement. Ultrasound guidance improves confidence that the product has reached the joint and reduces the risk of an expensive injectate being deposited in surrounding tissues.

However, hyaluronic acid does not repair lost cartilage, correct deformity or reliably help every patient. The average additional benefit over placebo is uncertain and may be small. Ultrasound improves placement accuracy; it does not make an ineffective product effective for a particular person or remove all procedural risk.

Other options to discuss

Option	Role in care
Education, exercise and physiotherapy	Core management to improve strength, movement, confidence and self-management.
Weight management	May reduce joint load and improve symptoms when weight loss is appropriate and achievable.
Topical or oral medicines	Can help some people; risks depend on health, other medicines and duration.
Walking aid or brace	May improve confidence or reduce load in selected situations.
Corticosteroid injection	May provide short-term relief when other medicines are ineffective or unsuitable; NICE describes approximately 2–10 weeks.
Other private injections	PRP or Arthrosamid® may be discussed, each with different evidence, costs, risks and eligibility.
Knee replacement	Considered when pain and functional limitation remain substantial despite appropriate non-surgical treatment.

No universal “best injection”

The appropriate choice depends on diagnosis, severity, previous treatment, health, priorities, cost and willingness to accept uncertainty. Choosing no injection is a valid option.

Risks, reactions and when to seek help

No injection is risk-free. Your individual risk can be affected by medicines, allergies, diabetes, immune suppression, skin problems, prior reactions, knee swelling and other conditions.

Possible local effects

- Temporary knee pain, tenderness, warmth, stiffness or bruising.
- Swelling or joint effusion, which can occasionally be pronounced.
- Local redness, itching or an inflammatory flare.
- Bleeding or bruising, particularly with blood-thinning treatment.
- Failure to improve or only short-lived benefit.

Less common but important risks

Joint infection is rare but serious and needs urgent assessment. Allergic or hypersensitivity reactions can occur; Synvisc® requires specific attention to avian protein, feather and egg allergy. Needle injury to nearby structures and extra-articular product placement are possible. Ultrasound guidance helps reduce placement and pathway risks but cannot remove them completely.

Contact JointClinics or urgent care promptly

Increasing redness, heat or swelling; fever or feeling significantly unwell; rapidly worsening pain; discharge from the injection site; a very swollen knee; new calf pain or swelling; or a spreading rash.

Call 999 for an emergency

Severe breathlessness, chest pain, collapse, facial or throat swelling, difficulty breathing, or another severe or rapidly worsening symptom.

Reporting a device problem

Tell the treating clinician about any suspected complication. Problems with a medical device can also be reported to the UK Medicines and Healthcare products Regulatory Agency through the Yellow Card scheme: yellowcard.mhra.gov.uk.

Frequently asked questions

Does ultrasound guarantee the injection is in the joint?

Ultrasound allows real-time visualisation and is substantially more accurate than landmark-only techniques in published studies. It reduces—but does not eliminate—the risk of extra-articular placement or other complications.

Why is it important not to inject surrounding tissues?

The product is designed for the joint cavity. If deposited outside the joint, it may not produce the intended effect and may cause local pain, swelling, inflammation or other tissue reactions. Both Synvisc® and OSTENIL® instructions emphasise accurate intra-articular placement. [2] [3]

Which product will I receive?

Mr Dehne will confirm the proposed formulation. Synvisc® and OSTENIL® differ in source, composition and injection schedule. The choice is personalised and may also depend on availability.

Is the injection recommended by NICE?

No. NICE NG226 states that intra-articular hyaluronan injections should not be offered for osteoarthritis. This should form part of your informed decision. Other guidance and clinical practice differ, but benefit cannot be guaranteed.

How soon might it work?

If benefit occurs, it usually develops over several weeks. Some people do not improve. Product information may describe effects lasting several months, but individual duration is unpredictable.

Can the injection be repeated?

Repeat treatment may be considered after reassessment, but previous benefit does not guarantee future benefit. Risks, product instructions, cost and alternatives should be reviewed again.

How do I book?

Visit jointclinics.co.uk/book/injection, telephone **07553 209288**, or request an assessment through the JointClinics website.

Your treatment record and questions

Keep a record of the selected product and injection. Bring this information to future appointments.

Your key details

Treatment date	
Knee treated	
Product and formulation	
Batch / lot number	
Aspiration performed	
Injecting clinician	Mr Kenan Dehne
Follow-up plan	
Urgent contact number	

Questions to ask

- Why is hyaluronic acid being considered for my knee despite the NICE recommendation?
- Which product and injection schedule are proposed, and why?
- How does ultrasound guidance change placement accuracy and my procedural risk?
- What result is realistic for my symptoms, and when will we decide whether it helped?
- What are my alternatives, including no injection and knee replacement?
- What exactly is included in the price and follow-up?

Medical information notice

This booklet provides general educational information and does not replace personalised medical advice, examination, formal consent or the current instructions for the selected medical device. If this booklet differs from advice given by your treating team, follow your treating team's instructions. In an emergency, call 999.

JointClinics contact

Appointments and enquiries

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Your consultant

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References

1. National Institute for Health and Care Excellence. **Osteoarthritis in over 16s: diagnosis and management (NG226)**. Published 19 October 2022. [NICE recommendations](#)
2. Genzyme Corporation / Sanofi. **SYNVISC® (hylan G-F 20) Prescribing Information and Patient Information**. [Official product information](#)
3. TRB Chemedica UK. **OSTENIL® PLUS Instructions for Use**. Revision January 2022. [Official UK instructions](#)
4. Fang WH, Chen XT, Vangsness CT Jr. **Ultrasound-Guided Knee Injections Are More Accurate Than Blind Injections: A Systematic Review of Randomized Controlled Trials**. Arthroscopy, Sports Medicine, and Rehabilitation. 2021;3(4):e1177–e1187. [PMC8365196](#)
5. Oo WM, Linklater J, Siddiq MAB, Fu K, Hunter DJ. **Comparison of ultrasound guidance with landmark guidance for symptomatic benefits in knee, hip and hand osteoarthritis: systematic review and meta-analysis of randomised controlled trials**. Australasian Journal of Ultrasound in Medicine. 2024;27(2):97–105. [PMC11109994](#)
6. Pereira TV, Jüni P, Saadat P, et al. **Viscosupplementation for knee osteoarthritis: systematic review and meta-analysis**. BMJ. 2022;378:e069722. [BMJ 2022;378:e069722](#)

Evidence context

Published studies differ in product, dose, injection technique, patient selection and risk of bias. Product instructions describe intended use and safety; they do not prove that every patient will benefit. Guideline recommendations remain inconsistent internationally.

Document control

Prepared for JointClinics patient education. Version 1.0 — September 2026. Review date: September 2028, or earlier if NICE guidance, product instructions, evidence, pricing or the JointClinics pathway changes.