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# Osteopen, Cartrophen - Pentosan Polysulfate Sodium (PPS) for arthritic joint pain in horses

What Pentosan polysulfate sodium (PPS) is:

- A semi-synthetic drug that has been used to relieve bladder pain and discomfort related to cystitis

Indication for use:

- Joint pain associated with osteoarthritis
- Administered as an intramuscular injection

Action

- PPS is thought to work by inhibiting proteases, which break down cartilage, so protecting the joint
- It is thought to promote the synthesis of proteoglycans, which absorb water to help the joint withstand compressive forces, provide joint lubrication, maintain cartilage flexibility and structural integrity
- It may also reduce nerve growth factor production, which is linked to pain in OA
- It may also improve synovial (joint) fluid quality
- There is also some support for disease modifying and anti-inflammatory properties

Effectiveness:

- Small studies have demonstrated an improvement in pain with people with osteoarthritis after a few weeks of taking the medication
- Research supports improvement of lameness in horses with osteoarthritis, and slowed signs of cartilage degeneration

Safety and Risks:

- PPS is generally well tolerated, with no serious drug related adverse effects

Conclusion:

- PPS shows promise as a treatment for joint pain, particularly in osteoarthritis, with evidence supporting pain relief, and potentially some disease-modifying benefits

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