

Glucosamine

Glucosamine, in its unlicensed form as a food supplement, has been commonly used for many years for the relief of pain and symptoms associated with joint disorders.¹ In its licensed forms, as glucosamine sulphate and glucosamine hydrochloride, it is indicated for the relief of symptoms in mild to moderate osteoarthritis of the knee. However, despite its extensive use and now licensed indications, a number of evidence based, systematic literature reviews have not found it to be cost effective.

Key recommendations

- Glucosamine (with or without chondroitin) is not recommended for prescribing on the NHS as the evidence to support its efficacy is not strong enough and it is not considered to be cost-effective.
- Patients already being prescribed glucosamine should be reviewed and prescriptions stopped. No new prescriptions of glucosamine containing products should be commenced.
- Patients wishing to take glucosamine should be advised to purchase it over-the-counter (OTC). OTC glucosamine sulphate at a dose of 1500mg daily.
- However, please note that the MHRA has warned against glucosamine use by people who have seafood allergies or those taking warfarin.³

Clinical evidence

NICE updated their clinical guidelines for the management of osteoarthritis (OA) in February 2014,² and their 'do not do' advice on the use of glucosamine remains unchanged. Their overall recommendations are:²

- Exercise should be a core treatment for people with osteoarthritis, irrespective of age, comorbidity, pain severity or disability.
- Interventions to achieve weight loss should be a core treatment for people with OA who are obese or overweight.
- Prescribers should consider offering paracetamol for pain relief in addition to core treatment; regular dosing may be required. Paracetamol and/or topical NSAIDs should be considered ahead of oral NSAIDs, cyclo-oxygenase 2 (COX-2) inhibitors or opioids. Please note: NICE will be reviewing CG177 as their surveillance suggests that paracetamol may not have a clinically important effect on pain in people with osteoarthritis.²
- When a person presents with osteoarthritis, do not prescribe rubefacients, intra-articular hyaluronan injections, acupuncture, chondroitin or glucosamine products.

The table below shows the annual cost of glucosamine compared to other medicines used for OA in primary care.⁴

Drug	Dose regimen	Drug cost per year (£)
Glucosamine sulphate 1.5mg tablets (Dolenio®)	1500mg orally once daily	£221
Glucosamine hydrochloride 625mg tablets (Alateris®)	1250mg orally once daily	£224
Paracetamol	1g orally up to four times daily	up to £62
Naproxen	250mg to 500mg twice daily	£24 to £33
Ibuprofen	400mg to 600mg orally three times daily	£41 to £82
Celecoxib	200mg orally, once or twice daily	£24 to £48

In England and Wales, over £334,000 is currently being spent on glucosamine preparations in the course of a year (ePACT July 2017 - September 2017). Reducing the use of glucosamine in favour of a more cost-effective alternative, has the potential to release significant savings.

Stopping prescribing of glucosamine could release savings of £334,653 across England and Wales. This equates to £571 per 100,000 patients.

References

1. Wandel S, Juni P, Tendal B et al. Effects of glucosamine, chondroitin, or placebo in patients with osteoarthritis of hip and knee: network meta-analysis. *British Medical Journal* 2010; 341: c4675
2. National Institute for Health and Care Excellence (NICE). Clinical Guideline 177. Osteoarthritis: care and management. February 2014. Available at: <https://www.nice.org.uk/guidance/cg177> Last accessed 28/07/2017.
3. Medicines & Healthcare products Regulatory Agency. Current problems in pharmacovigilance – Volume 31. May 2006. Available at: <http://webarchive.nationalarchives.gov.uk/20080906013847/http://www.mhra.gov.uk/Publications/Safetyguidance/CurrentProblemsinPharmacovigilance/CON2023859> Last accessed 28/07/2017.
4. NHS Business Services Authority (NHSBSA). Department of Health Drug Tariff. July 2017. Available at <http://www.drugtariff.nhsbsa.nhs.uk> Last accessed 28/07/2017.

This resource has been commissioned by NHS Clinical Commissioners on behalf of CCGs in England. Information prepared by Gemma Dowell, clinical writer for PrescQIPP CIC, November 2017 and reviewed by Sue Smith, Senior Medicines Evidence Reviewer, November 2017. Non-subscribers who wish to access the implementation resources should contact help@prescqipp.info

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Bulletin



Audit, patient letter

Data pack available here: https://pdata.uk/#/views/B205_Glucosamine/FrontPage?:iid=2



Data pack