improve quadriceps strength after ACL reconstruction, though results vary. Psychological readiness and functional symmetry consistently predict safe return to sport. Collectively, these findings illustrate that evidence-based rehabilitation strategies directly enhance post-surgical functional outcomes in athletes.

Conclusions: Modern rehabilitation following sports-related surgery should adopt an evidence-based, individualised, and multidisciplinary approach. The rehabilitation plan should integrate early functional activity, progressive strengthening, and psychological assessment. Collaboration among surgeons, physiatrists, and physiotherapists is essential to optimise outcomes and reduce the risk of re-injury.

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Will Artificial Intelligence Take Over Surgery? A Contemporary Literature Review

Authors: Fatimah Garashi[1*]

1: University of Manchester, Manchester, United Kingdom
*Corresponding Author: fatmaalgrashi@gmail.com

Background: Artificial intelligence (AI) and robotic technologies are reshaping modern surgery, evolving from mechanical aids into cognitive collaborators. Their impact on outcomes, workflow and surgical autonomy remains debated. This review synthesises the highest-level evidence from the past decade examining AI-assisted surgery in humans.

Methods: A comprehensive PubMed and Embase search (January 2015–October 2025) identified peer-reviewed human studies using combinations of "artificial intelligence", "machine learning", "deep learning", "computer vision" and "robotic surgery". Eligible publications included systematic reviews, meta-analyses and large observational cohorts. Thirty-eight studies were narratively appraised and grouped into seven domains: foundational frameworks, comparative outcomes, predictive analytics, intra-operative computer vision, specialty exemplars, training and ergonomics and ethics and safety.

Results: Across high-quality meta-analyses and multicentre cohorts, AI-assisted or robotic surgery consistently reduced blood loss (20-35%), shortened hospital stay (by 1-2 days), and lowered conversion rates (up to 40%) without compromising oncological margins or increasing complications. Machine-learning models outperformed conventional risk scores for morbidity, mortality and postoperative delirium prediction. Computer-vision and augmented-reality systems enhanced anatomical recognition, navigation and instrument precision. Specialty-specific studies demonstrated reproducible advantages in hepatobiliary, colorectal, urological, thoracic and paediatric surgery. Training platforms incorporating AI shortened learning curves and reduced ergonomic strain, while ethical analyses emphasised the necessity of transparency, data security and sustained human oversight.

Conclusions: Evidence from 38 studies shows that AI augments rather than replaces surgical expertise. When ethically implemented, it enhances precision, safety and efficiency across disciplines. The future of operative care rests on a partnership between human judgement and algorithmic insight.

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Orthoplastics Exposure in Plastic and Orthopaedic Surgical Training: A Literature Review

Authors: Khansa Irfan[1*], Aysa Masoumi[2]

1: Oxford University Hospitals Trust, Oxford, United Kingdom
2: East Lancashire Hospitals Trust, Blackburn, United Kingdom
*Corresponding Author: khansa.irfan@ouh.nhs.uk

Background: Orthoplastics represents a collaborative interface between plastic and orthopaedic surgery, focused on the reconstruction of complex limb injuries. Despite its increasing clinical importance, there is limited literature assessing orthoplastic exposure within plastic surgery and orthopaedic training programmes. This review aims to evaluate training patterns and trainee exposure to orthoplastic procedures.

Methods: A literature review was conducted using PubMed, limited to the last ten years (2015–2025). MeSH terms included "orthoplastic," "plastic surgery," "orthopaedic surgery," and "trainee exposure." Studies assessing operative exposure, educational experiences, or training outcomes in orthoplastic or orthoplastic-type settings were included.