

HAIR ELEMENT ANALYSIS

INFORMATION FOR PATIENTS



About Elements

Elements or Minerals

Although it is sometimes called hair mineral analysis, technically speaking this test analyzes elements, not minerals. The word mineral includes things like rubies and emeralds, and if you have those in your hair, you might want to keep them! Therefore, we call our test Hair Element Analysis, rather than hair mineral analysis.

Essential Elements

Many of the elements tested are essential to the body. Essential elements include calcium, magnesium, sodium, chloride, phosphorus, and potassium. Many others are required as cofactors in biochemical processes.

The right balance of these elements is essential for optimal health.

Toxic Elements

Some elements are potential toxins to the body. In particular, the elements often referred to as 'heavy metals' are known to be toxic even in small doses.

Many essential nutrients, plus a number of toxins, are elements of the chemical periodic table. Certain elements are critical to health, for example: potassium and sodium are crucial for proper heart function and calcium and magnesium are essential for bone development. However, other elements like mercury, cadmium and lead are toxic. Good health depends on having the right balance of nutritional elements and low levels of toxic elements. Hair element analysis is an easy and inexpensive way to measure these levels.

Conditions related to toxic elements

Toxic elements are found nearly everywhere: from antimony as a fire retardant in clothing to uranium salts in certain pottery glazes. Toxic elements may create an imbalance in essential elements (see explanation on reverse) or directly trigger a number of health problems including:

Anxiety/Depression: Both lead and mercury toxicity can result in symptoms of depression. Arsenic and mercury have been associated with symptoms of anxiety.

Memory Impairment: Lead toxicity can impair long term memory and cause confusion. Cadmium may also cause confusion.

Heart disease: Antimony toxicity may damage the heart. Cadmium toxicity increases blood pressure and may also damage heart muscle. Lead has been shown to increase blood pressure.

Neurological problems: Arsenic toxicity causes numbness and tingling in the feet and hands. Extremely high levels of bismuth may also cause neurological problems like muscle twitches, tremors or convulsions.

Fatigue: Mild toxicity with any of the toxic elements can contribute to symptoms of fatigue.

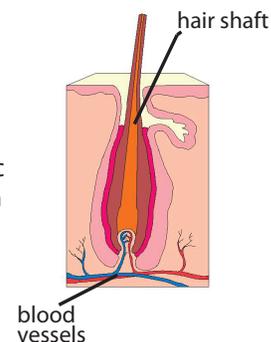
These are just a few examples of the effects of toxic element exposure. There are many more potential problems associated with the effects of toxic elements.

Conditions related to nutritional element imbalance

Aside from toxic element exposure, it is also possible to have a simple deficiency or excess of nutritional elements. For example, low levels of zinc and/or magnesium are strongly associated with increased risk of diabetes. If all or most of the nutritional elements appear on the low end of normal, it may indicate that you have issues with absorption or digestion of food.

Why choose hair element analysis?

The illustration at right shows that the hair root is in constant contact with blood vessels, allowing both nutritional and toxic elements to enter the hair shaft continuously as hair grows. In other words, hair analysis reflects long-term exposure to the various elements. This is a significant advantage over urine or blood samples, which only measure the levels from one point in time.



Why Test?

Good health has a lot to do with maintaining balance; the right balance of work and play, the right balance of nutrients in the diet, and the right kinds of foods.

Element imbalances may contribute to symptoms and biochemical changes that eventually lead to illness.

Rocky Mountain Analytical is committed to offering tests that identify mineral imbalances and other imbalances - so they can be corrected before disease develops!

About Rocky Mountain Analytical

Rocky Mountain Analytical is an accredited medical laboratory located in Calgary, Alberta. We started in 2002 with saliva hormone testing, and have since added numerous other tests including food allergy testing.

In addition to our saliva hormone and food allergy test panels, we also offer a urine test for breast cancer risk and a urine test for thyroid function.

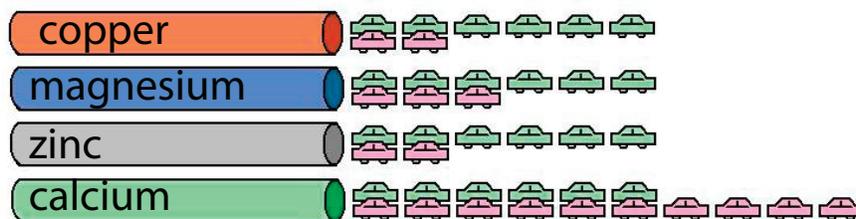
Ask your health care provider for more information about these or any other Rocky Mountain Analytical tests.

We're on the web!
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How toxic elements disrupt nutrient balance

Think of each nutritional element as having its own tunnel, with the normal range being the number of vehicles that usually pass through that tunnel every day. For example, the following diagram shows the normal number of cars in green, and the actual numbers in pink:



The diagram shows more calcium and less magnesium, copper and zinc than expected exiting the tunnels. From these results, it might seem reasonable to supplement with magnesium, zinc, and copper and cut back on calcium intake. However, when many of the nutritional elements are higher or lower than expected, it usually means there's some kind of blockage or traffic diversion through the tunnels. So, we do some calculations to see if traffic is really increasing or decreasing, or to see if there's a problem inside the tunnel. In other words, if you have a lot of lows and highs in your nutritional elements, there may be an overall problem with how those elements are transported in the body. Your health care provider will focus on fixing those problems first, before supplementing with specific nutritional elements to correct the imbalance.

A major cause of large excesses or deficiencies of nutritional element levels is the presence of toxic elements like mercury. Imagine the toxic elements as a demolition crew: they go into the tunnel and rip up the road and disrupt the normal traffic flow. They may also divert traffic so that cars are forced through different tunnels. If tunnel traffic (i.e. nutritional elements) is significantly different than expected, it strongly suggests that a demolition crew (i.e. toxic element) is present and causing problems. Therefore, rather than trying to force more cars through the slow tunnels and fewer cars through the busier than normal tunnels, it makes more sense to get rid of the demolition crew!

It's also possible for people to have a genetic tendency to retain or excrete certain elements, or for poor digestion to affect nutritional element status. Your health care provider will go through your test results and determine the best treatment for you.

Restoring balance

Restoring the right balance of elements often involves using supplements that chelate, or bind up, toxic elements so that they can be safely eliminated. It is also important to try and minimize exposure to toxic elements. Once the body is clear of toxic elements, your health care provider may want to repeat your hair element analysis to see if your nutritional elements are back in balance, or if you need further supplementation.