



Dr Test Doctor (Test Doctor) Test Clinic. 123 Test Street, Test Suburb Victoria 3125

Lab ID
Patient ID P000060
Ext ID 26115-0003

Test Patient

Sex: Female • 56yrs • 01-Jan-70
123 Home Street, Test Suburb VIC 3125

RECEIVED
25-Apr-26

PRE-CHELATION METALS CHALLENGE

Specimen type - Urine, Spot

Collected

15-Apr-26

TOXIC METALS						
TEST	RESULT	H/L		REFERENCE	UNITS	
Aluminium	25.70			(<40.00)	ug/gCR	
Antimony	0.02			(<1.00)	ug/gCR	
Arsenic	46.00	H		(<35.00)	ug/gCR	
Barium	0.95			(<5.70)	ug/gCR	
Beryllium	<DL			(<0.60)	ug/gCR	
Bismuth	<DL			(<1.00)	ug/gCR	
Cadmium	0.77	H		(<0.60)	ug/gCR	
Lead	2.19			(<8.00)	ug/gCR	
Mercury	4.2	H		(<3.0)	ug/gCR	
Nickel	0.67			(<2.00)	ug/gCR	
Platinum	<DL			(<1.00)	ug/gCR	
Silver	0.02			(<0.10)	ug/gCR	
Thallium	<DL			(<1.50)	ug/gCR	
Tin	0.21			(<0.50)	ug/gCR	
SERVICE	RESULT	H/L		REFERENCE	UNITS	
Creatinine, Urine	6.40			(2.47-19.20)	mmol/L	



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Toxic Metals Comment

ARSENIC ELEVATED (URINE):

Arsenic exposure may be organic (dietary, e.g. seafood) or inorganic (toxic). Urinary elevation reflects recent exposure and detoxification efficiency.

Clinically, elevated urinary levels may be associated with gastrointestinal upset, fatigue, skin changes, or neuropathic symptoms. Interpretation should consider recent exposure, occupational or environmental sources, renal clearance, and nutritional status.

From a functional medicine perspective, management focuses on differentiating organic vs inorganic sources, improving methylation capacity, ensuring folate and selenium sufficiency, and reducing exposure.

Treatment: Distinguish between organic and inorganic forms; support methylation (folate, B12, SAMe), and use chelation agents like DMSA or NAC if applicable.

MERCURY ELEVATED (URINE):

Elevated urinary mercury suggests increased mercury exposure and renal excretion. Urinary mercury primarily reflects inorganic or elemental mercury exposure rather than methylmercury from seafood.

Clinically, elevated urinary mercury may be associated with neurocognitive symptoms, tremor, fatigue, or renal effects, depending on exposure magnitude and chronicity.

From a functional medicine perspective, this finding should be interpreted in the context of exposure sources (occupational, dental, environmental), renal function, and antioxidant capacity. Correlation with exposure history and, where clinically indicated, mercury speciation or blood testing may assist contextual interpretation.

Treatment: Eliminate exposure (e.g., amalgam removal by trained providers), use selenium, NAC, ALA, and chelation agents as appropriate.

CADMIUM ELEVATED (URINE):

Elevated urinary cadmium suggests increased cadmium exposure and/or mobilisation with renal excretion. Urinary cadmium is considered a marker of chronic body burden rather than acute exposure.

Clinically, elevated cadmium exposure may be associated with renal tubular stress and bone mineral effects at higher or sustained levels. Smoking remains a common non-occupational source.

From a functional medicine perspective, this finding should prompt assessment of exposure sources (smoking, diet, occupation) and consideration of renal health and antioxidant status, with emphasis on exposure reduction rather than intervention unless clinically indicated.

Treatment: Remove exposure, support zinc and selenium (compete with cadmium), and consider chelation (e.g., EDTA or DMSA).

Methodology

Inductively Coupled Plasma Mass Spectrometry (ICP-MS), Automated Chemistry/Immunochemistry