

Metal Sensitivity and Joint Replacement





Introduction

Welcome to the AAHKS patient education video series!

- This video will cover **Metal Allergy / Hypersensitivity**:
 - What is it? Diagnosis

• Signs & Symptoms • Management





Implants Contain Metal



Cobalt Aluminum Nickel Niobium Molybdenum

Chromium

Titanium

Zirconium

Vanadium

Tantalum



https://aaos.org/hipreplacementmodel

https://healthcare.utah.edu/orthopaedics/

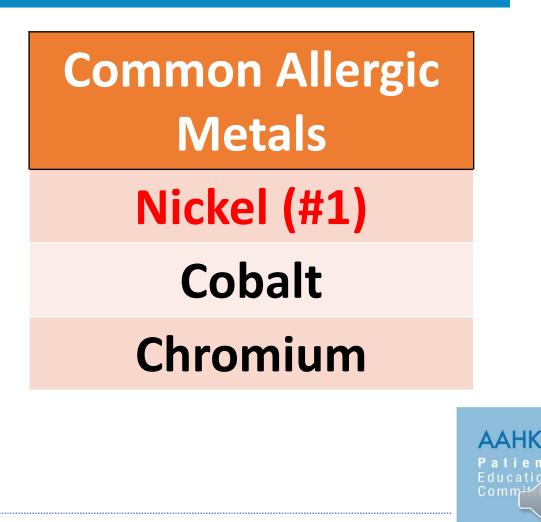
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Metal Allergy

- 10-15% of the Population
- Delayed-Type Reaction
 - First Exposure
 - Second Reaction





Signs & Symptoms

- Skin Reaction
 - Rash
 - Itching
- Associated with
 - Jewelry
 - Clothing
 - Eyeglasses
 - Occupation











Testing for Metal Allergy

- Skin Patch Testing
 - Positive Test **DOES NOT MEAN** Problems with Joint Replacement
 - Unreliable Results in Orthopaedics
- Blood Tests are available
 - No Accepted and Reliable Test
- More Research is Needed





Metal Ions & Joint Implants

- Poorly Functioning Implants release Metal Ions
 - "Metal on Metal" hips
 - Worn Plastic Liner



- Metal ions MAY EXCLTE the immune system \rightarrow Problems
- Metal Ion Levels can be ELEVATED in patients with wellfunctioning implants



Allergic Symptoms

- Swelling
- Stiffness
- Pain at rest
- Skin Rash
- Itching

INFECTION MUST BE RULED OUT



Before Surgery

Severe Rash & Itching to Metal Jewelry

• Specialized implants are available





https://www.aesculapimplantsystems.com/en

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After Surgery

- Rule Out Infection
- Rash or Itching
 Topical/Oral Steroids
- Continued SEVERE Rash & Pain
 - Exhausted non-operative treatments
 - Revision Joint Replacement Surgery with special implants
 - Unpredictable Outcomes





Summary

- Allergic reaction to metal implants is VERY RARE
- Routine testing is NOT recommended
- Diagnosis can be Difficult
- Inform your surgeon if you have **SEVERE** metal sensitivity
- Research is ongoing





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