

MELISA®

a valuable diagnostic tool in orthopedic surgery



Immune responses to metals in medical devices

“The symptoms ... may be limited to the region where the device is implanted or may be more generalized. Reported systemic symptoms include fatigue, rash, joint and muscle pain, and weakness. Although uncommon and varied, these symptoms can sometimes mimic more well-established inflammatory conditions, such as systemic lupus erythematosus” US Food and Drugs Administration Committee 2019

An inflammatory response activated by metal allergy may be one of the causes of health problems in patients. MELISA, a clinically validated blood test, can identify which metals are causing an immune reaction. Localized symptoms such as pain, rash and swelling around the implant may be present. Additionally, numerous systemic symptoms including chronic fatigue, fibromyalgia, joint pain, muscle weakness, cognitive dysfunction are reported.

Studies

- 76% of chronic fatigue sufferers experienced health improvement after replacing dental restorations containing allergenic metals, identified by MELISA testing
- 78% of allergic patients who underwent revision surgery to change their implants and remove the allergen reported that they were “moderately” or “a lot” better
- 60% of allergic patients with poorly functioning implants had metal allergy compared to 25% with well-functioning implants
- 71% of patients with autoimmune diseases and mercury allergy improved after having their amalgam fillings removed
- 50% of fibromyalgia patients no longer fulfilled the criteria for fibromyalgia after restricting exposure to metals they were allergic to. 20% had reduced trigger points and all reported improvement in symptoms
- 63% of patients with connective tissue disease were allergic to two or more metals

A fully referenced copy of this leaflet is available at www.melisa.org/ortho

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Based on more than 20 years' research, MELISA has identified symptoms and indicators for those likely to be metal hypersensitive. If several of these are present, allergy to metals should be considered, once infection and mal-positioning have been excluded. A blood sample can be sent to any MELISA licensed laboratory, and needs to arrive within 48 hours.

Pre-surgery - Indicators for metal allergy

Atopy: eczema, asthma, food allergies, hay fever (in immediate family also)

Autoimmune disease: rheumatoid arthritis, thyroiditis, coeliac disease, Sjögren's, multiple sclerosis (in immediate family also)

Skin reactions to jewelry, metal piercings, metal clasps and buckles etc (immediate family also)

Positive patch testing, dermal allergies to creams, cosmetics

Chronic fatigue syndrome, fibromyalgia, multiple chemical sensitivity and/or multiple non-specific symptoms of unknown origin such as fatigue, pain, "brain fog", depression

Post-surgery - Indicators for metal allergy

Slow wound healing, swelling

Unexplained pain, loosening or multiple unidentified infections

Generalised/localised skin rashes, urticaria, swelling

Unexplained change in health post-surgery; fatigue, rashes, joint/muscle pain, headaches, low grade fever, "brain fog", depression, mood changes

Specific metals causing allergies can be identified with MELISA testing. Relevant panels can be selected according to the patients' exposure or individual metals can be selected for those with complex metal exposure. A complete evaluation with a list of metal exposure can be provided if the full questionnaire is completed.

MELISA Orthopedic panels

Cobalt Chrome, Stainless steel, Vitallium	Chromium, Cobalt, Manganese, Molybdenum, Nickel, Tungsten
Titanium or Titanium alloy (inc Nitinol)	Aluminum, Nickel, Niobium, Titanium dioxide, Titanium sulphate, Vanadium
Oxinium	Chromium, Niobium, Tin, Zirconia
Spinal implants	Aluminum, Chromium, Cobalt, Nickel, Niobium, Manganese, Molybdenum, Tantalum, Titanium dioxide, Titanium sulphate, Tungsten, Vanadium
Orthopedic pre-test	Aluminum, Beryllium, Chromium, Cobalt, Manganese, Molybdenum, Nickel, Niobium, Tantalum, Tin, Titanium dioxide, Titanium sulphate, Tungsten, Vanadium, Zirconia