NutriPATH
Integrative Pathology Services

HEAVY METALS testing

Looking for a 'one-stop shop' laboratory with advanced mineral and metal testing? NutriPATH Pathology have the most advanced technology in assessing minerals and metals through a variety of collection methods. Listed below is a summary of each method of collection and how this may benefit your patient depending on the individual case and health condition.

BLOOD METALS to detect current toxicity

Blood levels reflect what is circulating in the bloodstream currently. Nutrient elements and toxic metals are measured. Through blood testing you can confirm symptoms of metal intoxication or nutritional deficiency. Blood results allow you to take immediate action on frank toxicity levels.

URINARY METALS to detect excreted levels from recent exposure

Urine allows you to measure the amount of metals excreted via the renal system. Therefore, urine metal analysis is a direct reflection of metal excretion. You can distinguish between baseline or provocation urinary heavy metal levels.

- **Baseline Spot Urine -** This can be a spot or random urine, or a morning urine. This sample is generally used to evaluate immediate exposure. In chelation therapy, the baseline urine is used to compare test values of an unprovoked with a provoked urine sample. This comparison serves as a therapy guideline.

- **Challenge Test (Provocation Urine)** - Each chelating agent has a specific half-life, which dictates the optimum urine collection time and the chelator's maximum binding capacity. Urine creatinine values are used to mathematically convert creatinine values. This conversion reduces the potentially great margin of error which otherwise can result from sample collection and variation in sample volume given.

HAIR MINERAL ANALYSIS to define past and/or chronic exposures

Hair mineral analysis (HMA) reflects how efficiently the root was nourished (or intoxicated) via the bloodstream. As long as metals circulate, hair tissue will be supplied. This feeding and storing mechanism continues over time. Therefore, hair mineral levels reflect how well or poorly the hair tissue was supplied over time (several months). HMA values do not reflect present variations as seen in blood or urine.

As long as toxins circulate in the bloodstream, hair will be supplied. A 'normal' mercury level in hair does not necessarily exclude a metal burden. If a metal such as mercury has fully crossed the blood brain barrier and no additional exposure exists, mercury will no longer be detected in the circulating bloodstream. Since mercury is no longer circulating and thus not supplying the hair root, it will not be detectable in hair either.

SALIVA ANALYSIS to detect metal release from dental materials

Saliva testing only shows what dental metals were released either before or during the chewing period. By comparing saliva before and after a chewing gum test, it is assumed that the amount of metals released during the chewing period reflect on the stability of the amalgam fillings, and how much mercury and other potentially toxic dental metals are released.

FAECAL METALS define intake and excretion

For many toxic metals, faecal (biliary) excretion is the primary route of elimination from the body. Thus, the metal content of faecal matter is a reflection of the dietary metal intake. Certain foods such as fish are high in arsenic or mercury, and faecal testing evaluates how much of the oral metal intake is excreted through normal digestion. Faecal analysis reflects the metal intake from water, food, tins, aluminum foils and cookware, medicine, etc. For example, if we eat fish rich in arsenic and/or mercury, faecal metal excretion is accordingly high. Thus, faecal metal analysis is an evaluation of the oral metal intake and the resulting faecal metal excretion. Faecal metal analysis does not provide information about a patient's systemic toxic metal burden; it cannot be used to verify systemic intoxication or detoxification. Faecal metal analysis will only show the concentration of metal that passes through the digestive tract.

DRINKING WATER ANALYSIS locating the source of metal exposure

The water people drink can influence their metal status. This is especially true during chelation. It is thus important to know about the metal content of the water.

HEAVY METALS TESTS AVAILABLE

- **Hair Mineral Analysis - Level 1 [5013]:** Ca, Cr, Cu, Fe, Mg, Mn, Se, Zn; Al, As, Cd, Hg, Ni, Pb, Ag, Sn
- **Hair Mineral Analysis - Level 2** [**5014]:** B, Ca, Co, Cr, Cu, Fe, Ge, I, Li, Mg, Mn, Mo, Se, Sr, V, W, Zn; Al, Sb, As, Ba, Be, Bi, Cd, Hg, Ni, Pb, Pd, Pt, Ag, Tl, Sn, Ti, U, Zr
- **Heavy Metal Analysis (urine) [5020]:** Ag, Al, As, Ba, Be, Bi, Cd, Hg, Ni, Pb, Pt, Sb, Sn, Tl
- **Essential Mineral & Heavy Metal Analysis (urine) [5021]:** B, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Se, Sr, V, Zn; Ag, Al, As, Ba, Be, Bi, Cd, Hg, Ni, Pb, Pt, Sb, Sn, Tl
- **PRE-Chelation Metals Challenge (spot urine) [5022]** ***or*** **POST Chelation Metals Challenge (spot urine) [5024]:** Ag, Al, As, Ba, Be, Bi, Cd, Hg, Ni, Pb, Pt, Sb, Sn, Tl
- **PRE-Chelation Metals & Minerals Challenge (urine) [5023]** ***or*** **POST Chelation Metals & Minerals Challenge (urine) [5025]:** B, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Se, Sr, V, Zn; Ag, Al, As, Ba, Be, Bi, Cd, Hg, Ni, Pb, Pt, Sb, Sn, Tl
- **Red Cell *or* Whole Blood Metals [5026]:** Al, Sb, As, Be, Bi, Cd, Hg, Ni, Pb, Pt, Ag, Tl, Sn, U, Zr
- **Urine Mercury [5032]:** Mercury
- **Faecal Minerals & Metals [5034]:** Cr, Cu, Zn, W; As, Be, Bi, Cd, Ga, Hg, Ni, Pb, Pd, Pt, Sb, Tl, Ti, U
- **Saliva Metals [5035]:** Cr, Co, Mo, Cu, Cd, Ga, Ir, Hg, Ni, Pd, Pt, Rh, Ag, Sn
- **Drinking Water Minerals & Metals [5036]:** Cr, Cu, Fe, Mn, Se, Zn, Ca, Mg, B, Sr; Al, Sb, As, Ba, Be, Cd, Hg, Ni, Pb, Ag, Tl, U
- **Porphyrins (urine) [4024]:** Uroporphyrins I & III, 7-Carboxy Porphyrin, 6-Carboxy Porphyrin, 5-Carboxy Porphyrin, Precoproporphyrins, Coproporphyrins I & III

How to order a test kit:

To order a test kit simply request the test name and/or test code on a NutriPATH request form and have the patient phone NutriPATH Customer Service on 1300 688 522.

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Phone 1300 688 522 for further details

www.nutripath.com.au