

... about glucosamine

Glucosamine is an endogenous amino-monosaccharide that is an essential part of glycosaminoglycans, a constituent of cartilage and synovial fluid. The mechanism of action of glucosamine in humans is unknown but, theoretically, it may stimulate production of cartilage components.¹

Only three glucosamine products are licensed in the UK for the relief of symptoms of mild to moderate osteoarthritis of the knee; *Glusartel*[®]▼, *Dolenio*[®]▼ (both glucosamine sulphate 1500mg), and *Alateris*[®]▼ (glucosamine hydrochloride 625mg); however, many products containing glucosamine are available. In the year ending June 2010, approximately £1.93 m was spent in Wales on over 180 of these products.²

There are several published trials of glucosamine, but the evidence to support efficacy in osteoarthritis is mixed.³ There appears to be more evidence of benefit in terms of pain and function associated with glucosamine sulphate products. However, if benefits exist, they are small, their clinical relevance is uncertain, and they have not yet been validated in the UK healthcare setting.³⁻⁵

Glucosamine is not recommended by NICE for the treatment of osteoarthritis - it is not considered to be cost-effective.⁶

With regard to safety:

- People with shellfish allergy should avoid glucosamine products, which are derived from the crushed shells of crustaceans.⁷
- The MHRA recommends that patients on warfarin should not take glucosamine.⁷
- Patients with impaired glucose tolerance should have their blood glucose concentrations checked, and patients with a risk of cardiovascular disease should have their blood lipid levels monitored.¹ Patients with asthma should be aware that worsening of symptoms has been reported.¹

References

1. *Alateris*[®]▼ 625mg tablets. Summary of Product Characteristics. Ransom. 2007.
2. Comparative Analysis System for Prescribing Audit (CASPA). Prescribing Services Unit, NHS Wales Informatics Service.
3. Towheed T et al. Glucosamine therapy for treating osteoarthritis (Review). Cochrane database of systematic reviews 2005 (updated 2009).
4. Black C et al. *Health Technol Assess* 2009; 13: 1-148.
5. UKMI London New Drugs Group. Primary Care Briefing *Glusartel*[®]▼ (glucosamine sulphate). October 2010. www.nelm.nhs.uk
6. National Institute for Health and Clinical Excellence (NICE). Clinical Guideline 59. February 2008.
7. Medicines and Healthcare products Regulatory Agency. Current problems in pharmacovigilance 2006; 31:8.