

## Risk of orthopedic implants triggering airport detectors

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Increased security at U.S. airports has increased the probability of orthopaedic implants being detected by metal detectors. A study published in the April 2007 issue of the Journal of Bone and Joint Surgery (JBJS) examined 129 volunteers with a total of 149 implants to determine which devices are most likely to trigger detectors.

The major findings of the study were:

- More than half of all orthopaedic implants may be detected by metal detectors.
  
- Ninety percent of total knee replacements and all total hip replacements were detected, whether they were unilateral or bilateral.  
\* Plates, screws, intramedullary nails and wires are rarely detected.
  
- Cobalt-chromium and titanium implants are much more likely to be detected than stainless-steel implants.
  
- Lower-extremity implants are detected 10 times more often than upper-extremity and 11 times more than spine implants.
  
- Upper-extremity prostheses, such as total shoulder replacements, total wrist replacements and radial head replacements, were not detected.

The abstract of the study can be viewed at:

<http://www.ejbs.org/cgi/content/abstract/89/4/742>