

## **Hair Mineral Analysis**

Joy Healey BA(OU), Dip.ION, MCThA

As a Nutrition Consultant I see many clients with health challenges that conventional medicine has failed to solve. When confronted by such puzzles, one of many useful investigative tools at my disposal is the Hair Mineral Analysis, or HMA. It is something I will consider right away if I suspect that health problems could be arising as a result of toxic metal overload.

Hair contains all the minerals present in the body and, in most cases, reflects the quantity of these elements in your tissues. Analysis of this information provides a wealth of information on how efficiently your body is working and its nutritional status. A blood test will only give information about your mineral levels at the time the test is taken. For instance, if you've just eaten a banana a blood test may indicate a high potassium level, even though you actually need a potassium supplement. Hair analysis reflects your body's storage of potassium over a period of time, not what you ate that day, or even that week. Likewise, urine tests measure what is being excreted from your body, which is not necessarily what has been absorbed as fuel.

Trace minerals are essential in countless metabolic functions in all phases of the life process. According to the late author and noted researcher, Dr Henry Schroeder, trace elements (minerals) are "more important factors in human nutrition than vitamins. The body can manufacture many vitamins, but it cannot produce necessary trace minerals, or get rid of many possible excesses."

Many symptoms of ill-health are associated with vitamin and mineral deficiencies or excesses. In recent months the news has contained scare stories about excesses of vitamins and minerals, much of it is scare-mongering and misinterpretation of scientific research. But there are legitimate concerns too. Although are essential in the right amounts, did you know that excess mineral intake can negate the beneficial intake of vitamins? For instance:

- excess zinc can reduce the beneficial effect of vitamin D
- excess calcium can reduce the beneficial effect of vitamin A and magnesium
- excess copper is associated with frontal (behind the eyes) headaches
- excess iron can contribute to symptoms such as arthritis, high blood pressure and produce tension headaches.

Mineral imbalances can arise from improper diet, stress, medications, pollution and even from taking the incorrect type or amount of a nutritional supplement.

**How is the test carried out?** Taking a hair sample is simple, non-invasive and pain free. Any one can do it. All that is needed is about a tablespoon of hair taken from several areas of your scalp on the back portion of your head. The hair must be about one to one and a half inches from the root end – it's important to cut off and discard any hair longer than that. This is despatched to a lab in the USA that specialises only in hair analysis. On arrival it is prepared for testing and then acids are added to break the hair down, separating out the elements contained in the hair protein. After 'digestion' the remaining mineral salts are put into solution and analysed by sensitive and specialised instruments. The results are interpreted to produce nutritional mineral levels, their interrelationships and metabolic categorisation. The report is then personalised for you, complete with graphs and explanations which may give you answers you have been seeking for years.

**Why the USA?** After evaluating various services I settled on this lab because it offered excellent value for money. a superb report and a fast service. My own report contained 18 pages of information (others may differ, depending on findings) and was delivered within a fortnight at a cost of £50. It included levels of 38 minerals and the interactions between them, my metabolic type with a list of recommended supplements and details of foods to increase and decrease in order to improve my

mineral balance. At the other end of the spectrum was a UK service which I won't name. Although it was a few pounds cheaper, I waited 8 weeks for its return then received just one sheet of paper giving levels of 19 minerals. No explanations, no ratios, no interactions, no graphs, no analysis. You get what you pay for.

**Are there any problems?** You will be asked to specify which hair preparations you used, as some hair treatments can contaminate scalp hair. For instance dyes may contain lead acetate, bleaching processes affect calcium and certain medicated shampoos contain zinc or selenium. However, only that individual element is affected. All the others tested are valid. If scalp hair is in short supply, hair from other parts of the body is completely acceptable!

**Is it reliable?** Hair is used as one of the tissues of choice by the Environmental Protection Agency in determining toxic metal exposure. A 1980 report from the E.P.A. stated that human hair can be effectively used for biological monitoring of the highest priority toxic metals. This report confirmed the findings of other studies in the USA and abroad, which concluded that human hair might be a more appropriate tissue than blood or urine for studying community exposure to certain trace elements. Although some health-care professionals are sceptical, in the past twenty years there have been over a thousand references in peer-reviewed journals, supporting the reliability of the HMA. But perhaps of more interest are the following case histories.

**Case history 1:** J.C. presented with symptoms of fatigue, lethargy, joint aches and excessive hair loss (at age 25). His hair mercury was markedly high. Following treatment his hair levels of mercury decreased to a much more acceptable level and his symptoms improved significantly. The source of the toxicity was never identified.

**Case history 2:** C.T. became mentally ill and was diagnosed with paranoid schizophrenia. He was also alcoholic and consuming large quantities of drugs. An HMA revealed four times the acceptable levels of lead in his hair and also elevated levels of cadmium, mercury and copper. Following therapy and supplementation his condition improved dramatically, he lost his cravings for alcohol and his symptoms of mental illness reverted to normal, with no further need for psychoactive drugs.

**Case history 3:** L.S., a housewife in her early 40s, had been feeling tired for months. Her doctor had run all the standard tests and could find no problems. Finally she had an HMA which showed she had high levels of lead that were causing her tiredness. The cure came easily, she was feeling better in two weeks and the tired feeling vanished within a month.

L.S. was breathing excess lead from a car exhaust. How much lead are you breathing in from car exhausts – jogging or queuing in heavy traffic? How much cadmium have you accumulated from passive (or active!) smoking at the office and the pub? Is the mercury in your fillings stable, or is the vapour slowly poisoning you?

**Why might you benefit from an HMA?** If you have a disease or illness that has not responded to conventional treatment, you may wish to explore other possibilities and an HMA is an excellent place to start. If you are suffering from 'unexplained' problems such as headaches, backaches, weakness or tremors, an HMA could help you to get to the bottom of it.

If you can answer 'yes' to five or more of these questions an HMA may provide information which, if acted upon, could benefit your health.

- Do you live in a city or by a heavy road?
- Do you spend more than 2 hours a week in traffic?
- Do you exercise or walk by busy roads?

- Do you smoke more than 5 cigarettes a day?
- Do you live or work in a smoky atmosphere?
- Do you buy foods exposed to exhaust fumes (i.e. on display at a road-side stall)?
- Do you generally eat non-organic produce?
- Do you drink more than 1 unit of alcohol per day? (1 glass of wine, 1 pint of beer or 1 measure of spirits)?
- Do you spend a lot of time in front of a TV or VDU?
- Are you exposed to pollutants in your job (e.g. printing, dentistry) or hobby (gardening)?
- Do you have two or more amalgam dental fillings?
- Do you usually drink unfiltered tap water?

Or you may just be feeling under par without knowing why.

**Are just toxic minerals examined?** No – the HMA will examine the status of the essential minerals such as calcium, magnesium, zinc, chromium and a whole host of others. Modern food processing methods strip nutrients from food. Did you know that a massive 98% of chromium is stripped from flour in the refining process. Not heard of chromium? It is an essential part of the ‘Glucose Tolerance Factor’ which controls blood sugar, stimulates burning of food for energy, controls blood cholesterol levels, reduces blood fat levels and suppresses hunger symptoms. Modern farming methods have also depleted the mineral content of soil, and addition of some fertilisers can make minerals unavailable to plants. But it's not just deficiencies that can cause problems. You can have too much of anything! If calcium (in dairy products), sodium (in table salt) or phosphorous (in fizzy drinks) are present in excess in your diet, these can upset the natural mineral ratios. And interactions between minerals are important too. Is fluoride in your water supply depressing your calcium absorption? The graphs in an HMA will reveal all. Why not find out?

**To sum up:** Obviously an HMA is no substitute for diagnosis by a qualified medical practitioner, but if conventional medical investigations have failed to find a reason, or suggest a treatment for your problem, HMA represents an invaluable and cost effective next step.

Learn more, view a sample report, and see how to order online, at <http://www.4-hair-mineral-analysis.com>