British Hip Society Position Statement: Nickel Allergy in Total Hip Replacement

Date: January 2026

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1. Purpose

This statement provides guidance for orthopaedic surgeons regarding the relevance and management of self-reported or confirmed nickel allergy in patients undergoing total hip replacement (THR). It reflects the current evidence base, dermatological guidance, and consensus expert opinion.

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2. Background

Nickel sensitivity is common in the general population, with prevalence estimates between 10–15%. Many standard orthopaedic implants, including hip prostheses, contain small amounts of nickel. Consequently, surgeons are frequently asked to consider potential implications for patients reporting metal hypersensitivity or requesting "nickel-free" implants.

While metal hypersensitivity has been discussed for several decades as a possible contributor to persistent pain, cutaneous reactions, or implant loosening, the literature remains inconsistent and largely observational.

This statement focuses on pre-existing nickel allergy and does not cover metal-wear-induced reactions, such as ALVAL (Aseptic Lymphocyte-Dominant Vasculitis-Associated Lesions)

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3. Evidence Summary

3.1 Systematic Reviews and Current Data

A recent systematic review by **Field and Sochart (2021)** found **no robust evidence** linking nickel hypersensitivity with poor outcomes following total hip replacement. The review concluded that while sensitisation may occur post-operatively, causation between nickel exposure and implant failure or pain has not been established.

In a related analysis focusing on knee replacement, **Porter and Porter (2021)** proposed a pragmatic diagnostic framework but similarly acknowledged that evidence remains weak, with metal hypersensitivity being a diagnosis *of exclusion*.

3.2 Dermatological Guidance

The **British Society of Cutaneous Allergy (BSCA)** advises that many individuals with nickel allergy **do not experience complications** following joint replacement. Routine patch testing is not recommended, as positive skin reactions do not predict orthopaedic implant intolerance.

3.3 Pathophysiological Uncertainty

Current understanding suggests that while nickel ions can be released from some implants, the biological relevance of this exposure is minimal in most patients. Cutaneous hypersensitivity does not reliably translate into a systemic or deep-tissue immune response within the joint environment.

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4. Recommendations

4.1 Preoperative Assessment

- **Routine allergy testing (patch testing or blood tests)** for metal hypersensitivity is **not recommended** prior to THR.
- A **history of skin allergy to nickel** is **not a contraindication** to the use of conventional implants containing nickel. The implant Instructions For Use (IFU) should be available and may be reviewed prior to use.
- Surgeons should **discuss implant composition** when patients raise concerns and document this discussion clearly in the medical record.

4.2 Implant Selection

- **Standard, evidence-based implants** remain the preferred choice.
- When patients specifically request **totally** nickel-free alternatives, they should be informed that such implants may have **limited long-term outcome data and uncertain survivorship** compared to established designs.
- Use of alternative implants should follow **shared decision-making** with documented informed consent.

4.3 Postoperative Management

- In cases of persistent pain, dermatitis, or unexplained inflammatory response after excluding infection and mechanical causes, **metal allergy may be considered as a diagnosis of exclusion**.
- Referral to **dermatology or allergy specialists** for further evaluation may be appropriate in selected cases.

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5. Medicolegal Considerations

Although nickel sensitivity is common and patient concern is understandable, there is **no compelling evidence of a causal relationship** between nickel exposure from implants and implant failure or systemic allergic reaction.
Surgeons should ensure that:

- Patient concerns are **acknowledged and discussed**.
- The rationale for implant choice is **clearly documented**.
- Consent discussions emphasise the **lack of evidence of harm**, balanced against the **unknown long-term performance** of nickel-free alternatives.

This approach aligns with current medico-legal standards for transparency and informed decision-making.

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6. Summary Statement

At present, there is **no robust evidence** that nickel sensitivity or positive patch testing correlates with adverse clinical outcomes, aseptic loosening, or hypersensitivity reactions following total hip replacement.
The **British Hip Society** does **not recommend routine allergy testing** and supports the continued use of standard, evidence-based implants in patients with a history of nickel allergy, while encouraging open communication, informed consent, and thorough documentation.

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7. References

1. Field R, Sochart D. *Nickel hypersensitivity and total hip replacement: a systematic review.* **EFORT Open Rev.** 2021;6(10):957–967. PMCID: PMC8559563
2. Porter M, Porter P. *Metal allergy in primary and revision total knee arthroplasty: a systematic review and consensus algorithm.* **Bone Jt Open.** 2021;2(10):754–764. DOI: 10.1302/2633-1462.210.BJO-2021-0098.R1
3. British Society of Cutaneous Allergy. *Nickel – Patient Information Leaflet*. https://cutaneousallergy.org/pils/nickel/

Disclaimer:
This statement reflects the interpretation of current evidence as of October 2025. It is intended to guide clinical practice but should not replace individual clinical judgment. The British Hip Society will review this guidance as further evidence emerges, or regulatory advice evolves.

This document was sent for consultation to:

Members of the British Hip Society
British Orthopaedic Association
National Joint Registry
Medicine and Healthcare Regulatory Agency
British Association of Surgery of the Knee
British Society of Cutaneous Allergy
British Society of Shoulder and Elbow Surgery
British Society of Foot and Ankle Surgery
British Association of Spinal Surgery
British Society of Surgery of the Hand
Representatives from NHS Implant Retrieval Services.