

Key Questions and Background

Hyaluronic Acid/Viscosupplementation

* Update of *Hyaluronic Acid/Viscosupplementation for Knee OA (2010)*

Introduction

Osteoarthritis (OA) is the most common form of chronic articular disease, and the most commonly affected joint is the knee. Conservative management generally requires a combination of both nonpharmacological and pharmacological therapies. Viscosupplementation, which involves an injection of hyaluronic acid, provides an alternative to NSAIDs and corticosteroid injection, both of which have potential undesirable side effects and/or other drawbacks. Hyaluronic acid is a normal component of synovial fluid and cartilage that acts as both a joint lubricant and a shock absorber. The concentration and molecular weight of endogenous hyaluronic acid are reduced in patients with osteoarthritic joints.

Policy Context*

The Health Technology Assessment program reviewed *Hyaluronic Acid/Viscosupplementation for Knee* in 2010. This topic was selected for re-review based on a recent systematic review and meta-analysis ([Rutjes 2012](#)) that could change the previous determination.

Hyaluronic acid preparations have been approved by the Food and Drug Administration (FDA) for treatment of pain associated with OA of the knee in patients who have not had an adequate response to nonpharmacological, conservative treatment and simple analgesics. No new indications have been approved since the 2010 report.

Scope of This HTA

Key questions guide the development of the evidence report. HTA seeks to identify the appropriate clinical topics (e.g., population, indications, comparators, outcomes) to address the statutory elements of evidence on safety, efficacy, and cost-effectiveness relevant to coverage determinations.

Population: Adults with OA of the knee.

Interventions: Viscosupplementation/hyaluronic acid injection (e.g., hyaluronic acid injection – Hyalgan, Synvisc, Supartz, Orthovisc, Euflexxa, Gel-One)

Comparators: NSAIDs, corticosteroid injection, physical therapy, oral pain medications, placebo, arthroscopic lavage and/or debridement.

Outcomes: Pain, function, quality of life, adverse effects.

Key Questions

1. 1a: What is the clinical effectiveness of viscosupplementation for treatment of OA of the knee?
1b: Do different viscosupplementation products vary in effectiveness?
2. What are the adverse effects associated with viscosupplementation in patients with OA of the knee?
3. Does the effectiveness of viscosupplementation vary by subpopulation defined by these factors: age, race/ethnicity, gender, primary versus secondary OA, disease severity and duration, weight (body mass index), and prior treatments?
4. What are the cost implications and cost-effectiveness of this type of product?

Public Comment & Response

See Key Question Public Comment and Response document published separately.

[For additional information on key questions and public comment.](#)