

Biolab Medical Unit

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Biolab reference: PLPE/XXXX/C12

Patient: SAMPLE PATIENT

Date: 02-03-2012

DOB: 23-05-1937

Your reference:

Sex: FEMALE

Doctor: DR

Sample Date: 02-03-2012

Post Arthroplasty Blood Toxic Metal Profile

Whole blood chromium, cobalt, manganese and molybdenum

Reference intervals based on ICP-MS analyses of blood samples in trace-element-free EDTA tubes.

Element	Result	Units	Reference interval
CHROMIUM (Cr)	163	nmol/L	3.6 - 23.1
COBALT (Co)	86.0	nmol/L	0.3 - 10.0
MANGANESE (Mn)	126	nmol/L	80 - 200
MOLYBDENUM (Mo)	63	nmol/L	2.2 - 85.0

The Medical Device Agency alert (MDA/2010/033) states that, for patients implanted with metal-on-metal replacements:

- * post-operative follow-up should be at least annually for five years and more frequently in the presence of symptoms,
- * painful MoM hip replacements should be investigated carefully, for example by evaluation of cobalt and chromium levels in blood and cross sectional imaging, including MRI or ultrasound scan,
- * cobalt and chromium levels in the blood should in particular be measured in the following patient groups:
 - >patients with small component size (hip resurfacing arthroplasty only),
 - >cases where the patient or surgeon is concerned about the MoM hip replacement,
 - >patients where there is concern about higher than expected rates of failure
- * if either cobalt or chromium levels are elevated above 7ppb [i.e. Cr > 135nmol/L or Co > 119nmol/L] then a second measurement should be performed three months after the first test.

Patients with well functioning metal-on-metal joints may have somewhat elevated blood levels of chromium and cobalt without apparent adverse health effects [e.g. Cr 45 nmol/L or Co 30 nmol/L]