



PATIENT INFORMATION SHEET

IDENTIFYING METAL TOXICITY IN URINE...



WHICH TEST SHOULD I USE?

Urine element testing is primarily useful to monitor levels of toxic metals such as **aluminum, arsenic, cadmium, lead, and mercury** and special mineral uptake testing.

6-8 HOUR URINE COLLECTION:

The 6-8 hour collection profiles are primarily for patients who are receiving oral or IV metal chelating agents to mobilize toxic elements from body pools.

24-HOUR URINE COLLECTION:

The 24-hour collection profiles measure the total output of urine over 24 hours and the daily output of nutrient and/or toxic elements is determined.

NUTRIENT AND TOXIC ELEMENTS - URINE PROFILES:

Metametrix offers flexibility in urine element testing. Healthcare providers can select from challenged and unchallenged protocols. Options include testing both nutrient and toxic elements or toxic elements only with **6-8 hour or 24 hour** urine collections.

WHAT ARE ELEMENTS AND WHY ARE THEY IMPORTANT FOR HEALTH?

Elements are the small but essential nutrients for proper functioning of the body. You could hold the total amount of the mineral zinc present in your body on the tip of your finger, but without it your cells could not divide and grow, and your organs would stop working in minutes. Every function of your body, from digestion to nerve impulse conduction and brain function, is critically dependent on the presence of about two dozen different elements. Your tissues cannot produce these elements, so they must be supplied regularly in your diet. Many factors, however, make it difficult for us to get adequate amounts of elements. Modern food production depletes elements from foods and our lifestyles do not always make it convenient for us to eat the right balance of foods. Additionally, inadequate digestion and absorption of these nutrients can lead to subtle yet significant deficiencies that can cause serious health problems.

NUTRIENT AND TOXIC ELEMENTS IN URINE

Some elements can accumulate in tissues causing toxic effects. Metal toxicity is a significant environmental health concern. A toxic load of lead, cadmium, mercury, aluminum, or arsenic is capable of rendering considerable damage to the brain and nervous system, particularly in children. Toxic elements produce their many negative effects through various mechanisms. The cancer-inducing effect of arsenic seems to be due to an inhibition of DNA repair. Genotoxicity, in which chromosomes are damaged, is linked to the free radical generation abilities of cadmium, lead and nickel.

CONDITIONS AND SYMPTOMS RELATED TO ABNORMAL ELEMENT LEVELS IN URINE:

- Chronic pain in muscles
- Fatigue
- Brain fog (state of forgetfulness and confusion)
- Chronic infections such as *candida*
- Gastrointestinal problems
- Food allergies
- Dizziness
- Migraines/headaches
- Visual disturbances
- Depression
- Anxiety
- Nervous system sensitivities

[Source: Jigsaw Health]