



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

Lab ID
Patient ID P000060
Ext ID 26114-0449

Test Patient

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

RECEIVED
24-Apr-26

Chemical Pathology

Specimen type - Urine, Spot

12-Jan-2025 01.12PM

[illegible]

Nutrient Mineral Comment

LOW SELENIUM LEVEL: Treatment considerations: 1. Increase foods rich in Selenium e.g. organ meats, eggs, garlic, shellfish, brazil nuts, whole grains, brazil nuts 2. Selenium 3. Reduce exposure to heavy metals. Lead and Arsenic are antagonistic to Selenium.

IODINE COMMENT: Urinary iodine reflects dietary iodine intake, more than 90% of dietary iodine is excreted in the urine. WHO Guidelines: >100 ug/gCR Not Iodine deficient 50 - 100 ug/gCR Mild Iodine deficiency 20 - 49 ug/gCR Moderate Iodine deficiency < 20 ug/gCR Severe Iodine deficiency Low levels of iodine may lead to hypothyroidism and goitre and in severe cases, intellectual disability.

Toxic Metal Comment

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

Sources: Environmental sources of arsenic exposure include food, water, soil, and air, esp. around arsenic-containing mineral ores. In industry, arsenic is a by-product of the smelting process for many metal ores such as lead, gold, zinc, cobalt, and nickel. Arsenic is used for purifying industrial gases (removal of sulfur), burning fossil fuels, electronics manufacturing (microwave devices, lasers, light-emitting diodes, photoelectric cells, and semiconductor devices), hardening metal alloys, preserving animal hides, bronze plating, and clarifying glass and ceramics. Other potential sources of arsenic exposure are: - Wood preservatives, insecticides, herbicides (weed killers and defoliants), fungicides, cotton desiccants, cattle and sheep dips, paints and pigments, antifouling paints, leaded gasoline, and fire salts (multicolored flame). - Wine (grapes sprayed with arsenic-containing pesticides), Seafood (especially certain cold water and bottom-feeding finfish) and Seaweed. - Smokers may also inhale small amounts of arsenic as a result of pesticide residue on tobacco leaves. - Medicinals: Fowler's solution (potassium arsenite), antiparasitic drugs (carbasone), Donovan's solution, folk remedies ("Asiatic pill," kushtay, yellow root), kelp-containing health foods, some naturopathic remedies.

Treatment: Address underlying causes and consider EDTA chelation IV. Laboratory Information: The given reference range applies only if 48hrs prior to the urine collection no fish, or algae products were consumed. Mineral waters high in arsenic may also raise urinary excretion levels. Consumption of any of these sources raises urine levels considerably, at least 2-3 times above the given range. Smoking may also raise urinary excretion levels of arsenic.

ELEVATED BROMINE: Bromine is a common component of flame-proofing agents, fumigants, medications, food products, and pool/spa sanitizers. Although bromine was once thought to have no essential function in the body, recent studies suggest that it may also be an essential element at low levels and play a role in connective tissue formation. High environmental exposure can lead to excess accumulation. If iodine status is low, bromine competes with iodine uptake in the thyrocyte and for tyrosine binding sites within thyroglobulin, and thereby impedes thyroid hormone synthesis. Bromine is mostly excreted in urine, so urine analysis can indicate excessive bromine exposure.

CADMIUM Competes with Zinc at all cellular binding sites resulting in loss of enzyme activity. Kidney is the primary effected organ. Chronic exposure can result in slow onset of renal dysfunction with proteinuria. Treatment: Address underlying causes and consider EDTA chelation - IV. Increase elimination with: Methionine 3000 mg/day (ensure adequate Vit B12 and folate to prevent increase in Homocysteine elevation), Vit C, 3000mg/day, Lipoic acid 100mg three times a day. Add competing nutrient elements: Zinc 50mg/day.



Dr Peter Gotis (00001) Nutripath Practice. 16, Harker Victoria 3125

Lab ID 25012-0001
Patient ID PAT-100009
Ext ID

Peter Gotis
Sex: Male • 64yrs • 06-Nov-1960
16 Harker Street, Burwood Vic 3125

COLLECTED 07-Jan-2025
RECEIVED 12-Jan-2025

URINE MERCURY REF RANGE: <30 nmol/L DETECTION LIMIT - 10 nmol/L BLOOD MERCURY REF RANGE: <20 nmol/L DETECTION LIMIT - 10 nmol/L The units of reporting and the reference range were changed by ARL on the 1st April 2000. NOTE: The reference range is not quoted when mercury is not detected (ND). The reference range does not apply post chelation therapy urine specimens. Literature Reference: "Heavy Metal Poisoning and its Laboratory Investigation" Dianne R Baldwin and William J Marshall, Ann Clin Biochem 1999; 36:267-300.

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 amalgam dental fillings with a well-qualified dentist in amalgam removal, particularly if sick (neuro symptoms) or high mercury levels are noted. Sauna treatments can help. Use antioxidants Vit C 3000 mg/day, Selenium 200-400mcg/day (protects against cellular toxic effects 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 homocysteine elevation), Vit C 3000 mg/day, Lipoic Acid 100 mg three times a day. Add competing nutrient elements: Selenium 200-400 mcg/day.

Methodology

Inductively Coupled Plasma Mass Spectrometry (ICP-MS)