

# LAB TESTS DON'T LIE

## Detoxification, Heavy Metals, Bowel Function

### HEAVY METALS: TOXIC ELEMENTS OR NECESSARY CO-ENZYMES?

Since the beginning of time, we as humans have been exposed to environmental influences. With the increase of industrial processes, some elements have become more ubiquitous. The importance of heavy metals is subject to many controversial discussions. Our body is equipped with a liver whose job it is to eliminate toxic substances. It does that with the help of enzymes that split the work. They are called phase I and phase II enzymes. Genetic tests allow us to test for their functionality. If the enzymes are present in their normal configuration, the body can easily detoxify heavy metals. If mutations are present, however, the functionality of the liver enzymes is reduced. Toxic intermediate products can accumulate in the body.

Find out about your liver enzymes. We will send you a kit to collect 1cc of saliva. That is sufficient to research your liver enzymes.

- **Cytochrome p450 Oxidase 2E1 (CYP2E1)** is a phase I enzyme that catalyzes the disintegration of an array of toxins. Besides the liver, it is found in kidneys and lungs.
- **Glutathione-S-Transferase M1 (GSTM1)** is the key enzyme of phase II. It is responsible for a large range of toxic products. A genetically caused reduced activity has crucial effects on the damage done to cells. GSTM1 is an important factor in the detoxification of heavy metals such as mercury and cadmium, which are found in dental materials.
- **Microsomal Epoxid-Hydrolase (mEH).** Besides the phase I enzymes which oxidize toxic substances, the hydrolases play an important role in detoxifying highly reactive intermediate products of detoxification process.

→ **DETOXIFICATION:** CYP2E1, GSTM1, mEH, analysis and interpretation US\$ 290. –

Hair and urine should not be used for testing of heavy metals, because first of all the environmental influence is uncertain, and secondly the genetics of detoxification (see above) has a great influence on the heavy metal content of these carriers. Because a great portion of the heavy metals is metabolized in the liver, we recommend a stool test. Test for heavy metals in stool. We send you a kit to collect 10cc of stool to find the concentration of copper, nickel, palladium, tin and mercury.

→ **HEAVY METALS IN STOOL:** analysis and interpretation US\$ 240.–

### THE BOWELS – THE CRUCIAL ORGAN

The analysis of the bile **acids**, **calprotectin** and **pancreas elastase** allow a highly differentiated analysis of the intestines.

- The bile acids are made from cholesterol in the liver. Bound bile acids carry out an important job to bind fat in the small intestine. In the case of intestinal problems, bacterial overgrowth or inflammatory conditions, the binding of fat is compromised (syndrome of loss of bile acids). The loss of bile acids leads to a compensatory over production in the liver which leads to increased stone formation in the liver and gall bladder.
- Calprotectin is an objective and reliable parameter for gastro-intestinal conditions of inflammatory or tumorous origin. The stool sample allows differentiation of inflammatory or tumorous causes from functional causes.
- Pancreas elastase in stool can detect a mild to fairly serious insufficiency of the pancreas.

Test for following elements in stool. We send you a kit to collect 10cc of stool to find the concentration of bile acids, calprotectin, pancreas elastase.

→ **BOWEL FUNCTION:** bile acids, calprotectin, pancreas elastase US\$ 140. –

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**Yes, I want to make use of the offer. Please send me the following kits:**

After receiving your order, we send you the test kits with instructions in the mail. You send the stool or saliva directly to the lab with the pre addressed envelope you will receive. We do the billing, the results come directly from the lab.

_____	Quantity kits „detoxification“	_____	Quantity kits „bowel function“
_____	Quantity kits „heavy metals in stool“	_____	

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Place and ZIP Code: \_\_\_\_\_

Phone: \_\_\_\_\_

Credit Card: \_\_\_\_\_ Expiry date: \_\_\_\_\_

Add \$20 shipping and handling per order within the US. That includes the cost of sending the material to the lab on our UPS account. For foreign orders we have to charge actual UPS shipping cost. Send with check or credit card information to: Dr. Clark Research Association, 5959 Shallowford Rd # 221, Chattanooga, TN 37421 USA, fax +1-866-662 0086