#### **Report formats**

#### **PROFILE 1: RESULTS ONLY REPORT**

This quantitative report contains only the tissue mineral analysis results. It includes a graphic illustration of patient test results for at least 36 essential and toxic minerals, including reference ranges. It highlights significant mineral ratios and individual metabolic patterns.

#### **PROFILE 2: INTERPRETATIVE REPORT**

This is our most popular and comprehensive report.

It utilises all of our laboratory's expertise and extensive experience in interpreting trace mineral patterns.

The report contains all the data in Profile 1, as well as a detailed medical discussion of the patient's chemical results and personalised nutritional recommendations.

#### PROFILE 3: COMPARATIVE REPORT

This comparative report is available as a follow-up to Profile 2, comparing current and previous test results, and providing a comprehensive discussion with revised personalised nutritional recommendations.

#### Hair samples

The laboratory requires a half a gram (0.15 gm) or about one tablespoon of head hair for testing.



Taking a hair sample is quick and easy. Cut hair close to the scalp in 2 - 3 locations. Use the first 4cm of hair, as this reflects the body's most recent metabolic activity. The hair needs to be clean, well-rinsed, untreated and uncoloured. If hair is treated or coloured, wait six to ten weeks and take a sample from the freshly grown untreated hair.

Head hair is best for testing. If head hair is not available pubic hair can be used. If there is no hair, clean fingernail clippings can be tested. These alternative tissue samples can be used to monitor toxic mineral levels, but may not always provide nutrient mineral data that is as reliable as head hair. Do not mix different types of tissue samples, eg. head hair with pubic hair.

# Benefits of an InterClinical Hair Tissue Mineral Analysis

Reliable clinical data on over 36 nutrient and toxic minerals, and 27 significant mineral ratios.

- ✓ Fully licensed and accredited world-leading laboratory.
- ✓ Safe, specialised, scientific, non-invasive pathology test.
- ✓ Valuable health information often not revealed in standard blood and urine tests.
- Excellent means of identifying potential nutrient mineral deficiencies and excesses.
- ✓ Useful indicator of toxic mineral exposure.
- ✓ Personalised interpretive test report that assesses your current mineral status, highlights areas of concern and recommends dietary changes for improved health.

## Ordering a hair analysis

We encourage you to ask your doctor or health care adviser for a Hair Tissue Mineral Analysis from InterClinical Laboratories; alternatively you can contact us directly for an submittal kit.

Test results are normally available within 10-14 days from the date we receive your hair sample.

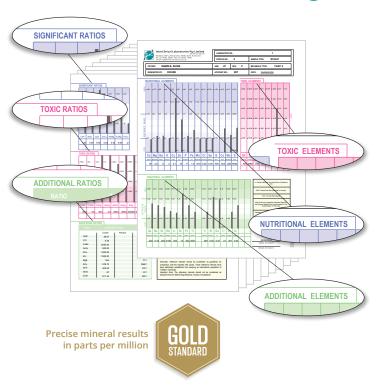
We also offer HTMA for dogs and horses! Contact us for more information.

#### **Available from:**



# Don't play guessing games with your health

# Nutrient and Toxic Element Testing



# Hair Tissue Mineral Analysis Balancing Body Chemistry

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FOR CLINICAL DATA YOU CAN RELY ON

#### Why test for minerals?

Minerals are essential for growth, healing, vitality and wellbeing. They provide structural support in bones and teeth, and they maintain the body's acid-base balance, water balance, nerve conduction, muscle contractions and enzyme functions. Minerals participate in almost every metabolic process in the body – they are the true 'spark-plugs' of life.

Ideally we should get all the minerals we need from a balanced diet. Unfortunately this is rarely possible in today's world. Modem farming techniques, fertilisers and depleted soils reduce the mineral content of foods. Environmental toxins, chemical food additives and stressful lifestyles also have a detrimental effect on our nutritional status. Consequently, we need to test and monitor our nutritional needs more than ever.

## What is a Hair Tissue Mineral Analysis?

Hair Tissue Mineral Analysis (HTMA) is an analytical test that measures the mineral composition of hair. It is regarded by many doctors, naturopaths and nutritional therapists as one of the most valuable screening tools available in everyday and preventative health care.

InterClinical Laboratories provides reliable clinical data on over 36 nutrient and toxic minerals, and 27 significant mineral ratios.

#### Minerals tested

#### NUTRITIONAL ELEMENTS

Boron
Calcium
Chromium
Cobalt
Copper
Iron
Magnesium
Manganese
Molybdenum
Phosphorus
Potassium
Selenium
Sodium

Sulfur

Zinc

#### TOXIC ELEMENTS

Aluminium Antimony\* Arsenic Beryllium Cadmium Lead Mercury Uranium

# ADDITIONAL ELEMENTS

Barium
Bismuth
Germanium
Lithium
Nickel
Platinum
Rubidium
Strontium
Thallium
Tin
Titanium
Tungsten
Vanadium
Zirconium

## Why biopsy hair tissue?

Hair is a body tissue made up of mostly dead, keratinised cells fused together. The shaft of the hair is the portion that projects from the skin surface. The root of the hair, below the skin surface, contains living matrix cells from which the hair grows. Matrix cells depend on the blood supply for nourishment and growth. As they grow and divide, minerals are keratinised into the growing hair shaft, creating a permanent record of metabolic activity and exposure to toxic elements.

Mineral concentrations in the hair can provide a reliable indicator of mineral stores in the whole body. If your health, diet or environment has created a mineral imbalance or toxic mineral excess, it will be recorded in the hair shaft. Research has shown that hair mineral levels reflect stored mineral levels in other body tissues.

# Non-intrusive health screening

Hair Tissue Mineral Analysis is a non-intrusive health screening tool for measuring your body's mineral status. This data can highlight potential health problems and help you to treat them through a nutritional program designed to meet your individual health needs.

## Why not just test blood?

Measuring the mineral content of blood gives a good indication of the minerals being transported around the body. However, it can not accurately measure the minerals stored in tissue.

Very often, the body's homeostatic mechanisms maintain proper serum mineral concentrations at the expense of tissue concentrations. Unfortunately, correct serum levels often mask both mineral excesses and deficiencies in tissue mineral concentrations.

#### For example:

- About 30-40 days after acute lead poisoning, elevated serum lead levels may be undetectable. This is because the body removes lead from the blood as a protective measure and deposits it into tissues such as the liver, bones, teeth and hair.
- Iron deficiency symptoms are present long before low serum iron levels are detected, because the body depletes stored iron in order to maintain normal serum iron levels.

For more information: interclinical.com.au/hair

#### Causes of mineral imbalances

- Improper eating habits: Fad diets and diets high in refined carbohydrates, sugar, salt, alcohol and saturated fats can lead to mineral deficiencies and excesses. Even the mineral content of a healthy diet can be deficient if foods are grown on nutrient-poor agricultural lands.
- Stress: Both physical and emotional stress can lead to mineral imbalances. B-complex vitamins, zinc and magnesium are lost in greater quantities when you are stressed; you also absorb less nutrients from your food. Sports people often have a higher requirement of certain nutrients.
- Medications: Many deplete the body's store of nutrient minerals and can increase levels of toxic minerals. Medications such as diuretics, the oral contraceptive pill, antacids and aspirin can all cause vitamin and mineral deficiencies.
- Pollution: Toxic minerals such as lead, mercury and cadmium
  can interfere with mineral absorption and increase mineral
  excretion. They build up in our bodies from sources such as:
  air pollution, car exhaust, cigarette smoke, unfiltered water,
  dental amalgams, copper and aluminium cookware, hair dyes
  and antiperspirants. Toxins have also entered the food chain,
  contaminating some of our foods. It is almost impossible
  these days to avoid some exposure to toxic minerals.
- Genetic and individual factors: A predisposition towards certain mineral imbalances, deficiencies and excesses can be inherited from parents. Certain individuals can also inherit a higher requirement than normal for particular nutrients to maintain good health.
- Nutritional supplements: Supplements can also lead to mineral excesses and deficiencies. For example, excess calcium intake can cause phosphorus and magnesium deficiency. Continued magnesium deficiency increases sodium levels and eventually causes vitamin A deficiency.

#### Conditions affected by mineral imbalances

Acne
Allergies
Alzheimer's disease
Anaemia
Anxiety
Arthritis
Atherosclerosis
Cardiac conditions
Dental problems
Depression
Diabetes
Digestive problems

Fatigue
Hair loss and poor nails
Headaches
High blood pressure
Hormone imbalance
Hyperactivity
Hypercholesterolaemia
Hypoglycaemia
Immune impairment
Infertility
Insomnia
Learning difficulties

Macular degeneration Memory problems Migraines Mood swings Muscle cramps Osteoporosis PMS Prostate disorders Skin problems Stress Thyroid disorders Wounds healing poorly

<sup>\*</sup>Additional fee applies