

Orthox Ltd.

*High Strength, Regenerative, Tissue
Scaffolds for Large Lesion Articular*

Cartilage Repair

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Need

- There are >750,000 knee cartilage injuries each year.
- Cartilage defects lead to total joint replacement, costing the NHS >£1bn
- Regenerative, load bearing, tissue scaffolds offer a potential solution.



‘Orthox’s scaffolds aim to replicate the function and topography of knee cartilage’

Approach

- Orthox have developed a silk-based biomaterial that combines resilience and strength with tissue regeneration
- This was cast into porous scaffolds with smooth, contoured surfaces
- These were implanted in load bearing ovine knee cartilage defects

Benefits/ Outcomes

- After 3 months, scaffolds show tissue ingress and mechanical performance
- The cost of cartilage injury is estimated at \$65bn in the US through work disability
- Orthox scaffolds combine regeneration, functionality and affordability (<£1,000).

