FAQ Vets

## ParsleyPet ordering and operational questions

1. **How do I order a Nutritional Blueprint?**
   Answer: All tests are ordered online at www.parsleypet.com.
2. **When the test is ordered what does the patient receive?**
   Answer: An email with instructions and in-take form will be sent to the pet owner and doctor.
3. **What does the patient need to do when the test is ordered?**
   Answer: All ParsleyPet needs is 1 tablespoon of your dogs hair. Follow the instructions sent for collecting a hair sample for the most accurate results.
4. **What is done with the hair sample once collected?**
   Answer: Send the hair sample collected, certified mail to the ParsleyPet lab, address provided in the instructions.
6. **How will I know the sample is received and what is being done?**
   Answer: ParsleyPet will send you and the doctor (if desired) communication along the entire process, letting you know that we are processing and reviewing your pets sample.
7. **Are my results confidential?**
   Answer: Yes, all results and communication are only sent to the people you have indicated on the intake form
8. **What if I am not satisfied?**
   Answer: ParsleyPet always has a 100% happiness guarantee

## HTMA and Thyroid questions

9. **How does an HTMA (hair tissue mineral analysis) test Thyroid?**
   Answer: The adrenal glands produce a variety of hormones in order for the body to function. These include catecholamines such as adrenaline, mineralcorticoids such as aldosterone and glucocorticoids such as cortisol. The thyroid secretes T4 and T3, hormones that have a major regulatory effect upon metabolic processes.

   Many clinicians believe that low thyroid function (hypothyroidism) is becoming an epidemic. A very important parallel is that excessive, depleted or exhausted adrenal activity is oftentimes the underlying cause of low thyroid function. At the very least, adrenal function absolutely must be taken into account when thyroid issues are present, and the opposite applies as well.

   The 3 mineral ratios on a hair tissue mineral analysis that identify the “effect” of adrenal and thyroid function are:
   1. Na/K (sodium/potassium): adrenals
   2. Na/Mg (sodium/magnesium): adrenals
   3. Ca/K (calcium/potassium): thyroid

   The difference in a hair test is that the “effect” of adrenal and thyroid activity is a measurement through mineral activity. This is much different than a “free-fractioned

hormone" in the saliva or a "protein-bound" hormone in the blood. Minerals are the "sparkplugs" of biochemical activity, and this includes hormones. Therefore a mineral pattern on a hair test is a much more accurate "predictor" of thyroid and adrenal activity than a blood or saliva test. The saliva test may show you a current hormone level now, but the hair shows you a 3 month trend and a pattern of where the body is headed.

## HTMA questions

10. **What is HTMA (hair tissue mineral analysis)**

    Answer: Hair is formed from clusters of matrix cells that make up the follicles. During the growth phase, the hair is exposed to the internal metabolic environment such as the circulating blood, lymph, and extracellular fluids. As the hair continues to grow and reaches the surface of the skin, its outer layers harden, locking in the metabolic products accumulated during this period of hair formation. Although all breeds vary in hair growth, the test looks at a length a time instead of a snapshot conducted with a CBC.
    The biological process provides us with a blueprint and lasting record of nutritional metabolic activity that has occurred during this time.Hair tissue mineral analysis is a way to monitor the body's tissue and cellular mineral activity, which in turn reveals information regarding the body's energy and glandular systems. This includes the "effect" of thyroid and adrenal glandular activity in the tissues. This in many ways is a better biopsy to use to assess adrenal and thyroid activity than other lab tests such as blood or saliva, because HTMA is a 3-month biopsy, and also because blood levels of certain hormones do not always provide accurate data as to dysfunction of a specific gland.

    In addition to the identification of mineral activity, HTMA is one of the best biopsies to detect toxic metals such as mercury, lead and aluminum. Not only can HTMA detect the presence of toxic metals, this test can monitor how efficiently your dog is able to excrete toxic metals. This is arguably more significant than just observing the presence of a toxic metal. Toxic metal excretion depends heavily upon adrenal and thyroid functioning.

    Much of the modern nutritional research of hair mineral analysis comes from the work of Dr. Paul Eck and Lawrence Wilson, MD

11. **What are the benefits of an HTMA (hair tissue mineral analysis) test?**

    Answer: Hair analysis detects mineral deficiencies and toxic loads before blood tests. Nutrient minerals relate to stress and energy.
    Hair analysis detects trends towards health problems long before they are diagnosed.
    Hair analysis provides a guide to dietary supplements to stop or reverse a trend.

12. **What is tested with an HTMA (hair tissue mineral analysis)?**

    Answer: Nutritional Minerals: Calcium, Magnesium, Sodium, Potassium, Copper, Zinc, Phosphorus, Iron, Manganese, Chromium, Selenium, Boron, Cobalt, Molybdenum, Sulfur
    Additional Minerals: Germanium, Barium, Lithium, Nickel, Platinum, Vanadium, Strontium, Tin, Tungsten, Zirconium
    Heavy Metals: Uranium, Arsenic, Beryllium, Mercury, Cadmium, Lead, Aluminum

**13. Why use the hair? Why not use the blood?**

Answer: Blood analysis for minerals is a good indicator of the transport of minerals to and from the storage areas of the body (extracellular).

Hair tissue mineral analysis is a good indicator of the metabolic processes occurring within the cells (intracellular).

Hair is ideal tissue for sampling and testing. First, it can be cut easily and painlessly and can be sent to the lab without special handling requirements. Second, clinical results have shown that a properly obtained sample can give an indication of mineral status and toxic metal accumulation following long term or even acute exposure.

A HTMA reveals a unique metabolic world: intracellular activity, which cannot be seen through most other tests. This provides a blueprint of the biochemistry occurring during the period of hair growth and development.

Examples:

- Thirty to 40 days following an acute exposure, elevated serum levels of lead may be undetectable. This is due to the body removing the lead from the serum as a protective measure and depositing the metal into such tissues as the liver, bones, teeth and hair.
- Nutrient loss from the body can become so advanced that severe health conditions can develop without any appreciable changes noted in those same nutrient levels in a blood test.
- Symptoms of elemental deficiency can be present long before low levels can be detected in the serum.
- Excess sodium is associated with hypertension, but adequate amounts are required for normal health.

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 U.S. and abroad, which concluded that human hair may be a more appropriate tissue than blood or urine for studying community exposure to some trace elements

**14. Why test for minerals?**

Answer: Trace minerals are essential in countless metabolic functions in all phases of the life process.

- Zinc is involved in the production, storage and secretion of insulin and is necessary for growth hormones.
- Magnesium is required for normal muscular function, especially the heart. A deficiency has been associated with an increased incidence of abnormal heart conditions, anxiety and nervousness.
- Potassium is critical for normal nutrient transport into the cell. A deficiency can result in muscular weakness, mild depression and lethargy.
- Excess sodium is associated with hypertension, but adequate amounts are required for normal health.

In the words of the late author and noted researcher, Dr. Henry Schroeder, trace elements (minerals) are "...more important factors in nutrition than vitamins. The body can manufacture many vitamins, but it cannot produce necessary trace minerals or get rid of many possible excesses."

**15. What can cause a mineral imbalance?**

Answer: There are many factors to take into consideration, such as:

- DIET - Improper diet through high intake of refined and processed foods, alcohol and fad diets can all lead to a chemical imbalance. Even the nutrient content of a "healthy" diet can be inadequate, depending upon the soil in which the food was grown or the method in which it was prepared.
- STRESS - Physical or emotional stress can deplete the body of many nutrients while also reducing the capability to absorb and utilize many nutrients.
- MEDICATIONS - Both prescription and over-the-counter medications can deplete the body stores of nutrient minerals and/or increase the levels of toxic metals. These medications include diuretics, antacids, aspirin and oral contraceptives.
- POLLUTION - From adolescence through adulthood the average person is continually exposed to a variety of toxic metal sources such as cigarette smoke (cadmium), hair dyes (lead), hydrogenated oils (nickel), anti-perspirants (aluminum), dental amalgams (mercury and cadmium), copper and aluminum cookware and lead-based cosmetics. These are just a few of the hundreds of sources which can contribute to nutrient imbalances and adverse metabolic effects.
- NUTRITIONAL SUPPLEMENTS - Taking incorrect supplements or improper amounts of supplements can produce many vitamin and mineral excesses and/or deficiencies, contributing to an overall biochemical imbalance.
- INHERITED PATTERNS - A predisposition toward certain mineral imbalances, deficiencies and excesses can be inherited from parents.

**16. Can vitamin requirements be determined from a mineral test?**

Answer: Minerals interact not only with each other but also with vitamins, proteins, carbohydrates and fats. Minerals influence each of these factors, and they, in turn, influence mineral status. Minerals act as enzyme activators, and vitamins are synergistic to minerals as coenzymes. It is extremely rare that a mineral disturbance develops without a corresponding disturbance in the synergistic vitamin(s). It is also rare for a disturbance in the utilization or activity of a vitamin to occur without affecting a synergistic mineral(s).

For example, vitamin C affects iron absorption and reduces copper retention. Boron and iron influence the status of vitamin B2. Vitamin B2 affects the relationship between calcium and magnesium. Vitamin B1 enhances sodium retention, B12 enhances iron and cobalt absorption, and vitamin A enhances the utilization of zinc, while antagonizing vitamins D and E. Protein intake will affect zinc status, etc. Therefore, evaluating mineral status provides good clues of vitamin status and requirements.

**17. Is hair tissue mineral analysis supported by research?**

Answer: Hair tissue mineral analysis is supported by an impressive body of literature in a variety of respected national and international scientific publications. Over the past twenty-five years hair mineral testing has been extensive. Each year in the United States alone, federally licensed clinical laboratories perform over 150,000 hair mineral assays for health care professionals interested in an additional screening aid for a comprehensive patient evaluation. This does not take into consideration the thousands of subjects used in numerous continuing research studies conducted by private and government research agencies.

18. Advantages of hair tissue mineral analysis
    - Hair specimens can be collected more quickly and easily than blood, urine, or any other tissue, using a non-invasive method.
    - Hair analysis is more cost-effective than mineral testing through other means.
    - Unlike blood, hair is less susceptible to the homeostatic mechanisms that quickly affect trace element levels.
    - Long-term deviations of mineral retention or losses are more easily detected in hair than blood.
    - Concentrations of most elements in the hair are significantly higher than found in the blood and other tissues.
    - Hair provides a record of past as well as present trace element levels, i.e. biological activity.
    - Hair provides information of substances entering the hair from the blood serum as well as from external sources.
    - Hair is invaluable in the assessment of toxic metal levels.

Quotes:

"Through proper interpretation, there exists a unique ability to recognize abnormal processes from trace mineral patterns found in the hair and other tissues. With specific dietary modifications, restoration of a more normal biochemical balance can be achieved, thereby eliminating many nutritionally related endocrine, neurological and even emotional disturbances." David L. Watts, Ph.D.