

Adverse Reactions to Metal Debris

- The development of adverse immune responses to metal is an accepted complication of metal-on-metal hip replacements and was previously thought to be restricted these types of implants.
- Yet recent evidence has shown that tissues taken from between 7% and 44% of patients with failed knee replacements show signs of delayed type metal allergy (ALVAL).¹⁻³
- Still, this condition is rarely considered in routine clinical workups to investigate patients with unexplained pain post arthroplasty.
- Orthotype™ has been developed through the collaboration of experts in orthopaedics, pathology, bioengineering and genetics to help identify these adverse immune responses.
- Orthotype™ can be used in the investigation of patients developing unexplained pain post arthroplasty.
- It can also be used preoperatively to identify patients at greater risk of developing adverse responses following their surgery.



Orthotype™ testing is simple, using a standard blood draw with samples collected in EDTA (purple) tubes and is available in two forms.

Pre-op test to identify patients' risk of developing metal hypersensitivity.

Post-op test to determine the likelihood of the presence of a metal hypersensitivity response in a patient complaining of pain.

How to order Orthotype™

Orthotype™ can be ordered via NHS pathology labs. DNA extraction, testing and reporting is carried out by the NHS Blood and Transplant labs and results are sent to the email address on the request form.



Blood and Transplant

For details on how to order Orthotype™, scan the QR code, or visit bit.ly/Orthotype

REFERENCES

1. Kurmis AP, Herman A, McIntyre AR, Masri BA, Garbuz DS. Pseudotumors and High-Grade Aseptic Lymphocyte Dominated Vasculitis-Associated Lesions Around Total Knee Replacements Identified at Aseptic Revision Surgery: Findings of a Large-Scale Histologic Review. *J Arthroplasty*. 2019;34(10):2434-8.
2. Crawford DA, Passias BJ, Adams JB, Berend KR, Lombardi AV. Impact of perivascular lymphocytic infiltration in aseptic total knee revision. *The bone & joint journal*. 2021;103-b(6 Supple A):145-9.
3. Ng VY, Lombardi AV, Jr., Berend KR, Skeels MD, Adams JB. Perivascular lymphocytic infiltration is not limited to metal-on-metal bearings. *Clinical orthopaedics and related research*. 2011;469(2):523-9.