NutriPATH
Integrative Pathology Services
P: 1300 688 522
E: info@nutripath.com.au
A: PO Box 442 Ashburton VIC 3142

TEST PATIENT
Sample Test Name
Sex : F
Date Collected : 00-00-0000
111 TEST ROAD TEST SUBURB
LAB ID: 00000000 UR#:0000000

TEST PHYSICIAN
DR JOHN DOE
111 CLINIC STREET
CLINIC SUBURB VIC 3000

INTEGRATIVE MEDICINE

URINE, 24 HOUR

Toxic Metals, 24hr Urine

Urine Metals Information

URINE ANALYSIS AND CHELATION INFORMATION:
Urine analysis is an indispensable tool for assessing the renal ability to excrete and to assess renal disease. The information contained in this report is designed as an interpretive adjunct to normally conducted diagnostic procedure. The findings are best viewed in the context of a medical examination and history.

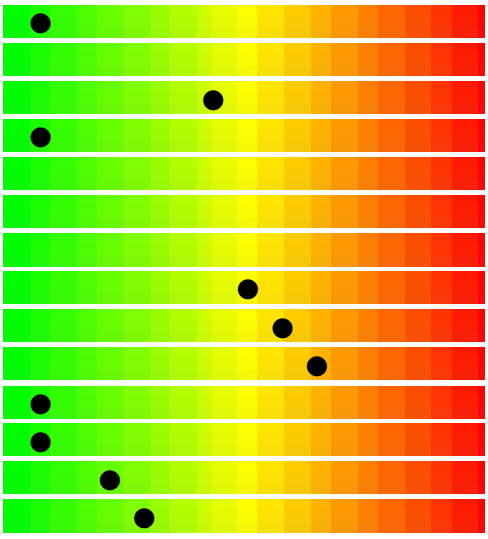
The results are reported in ug/g creatinine for the trace elements and heavy metals. Normalization per ug creatinine reduces the potentially great margin of error which otherwise can result from sample collection and variation in sample volume given.

Chelation treatment or provocation with complexing agents increase metal binding and urinary excretion. The maximum urinary excretion varies, depending on the chelating or complexing agent used and the binding capacity of the various chelating agents varies considerably. 24hrs prior to chelation, intake of mineral-containing supplements and algae products, medication or food such as fish which may be containing high levels of toxic metals such as Arsenic (As) or Mercury (Hg) should be avoided

To maximize the detoxification process, it is important to understand the binding capacity of these agents. Since the maximum metal excretion depends on the chelating agent's half-life, the appropriate urine collection protocol must be followed.

Urine analysis allows close monitoring of a patient's response to chelation therapy. In addition, urine mineral analysis reflects the body's immediate nutritional status, and factors influencing excretion. However, blood mineral analysis and other mineral assays are better indicators of a patient's nutritional status.

	Result	Range	Units
Aluminum, 24hr Urine	6.78	< 40.00	ug/gCR
Antimony, 24hr Urine	<DL (a)	< 1.00	ug/gCR
Arsenic, 24hr Urine	*32.95* *H	< 15.00	ug/gCR
Barium, 24hr Urine	2.33	< 8.22	ug/gCR
Beryllium, 24hr Urine	<DL (a)	< 1.20	ug/gCR
Bismuth, 24hr Urine	<DL (a)	< 0.15	ug/gCR
Cadmium, 24hr Urine	<DL (a)	< 0.80	ug/gCR
Lead, 24hr Urine	*11.68* *H	< 5.00	ug/gCR
Mercury, 24hr Urine	*2.82* *H	< 1.00	ug/gCR
Nickel, 24hr Urine	*11.43* *H	< 3.00	ug/gCR
Platinum, 24hr Urine	0.00	< 0.60	ug/gCR
Silver, 24hr Urine	0.00	< 1.40	ug/gCR
Thallium, 24hr Urine	0.58	< 0.60	ug/gCR
Tin, 24hr Urine	*6.57* *H	< 5.00	ug/24h



(*) Result outside normal reference range (H) Result is above upper limit of reference rang

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Toxic Metals Comments

ARSENIC
Associated with increased risk of: Vascular disease, Atherosclerosis, Cancers of skin, bladder and lung.

Treatment:
Address underlying causes and consider EDTA chelation IV.

LEAD
Exposure from ingestion, inhalation, dermal exposure. Absorption increased in patients with compromised gastrointestinal integrity and low dietary intake of calcium, magnesium, iron, Vits C and D.
Nervous system is very sensitive to even low levels of lead.
Urine Lead level is a good marker for lead exposure.

Treatment:
Address underlying causes, Lead can damage kidneys, so monitor closely with chelation. Methionine - chelation of lead (also for cobalt intoxication), EDTA chelation - IV, DMPS or DMSA chelation.

Increase elimination:
Methionine 3000 mg/day (ensure adequate Vit B2 and folate to prevent homocysteine elevation), Vit C 3000 mg/day, Lipoic Acid 100mg three times a day.
Add competing nutrient elements:
Calcium 1000 mg/d - Lowers intestinal absorption of lead, Magnesium 500mg/day, Iron 15 mg/day, and Vit D 20 mcg/day (800IU).

MERCURY
Pervasive toxic tissue effects due to non-specific enzyme poisoning.
Urine is the most reliable way to assess exposure to inorganic mercury. Levels >50 ug/24h indicate mercury overload.
However, quantity found in urine does not correlate severity of symptoms.
Hair & Whole blood mercury levels correlate with severity of symptoms.

Treatment:
Avoid Mercury, consider DMSA or DMPS chelation. Check urine challenge test every 6 weeks and stop chelation when mercury level is below 10mg/24h in urine post chelation. Consider removing amalgalm dental fillings with a well-qualified dentist in amalgalm removal, particularly if sick (neuro symptoms) or high mercury levels are noted. Sauna treaments can help. Use antioxidants Vit C 3000 mg/day, Selenium 200-400mcg/day (protects against cellular toxic effectts of mercury), SAMe 200 mg twice a day, Manganese 15 mg/day, Molybdenum 75-250 mcg/day, Zinc 50 mg/day, Amino Acid chelates.

Increase elimination:
Methionine 3000 mg/day (ensure adequate Vit B12 and folate to prevent homocycteine elevation), Vit C 3000 mg/day, Lipoic Acid 100 mg three times a day.
Add competing nutrient elements: Selenium 200-400 mcg/day.

NICKEL (Ni) HIGH:
Smoke, cigarette smoking and food are major sources of nickel exposure.
- Elevated nickel in baseline urine reflects increased immediate exposure
- Studies (Micro Trace Minerals 2004) indicate that the highest nickel binding has been observed
with the combination treatment EDTA+DMSA. The 95 Perzentile (Reference Range) for EDTA
IV chelation was 41mcg/g creatinine for patients not industrially exposed. The 95

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Percentile for
DMPS Provocation urines was 21mcg/g crea; for oral DMSA 20mcg/g crea.

Environmental/Occupational Sources
- Ni is found in ambient air at very low levels, as a result of releases from manufacturing facilities,
oil and coal combustion, sewage sludge incineration, and other sources.
- Exposure may be through contact with everyday items such as nickel-containing jewellery, cooking utensils, stainless steel kitchens, and clothing fasteners.

Toxicity and Symptoms:
- Nickel carbonyl is the most acutely toxic nickel compound, also found in cigarette smoke.
Symptoms include headache, vertigo, nausea, vomiting, insomnia, and irritability, followed by
chest pains, dry coughing, cyanosis, gastrointestinal symptoms, sweating, visual disturbances,
and severe weakness.
- Lung and kidney appear to be the target organs for acute nickel carbonyl toxicity in humans
and animals, with pulmonary fibrosis and renal edema reported.
- EPA's Office of Air Quality Planning and Standards, for a hazard ranking under Section 112(g)
of the Clean Air Act Amendments, considers nickel carbonyl to be a "high concern" pollutant
based on severe acute toxicity.

Chronic Effects (Noncancer):
- Contact dermatitis is the most common effect in humans from nickel exposure, and have been

SPECIMEN RECEPTION

URINE, 24 HOUR	Result	Range	Units
SPECIMEN RECEP. COMMENTS	PLEASE NOTE: This is a POST Challenge specimen.		

Tests ordered: SRCOM,24UMetox,IMPEI