SPECIAL REPORT: The 5 Simple Ways to use Functional Diagnosis in Practice

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SPECIAL REPORT

5 Simple Ways to Use Functional Diagnosis in Your Practice to Get More Diagnostic Information and Increase Clinic Income

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INTRODUCTION

Congratulations for downloading this special report from BloodChemistryAnalysis.com. This report is going to show you how you can use Functional Diagnosis to get more diagnostic information from your patients. This can be as simple as adding a few functionally oriented PE techniques to your screening PE or a few in-office lab tests with each patient.

FIRST A LITTLE INTRODUCTION TO FUNCTIONAL DIAGNOSIS

Over the last 6 years I have been using and teaching a system of diagnostic skills that I call Functional Diagnosis. This report is designed to introduce you to the concept of Functional Diagnosis, teach you some basic tools from the Four Quadrants of Functional Diagnosis, and explain how utilizing Functional Diagnosis in your practice will not only allow you to serve your clients better, but also provide you with a new revenue stream. Many practitioners pay their monthly overhead running these kinds of tests in their clinics.

This special report will save your patients money and save you time as you will be better at quickly evaluating where on the spectrum of health a patient lies. The purpose of Functional Diagnosis is to help you answer the following four questions:

1. Is there a dysfunction in this patient? If so, where is it?
2. What are the sources or causes of the dysfunction?
3. What individualized treatments are needed?
4. When has function been restored?

In this first section I'm going to discuss how to approach the history from a functional perspective, and how to work with symptoms according to a functional hierarchy. Before I do that I want to tell you how I got into Functional Diagnosis.

HOW I GOT STARTED

I thought I would be able to diagnose anything when I got into practice 6 years ago. I thought that I would have patients flocking to me because of my superior diagnostic skills and incredible treatment protocols. Well, after a few months went by I realized that I had not learned everything I could about natural medicine at Naturopathic school. I felt that I had an incredible training in treatment modalities. I could provide a treatment plan for pretty much any disease or condition that came across my desk. The problem was, I had a difficult time knowing what I was treating, let alone how to treat it.

You see, I had been trained in Western pathologically oriented diagnosis. My PE, urinalysis and lab interpretation skills were the same ones that medical doctors used. Most of the time my patient’s physical exam and lab tests all came back normal. Well, I knew that they were by no means normal, so why was I using interpretive methods based on that assumption? Why were there no testing methodologies that I could use in my office to help me diagnose the dysfunctions that plagued all my patients?
Luckily I started an associateship with a brilliant Naturopath who began my education in Functionally oriented diagnosis. I had been introduced to functionally oriented blood chemistry analysis while still in medical school. My mentor increased that knowledge and added valuable training in functional urinalysis, metabolic type testing, in-office lab testing, comprehensive acid-base evaluation, functionally oriented history testing, and hands-on physical exam skills. I finally learned how to diagnose and help the patients that came to me with no obvious sign of pathology, but were obviously not "normal".

Functional diagnosis allowed me to find out where the dysfunction was located, what individual treatment was needed, and when was function restored.

After my associateship ended I started out on my own and was lucky enough to build on my extensive training by learning VEGA testing and other diagnostic modalities. I added to my skill set by traveling to Germany for an intensive 10-day advanced VEGA testing training. I studied darkfield microscopy and became well versed in Biological Terrain Analysis (BTA).

Over the last six years I have put in literally thousands of hours learning the skills I have. It is time to give that knowledge back to help healthcare practitioners get started in this field.
That's what I want to do with this special report......I want to show you what you need to learn to transition to a more effective way of diagnosing your patients and with my help you won't have to spend the thousands of hours that I did.

**WHY SHOULD YOU BOTHER?**

More and more people are spending their own money seeing practitioners of complementary and alternative medicine. Most of those patients will test normal when using standard Western medical diagnostic tests. If you don't have the skills to uncover the cause of their dysfunction, then the money they spend will go to a practitioner who can, and not you.

People are finding out about the latest treatment for this disease, and the latest diet for that condition on the Internet and from the most recent health books. When a patient makes their way to your office you have to make an impression on them very quickly. You need to be able to stand out as a practitioner who can make a difference quickly and not just repeat everything they have already read on the Internet. You must be able to attract patients and be able to offer the latest techniques and treatments, but you must do it cost effectively and that's where functional diagnosis really thrives.

This Special Report will give you a primer so that you will know what you must do to begin to make a difference in your patients
lives and bring money your way.

**STEP I**
I'll discuss the history taking process and why this is the first area that many practitioner's of alternative and complementary medicine lose their patients. I will introduce the concept of Signs and Symptoms Analysis from a Functional Perspective.

**STEP II**
I will give you some tips to enhance your physical exam skills. Most practitioners in my experience do not get their hands on their patients enough. Doing a physical exam from a nutritional and functional perspective inspires confidence in your abilities, can provide quick feedback from patients, and increases compliance.

**STEP III**
I will show you how simple in-office lab tests can increase your diagnostic offerings to your patients and increase your bottom line. I will introduce the concept of Gateway testing.

**STEP IV**
You will be introduced to Blood Chemistry and CBC Analysis from a Functional Perspective. This technique can make such a huge difference in your diagnostic skills.

**STEP V**
I will give you some tips on how to increase your presence in your patients' lives by implementing take-home tests into your practice--
this technique is a wonderful referral tool.

OK. Ready to go? Let’s talk about how to approach the history taking process by using functional Signs and Symptoms Analysis.

**STEP 1: FUNCTIONAL SIGNS AND SYMPTOMS ANALYSIS**

When I first went into practice I used to re-invent the wheel each time a patient came into my office. I would sit and listen to the patient for about 45 minutes and then look hard at the copious notes I took and wonder what to do next. What PE should I do? Should I run a chem. screen and CBC? Did I ask all the right questions? What protocol am I going to choose as my treatment? It took me a while to put together a system of evaluation that took the guess work out of my new and follow-up patient consults.

One of the first areas I changed was my approach to the history taking process. Like a good Naturopath I was taught to take a thorough and exhaustive history. The problem was that I did not really have any idea what to do with all the information I collected. I soon identified a number of common problems that many doctors are faced with:

1. Most practitioners spend too much time asking questions.
2. Most practitioners do not know what to do with all of the information they gather.
3. Most practitioners never look at the initial history again. They lose a wonderful opportunity to track change over time.

4. Most practitioners use symptoms as their primary means of tracking progress.

One of the first tools I implemented into my practice was a thorough health assessment questionnaire. I use one called the Nutritional Assessment Questionnaire (NAQ), which is composed of 322 questions broken down into the systems of the body. I give this questionnaire to every new patient in their new patient packet of information. The NAQ is one of the best data gathering tools I have found. It has saved me and my patients many hours of history taking and provides an incredible tool to track data over a longer period of time. I call this “history taking in motion”. Many practitioners spend a lot of time gathering that initial history. However, that valuable data is often relegated to the back of the file and never referred to again. Using a health appraisal questionnaire allows you to ask relevant history questions in an easy to use questionnaire and enables you to ask the same questions at a later date to see how much change there has been. In medicine we are always looking for change and this tool is one of the best ways I know of to monitor changes in the symptom burden of the patient.

A health appraisal questionnaire is also an excellent tool to encourage compliance in patients. How many of us have had the experience of putting together an excellent protocol for a patient’s
migraine headaches only to have the patient return in 3 weeks saying that the headaches have not changed. By using the health appraisal questionnaire the patient themselves answers the questions and the questionnaire gathers the information for analysis. You can sit down with the patient and point out that yes, their headaches have not completely resolved but they reported on their initial health appraisal questionnaire that their headaches were a 3 (a severe symptom that occurs frequently) and on their next health appraisal questionnaire they had reported that the same symptom had dropped down to a 1 (a minor or mild symptom, rarely occurs). This patient is more likely to comply with your recommendations.

I also require that my patients fill it out on a regular basis. I can quickly see a patients progress and substantiate the changes in their symptoms by monitoring changes in other tests e.g. their physical exam, their functional urinalysis, and their blood work.

**SYMPTOM BURDEN**

Using a questionnaire allows you to assess the symptom burden of a particular system of the body. You can also use the same principle to evaluate the total symptom burden of the body. This allows you to quickly evaluate for change in a particular system.

Whether you create your own questionnaire or use someone elses I recommend that you find or develop one that follows the following template:
I recommend that you set up your questionnaire into two parts. Part I should deal with Diet, Lifestyle, and Medications that your patients may be taking. Part II should deal with symptoms of dysfunction in the various organ systems based on a functional hierarchy.

PART I
It is often easy to gloss over this section and head into Part II, which covers the organ systems. I think that this is a mistake. I find Part I a very helpful tool for uncovering hidden diet and lifestyle related factors that are obstructing my patients’ journey to health and wellness. It is also a great way to track prescription and over-the-counter drug use. It can also be used to track dietary and lifestyle changes that you ask your patients to make over the course of treatment. I use part I of the NAQ to steer my initial history intake. I ask the patient to go into more detail on the dietary related questions they answer. This is a wonderful way to begin the education process.

DIET
In the diet section ask about general dietary history. As I mentioned above, this is an excellent place to start the re-education process for your patients. I will often tie in symptoms from part II with the questions they answer in the diet section. For instance, a patient has a heavy symptom burden in the sugar handling section. They get sleepy in the afternoon, crave sweets,
have headaches if meals are skipped, get irritable if meals are skipped, and crave coffee in the afternoon. I would then turn to the diet section and see what elements in their diet may contribute to these symptoms. They may eat refined sugar daily, drink caffeinated beverages, use artificial sweeteners, and consume refined flour on a daily basis. Connecting lifestyle and diet choices in with symptomology is a very effective way of creating change.

**LIFESTYLE**

The lifestyle section of the NAQ asks four very important questions:

1. Are you exercising?
2. Have you changed jobs recently?
3. Have you had a change in marital state recently?
4. How much do you work in a given week?

These questions are related to the stress levels a patient is under. Hans Selye, the “father” of modern stress physiology put tremendous stock in the lifestyle factors that caused daily stress on the body.

Exposure to long, daily bouts of sustained stress put tremendous burden on the adrenals causing first an elevated cortisol level followed by a decreased level as the body passes through a stage of maladaptation to stress that leads eventually to outright adrenal dysregulation. This in turn contributes to blood sugar dysregulation.
as the body has a hard time regulating insulin levels, which leads to abnormal blood sugar swings. Sustained adrenal stress is one of the major causes of a dysfunctional thyroid. High levels of stress lead to the creation of a substance called reverse T3, which inhibits the creation and activity of active thyroid hormone.

**MEDICATIONS**

It is very difficult to remember to ask your patients about every drug they may be taking. The health appraisal questionnaire is a great tool to assess the medications your patients are taking. I always glance at the medication section of the questionnaire and am prompted to ask for specifics about any medications they are taking. I ask questions such as:

1. How long have you been taking this medication?
2. Who is the prescribing physician?
3. When was the last time you saw this doctor about this medication?
4. What condition is this medication meant to be addressing?
5. Do you notice any unusual symptoms associated with this medication?
6. Do you get routine lab work to make sure that your liver, kidneys and red blood cells are coping with this medication?
7. Are you interested in trying to reduce your dependence on your medication?
Note well: Only the prescribing physician has the right to change or alter a patient’s medication.

PART II
Part II of the questionnaire should focus on the organ systems of the body and is organized according to a functional hierarchy called the Foundations of Health.

The foundations of health include:
1. Proper diet,
2. Adequate sleep,
3. Proper stress management,
4. Optimal digestion, absorption, and utilization of nutrients,
5. Adequate elimination,
6. Optimal tissue minerals,
7. Balanced essential fatty acids,
8. Proper blood sugar regulation,
9. Optimal hydration,
10. Adequate vitamin levels,
11. Balanced adrenals, thyroid and sex hormones,
12. Good cardiovascular health,

You will notice that the digestive system is placed close to the top of the list ahead of lets say the kidney and bladder section. This is not to say that the kidney and bladder are any less important to optimum health. It has been noted over many years of that the body
heals in very clear patterns. It is possible to clear up kidney and bladder dysfunction by first assessing and treating any dysfunction in the digestive system. By increasing the level of available macro and micro nutrients in the body through optimizing digestion, by increasing the levels of Essential fatty Acids (EFAs) in the body by optimizing the gallbladder function, and by cleaning up the liver you can have a tremendous impact on the kidney.

It is important to focus the most attention on the symptom burden that is highest up the functional hierarchy. Even though a patient may have a high priority in the cardiovascular system, it would be best to focus the most attention on the high priority in the liver gallbladder system. Assessing and correcting the symptom burden in the liver gallbladder system will have a strong impact on the cardiovascular system.

Examples of some sections to include in PART II of your symptom questionnaire:

+++Upper Gastrointestinal system
The upper gastrointestinal (GI) system refers to the stomach and pancreas. This is one of the primary areas of dysfunction in the body. It is placed first on the questionnaire because it has the highest priority in the foundations of health. Many dysfunctions in the body will resolve themselves once the upper GI has been appropriately assessed and treated. In my experience you cannot
expect to resolve problems further down the digestive system without addressing stomach acidity.

+++Liver and Gallbladder
Gallbladder dysfunction is very common in the developed world, hence the reason why this section is so high up the foundational hierarchy. The gallbladder will become more and more compromised as the liver becomes more dysfunctional.

+++Small Intestine
The small intestine is the site for further digestion and also absorption and assimilation of the majority of nutrients. Success in the small intestine is dependent on proper setup from the stomach, gallbladder, and pancreas. Dysfunction in any one of these systems will lead to the production of metabolic toxins. The bacterial flora in the small intestine feasts on maldigested nutrients and produce metabolic toxins that cause considerable damage to the lining of the small intestine leading to problems such as leaky gut syndrome and malabsorption. The small intestine becomes a great place for potentially pathogenic to take up residence as the terrain in the small intestine begins to deteriorate.

+++Large Intestine
Success in the large intestine is dependent on optimal function in the rest of the digestive tract. Resolving issues of hypochlorhydria, pancreatic insufficiency, bowel toxemia, dysbiosis, leaky gut
syndrome, and malabsorption will have tremendous effects on the colonic health.

+++Minerals
No discussion of minerals can be done without first addressing calcium needs and calcium supplementation. A major part of the Mineral Needs section deals with the signs and symptoms of calcium insufficiency. Many in the healing arts feel that calcium deficiency is widespread and almost everyone would benefit from a daily calcium supplement. My experience indicates that the inability to use calcium available in the diet is far more widespread than simple calcium deficiency. When a calcium need is identified through subjective indications or through laboratory analysis, the lack of synergists or metabolizing agents may be locus to the problem. Always rule out the need for magnesium, phosphorus, vitamin A, B, and C, unsaturated fatty acids, iodine, and the inability to absorb calcium from the diet (hypochlorhydria) as the possible reason(s) for the calcium need.

+++Essential fatty Acids
Essential fatty Acids (EFAs) are just that, essential. You need to have them in order to live. Unfortunately most people in the so-called developed Western world are commonly deficient in essential fatty acids for a variety of reasons. Identifying EFA deficiencies is very important in a functionally oriented practice. However, gallbladder dysfunction should be taken into consideration
whenever you suspect EFA deficiency.

+++Blood Sugar Dysregulation
Blood sugar dysregulation is reaching almost epidemic proportions in the Western world, and the west is intent on exporting this curse to many developing countries too, which are seeing unprecedented explosions in obesity over the last 10 years.

Blood sugar dysregulation does not suddenly emerge. You cannot wake up one day with Type II diabetes and not have a clue that something is going wrong. Type II diabetes follows an insidious pattern of development and involves, to some extent, dysregulation in the three organs of sugar regulation: the endocrine pancreas, the liver, and the adrenal glands. These three organs work in harmony to regulate and normalize blood glucose levels across the day and night. Identifying symptoms of blood sugar dysregulation and treating it early will help your patients feel a whole lot better.

For more information on how to incorporate a Functional System of Signs and Symptoms Analysis in your practice please visit the following page on my website: [http://www.BloodChemistryAnalysis.com/diagnosis-history.html](http://www.BloodChemistryAnalysis.com/diagnosis-history.html)
STEP 2: Functional Physical Exam Techniques

In this section we will talk about how to enhance your physical exam skills. Most practitioners in my experience do not get their hands on their patients enough. Doing a physical exam from a nutritional and functional perspective inspires confidence in your abilities, can provide quick feedback from patients, and increases compliance.

Many of the physical exam skills we learned in medical school are designed to rule out and find pathology. They are not that helpful with diagnosing dysfunction. Most of the patients you do a standard screening physical exam will come out normal. It is quite easy to add a number of simple functional examinations to your standard PE to make the testing a lot more meaningful. This will not only help you sleuth out hidden dysfunctions, but will also give you a lot of nutritional information too.

In this section we will look at a number of these simple tests that you can incorporate into your PE.

SKIN EXAMINATION
The skin is one of the mirrors of deeper dysfunction in the body. Consider the implications behind the following on a skin examination:
+++Acne in an adult is very likely a sign of blood sugar dysregulation.

+++Dilated capillaries in the cheeks and nose are a classic sign of hypochlorhydria or too much alcohol. Check the HCL and stomach reflex (see below).

+++Check for bumps on the back of the upper arm (follicular hyperkeratosis). This is a sign of vitamin A or essential fatty acid deficiency. If you suspect EFA deficiency from their symptomology (you should have a list of EFA questions on your symptom questionnaire) consider pancreatic enzyme or bile salts to aid absorption. Check Murphy's sign (see below).

+++Patient displays dermatographism (a raised wheal when a sharp object is dragged across the skin). This is a sign of systemic allergies or sensitivities. Check their pulse for allergic tension (see below).

+++Slow wound healing is a sign of diabetes, and/or a deficiency in zinc, EFA, vitamin C, and bioflavanoids.

+++Multiple pigmented skin tags on neck and/or under arms are a classic sign of blood sugar dysregulation. Check Adrenals (see below).

+++Vertical creases on forehead near midline are a sign of
duodenal ulcers and epigastric discomfort. Check the stomach reflexes (see below).

**NAIL EXAMINATION**

+++ Spooning of the nails is a sign of iron deficiency. Run a CBC, Total Iron, TIBC, and Ferritin.

+++ Look for soft nails or poor growth as a sign of hypochlorhydria and mineral deficiency. Check stomach and HCL reflexes (see below).

+++ Cracking of the tips of the fingers and inflammation of the cuticles are signs of zinc deficiency. Do a Zinc Taste test.

+++ Red tips to the fingers with abnormal nail growth may be a sign of mercury toxicity. Run a hair mineral analysis or heavy metal urine screen post DMPS if symptomology matches.

+++ Ridging of the fingernails is common in multiple mineral deficiencies. Run Tissue Mineral Analysis.

**ABDOMINAL EXAMINATION**

+++ Check for tenderness in the 6th intercostal space in the mid clavicular line on the left hand side. Pain on palpation is indicative of stomach dysfunction (hypochlorhydria, gastric inflammation, H.
+++Check for tenderness in the 6th intercostal space in the mid clavicular line on the right hand side. Pain on palpation is indicative of liver/gallbladder dysfunction (liver detoxification problems, gallbladder stasis or insufficiency.)

+++A positive Murphy's sign (palpation of the gallbladder under the rib cages) is a classic sign of a congested gallbladder. Consider food allergies, biliary stasis, gallstones, bile salt supplementation, EFA deficiency.

+++Tenderness palpating the colon consider yeast overgrowth, sluggish bowel, bowel toxemia, dysbiosis.

+++Patients with hypochlorhydria often have tenderness in a reflex known as the HCL point located 1 inch below the zyphoid and over to the left edge of the rib cage.

**ADRENAL MARKERS**

+++Check for orthostatic hypotension. A drop in diastolic BP from prone to standing of more than 6 points is a strong sign of adrenal dysfunction, dehydration, or anemia.

+++Check for a paradoxical pupillary light reflex. The pupil staying dilated even when you shine a bright light in it is a sign of hypoadrenalism.
+++Medial knee tenderness over the insertion of the pes anserinus is a sign of adrenal insufficiency.

+++Inguinal ligament tenderness is a sign of adrenal weakness.

**BLOOD PRESSURE AND PULSE**

+++Calculating cardiac reserve
The cardiac reserve gives you a sense of the health of the heart muscle and the likelihood that the heart is under extraordinary stress that might lead to an MI or CHF like state.

Take a patient’s blood pressure and pulse. Add the diastolic and systolic blood pressure readings together and multiply by the pulse:
Systolic BP + Diastolic BP × Pulse = Cardiac Reserve

**Clinical Implications:**
Normal cardiac reserve = 14,000 to 19,500
Critical or danger points: < 10,000 or > 26,00. In this case do a full cardiac work-up or send out for further evaluation.

+++A pulse pressure above 50 is a sign of magnesium deficiency.

+++Slow heart rate is seen in hypothyroidism
+++Irregular heart rate may be due to potassium deficiency, allergies, or dehydration.

+++Check for what is known as "Allergic Tension"
Take a full one minute pulse sitting, then stand, wait 15 seconds and take another full pulse. If the standing pulse goes up by more than six beats, this is an indication of "allergic tension", ie. hidden allergies are putting a stress or tension on the nervous system.

These are only a few of the many simple tests you can incorporate into your physical exam to get more information from your patients.
STEP 3- IN-OFFICE LAB TESTING-
FUNCTIONAL TERRAIN ANALYSIS

In this section I will show you how simple in-office lab tests can increase your diagnostic offerings to your patients and increase your bottom line. I will also introduce you to the concept of "gateway testing".

It is common for practitioners of alternative and complementary medicine to have patients with symptoms such as fatigue, low energy, reduced immunity, unexplained weight gain, digestive dysfunction, allergies, anxiety or depression, and hormonal dysfunctions. These are the typical symptoms of a functional disturbance in the body.

Most patients with these symptoms present without clinical findings i.e. their blood tests, pathology reports etc., appear within “normal” range. However, there are a number of in-office tests that can identify the cause of these functional disturbances before severe damage sets in, allowing you to bring the body back into its normal state of equilibrium.

In-Office testing is a series of tests that identify the key biomarkers for health. These tests give us another method of evaluating the systems of the body that are not functioning optimally. In-Office testing, along with the other diagnostic methods covered in this
special report, is an extremely powerful way to practice preventative medicine. It allows us to assess whether there is an imbalance in physiological function, identify specific areas of imbalance, address the imbalances by making appropriate therapeutic recommendations, and re-check to see that the body has been brought back to a state of balance after treatment.

In-office testing allows you to assess for functional disturbances before true damage sets in. The results are immediate and testing is easily performed in an in-office setting. They provide a reference point to make sure treatment is working, and do not rely on expensive equipment or out-sourced labs. It costs about $350.00 to set your lab up with the right reagents, test tubes, centrifuge etc. Each bottle of reagent can do hundreds of tests. In-office testing can also be a wonderful additional source of income in a cash-based practice. You are running the tests in your clinic, so the revenue generated from these tests stays in the office and is not passed on to an out-sourced lab. I typically charge $75.00 for my full Functional Urinalysis panel.

In-Office Tests also act as “gateway” tests to determine the need for more specific laboratory assays (stool analysis, hormonal profiles, detox panels etc.). I use this function all the time. For instance, if a patient's bowel toxicity test is above 7 I will recommend a Digestive Stool Analysis, because there is something deep in the digestive tract that is causing the bowel toxicity test to be so abnormal. If their Urine Adrenal Stress test is
grossly abnormal then I feel justified in ordering a salivary adrenal test.

It is important to remember that these tests do not diagnose specific disease states or pathologies. They are prognostic signposts to help in the functional assessment of the patients.

The following is a list of the systems of the body and the in-office tests that can help uncover hidden dysfunctions.

+++Gastrointestinal functional disturbances can be assessed by the following tests:
   Bowel toxicity test (urine indican)
   Urine sediment test
   Urine calcium test
   Urine specific gravity
   Gastric string test for stomach pH (explained below)

+++Mineral and electrolyte deficiency can be assessed by the following tests:
   Zinc Taste Test
   Tissue Mineral Assessment test
   Dr. Kane's Mineral Assessment tests

+++Adrenal functional disturbances can be assessed by the following tests:
   Urinary Adrenal Stress test (Urine chloride)
   Ragland's postural hypotension test
Paradoxical pupillary reflex test
Dr. Bieler's salivary pH test

+++Thyroid functional disturbances can be assessed by the following tests:
  Delayed Achilles return reflex
  Basal body temperature testing
  Iodine patch test

+++Acid/Base functional disturbances can be assessed by the following tests:
  Breath-holding time
  Respiration rate
  Urine pH
  Salivary pH
  Dr. Bieler's salivary pH test

+++Oxidative stress can be assessed using the following tests:
  Oxidata free radical test
  Lingual ascorbic acid test
  Urine vitamin C test

+++Essential Fatty Acid deficiency
  Salivary pH

An Example of an In-Office Test-
The Gastro-Test

It is a common misconception that many functional gastrointestinal
disturbances are related to hyperacidity or excess stomach acid
The Gastro-test is a method to inexpensively, quickly and accurately measure stomach pH. The Gastro-Test itself is 70cm of a highly absorbent cotton string coiled inside a weighted gelatin capsule. The capsule is swallowed and retrieved from the stomach after 10 minutes. The string is rubbed with a pH stick and the color obtained compared to a pH chart provided with each capsule. One can perform either a static measurement after an 8-10 hour fast or test after a protein rich meal. Further testing after stomach acid stimulation or a bicarbonate challenge can be more diagnostic. The Gastrotest correlates well with functional reflex testing of the digestive organs described in the above section of the special report.

Directions
1. Have patient eat a protein rich meal 2 hours before test.
2. For an ambient pH have patient fast for 8-10 hours.
3. Get patient to swallow a little water to lubricate the throat
4. Swallow the capsule with a little water while the free end is held firmly outside the mouth
5. After capsule has been swallowed patient lies on left side or back on the table for 10 minutes.
6. After 10 minutes get the patient to sit up and with chin raised swiftly remove the string.
7. Lay string on paper and while the string is still moist touch the pH stick to the string starting at the distal end
8. The resultant colors are compared with the pH chart that comes with the test
9. Discoloration of any segment of the string represents acid pooling
10. Do not expect the whole string to be a consistent color
11. Use the following information if patient’s have a high pH reading with Gastro-test

NOTE: be aware that the string is contaminated with stomach juices and can therefore contain Helicobacter pylori bacteria and even parasitic residue.

Results
1. Any result of pH3 or lower indicates the stomach is able to secrete acid normally.
2. If stomach pH is above pH3, you may want to dynamically assess the stomach’s ability to secrete stomach acid after a challenge with sodium bicarbonate or stimulation with secretagogues, such as bitter herbs or caffeine.

Clinical Implications
High stomach pH is correlative of either hypochlorhydria or achlorhydria.

For more information on how to add an In-Office Lab to your clinic please visit the following page on my website:
STEP 4: BLOOD CHEMISTRY AND CBC ANALYSIS FROM A FUNCTIONAL PERSPECTIVE

Today you will be introduced to Blood Chemistry and CBC Analysis from a Functional Perspective. This method of analysis can make a huge difference in your diagnostic skills.

Most of us are using the conventional laboratory reference ranges for our blood chemistry and CBC interpretation. For many practitioners blood chemistry and CBC analysis is a matter of comparing a test result with the conventional laboratory reference range, seeing whether or not the patient’s results are normal or abnormal and attempting to fit them into a particular disease pattern or pathology.

Unfortunately, the conventional laboratory reference ranges are designed to identify and diagnose disease states and pathology, and are not much use in identifying dysfunction. People who fall within the reference range are assumed to have no clinical signs and symptoms of any disease, and are considered “normal”. The reference range used by conventional laboratories is based on a Gaussian or bell curve distribution of test results with an established mean value. The standard in laboratory medicine is to use 2 standard deviations above and below the mean to represent normal. This places 96% of people within the “clinically” normal reference range.
Unfortunately, this method of assessment does not allow for the large numbers of people who are told that they are “clinically” normal yet suffer from a wide range of signs and symptoms more suggestive of a subclinical or functional problem. The conventional reference ranges, because they are based on the Gaussian distribution, get wider and wider as the population gets sicker and sicker. Remember 96% of the population falls within the normal reference range. As the population becomes sicker the number of people who are declared “clinically normal” gets larger, making the definition of abnormal or disease states relative.

It is my experience that most people who seek medical care do not have a clinically identifiable disease. As a result they are told by their doctor that they have an “unremarkable” or “normal” laboratory test, i.e. they are “clinically” normal. They may be normal compared to the rest of the sick population, but they are a long way from being in a state of optimal health.

The main focus of this section is to look at blood chemistry and CBC testing from this functional perspective. I use a set of different reference ranges, which I call optimal ranges, for each test on a regular blood chemistry and CBC or hematology screen. Alternative blood chemistry and CBC analysis has been around for many years with many researchers and clinicians contributing their particular talents to this growing field. I have been using this particular method of analysis for the last 6 years, and over that time I have refined the diagnostic criteria into the system that it is today.
Many of the optimal ranges I use used to be the “normal” ranges 10 or 15 years ago. Also, many of these optimal ranges and patterns were inadvertently discovered by doctors seeking serum cancer markers. The optimal ranges are tighter than the conventional laboratory reference ranges, thereby increasing the sensitivity while reducing specificity. We increase our ability to detect patients with changes in physiological function and thus use laboratory testing in a more preventative way. We can identify the factors that obstruct the patient from achieving optimal physiological, biochemical, and metabolic functioning in their body.

For example, if a patient’s blood glucose is 105 mg/dL or 5.82 mmol/L., this falls within the normal laboratory reference range. In the conventional system the patient would be told that the lab test is normal and that he/she does not have diabetes. This is true, the patient may not have diabetes now, but as functionally-oriented practitioners we are more concerned with preventing disease from occurring. By using an optimal range for blood glucose, a serum glucose of 105 mg/dL or 5.82 mmol/L alerts us to the possibility that this patient’s ability to regulate blood glucose is becoming compromised. Combining this with a thorough history, a diet and symptom analysis, functional physical exam, and looking at other values on their chemistry screen we can more accurately determine whether or not the patient is having problems with blood sugar dysregulation. We have the opportunity to deal with the dysfunction long before it manifests in diabetes.
The following is an example of how you could use this system of blood chemistry analysis to identify dysfunction in the upper gastrointestinal system.

**BLOOD CHEMISTRY SCREEN PATTERN FOR HYPOCHLORHYDRIA**

Hypochlorhydria, or the insufficient production of stomach acid, is a very common clinical problem with influences far beyond the digestive tract (i.e. food and environmental sensitivity, asthma, intestinal parasites, dermatological problems, autoimmune disease and arthralgias.) It is a very common condition when you know what to look for. Most doctors wouldn't look to a blood chemistry screen to help them identify hypochlorhydria. I have found it tremendously helpful in helping me uncover cases of hypochlorhydria long before it has gotten very symptomatic. I have followed up a number of cases of this pattern with the gastrotest and have had the diagnosis confirmed in the majority of cases.

The inability to produce HCl is frequently due to a need for the following:

1. Chloride (low serum chloride)
2. Zinc (ALP will generally be decreased) and
3. Thiamine (CO2 will generally be decreased with an increased anion gap).
These are the primary nutritional factors required for the synthesis of hydrochloric acid. Paradoxically, sufficient HCL is needed in order to properly absorb these nutrients as well. Hence, the chronic nature of this problem is often perpetuated.

An increased total globulin level is often associated with a decreased production of hydrochloric acid in the stomach, along with changes in the following elements:
BUN
Total protein
Albumin
Phosphorous
MCV
Anion gap
Chloride
Alkaline phosphatase

**PATTERN:**

+++Hypochlorhydria is possible with an increased globulin level (> 2.8 or 28 g/L) and a normal or decreased total protein (<6.9 or 69 g/L).

+++Hypochlorhydria is probable if globulin levels are increased (> 2.8 or 28 g/L) along with an increased BUN (>16 or 5.71 mmol/L), a decreased or normal total protein (<6.9 or 69 g/L) and/or albumin
(<4.0 or 40g/L) and/or decreased serum phosphorous (<3.0 or <0.97 mmol/L).

+++Other values that may be reflective of a developing or chronic hypochlorhydria include increased or decreased gastrin (<50 or >100), an increased MCV (>90) and MCH (>31.9), a decreased or normal calcium (<9.2 or 2.3 mmol/L) and Iron (< 50 or 8.96mmol/dL), a decreased chloride (<100), an increased anion gap (>12) and a decreased alkaline phosphatase (<70).

Some of clinical indications of Hypochlorhydria that you would find on a symptom questionnaire or a functionally oriented physical exam include:

1. Gas and bloating shortly after meals
2. Sense of fullness/ Easy satiety
3. Nausea after taking supplements
4. Weak, peeling, or cracked nails
5. Dilated capillaries in cheeks and nose in non-alcoholics

In the final part of this Special Report I'll cover how to implement a series of take-home tests to improve patient compliance and increase your referrals.
STEP 5: IMPLEMENTING TAKE-HOME TESTING WITH YOUR PATIENTS

In the final part of this special report I'll cover how to implement a series of take-home tests to improve patient compliance, gather extra data from your patients, and increase your referrals. I suggest that you use a series of take-home tests as "homework" for your patients between office visits. It is important for your patients to continue to work on their case between office visits and this will happen if you set homework for them to do between appointments.

Accuracy and efficiency are important for the health care practitioner in private practice. You are responsible for collecting a large amount of both subjective and objective data in order to establish a “portrait” of your patient in a relatively short period of time. The value of the data lies in your ability to evaluate the data and present your clinical findings to your patient.

In this special report have covered the four major quadrants of data gathering for the functionally oriented practice. All of these methods of data gathering are essential in establishing a good profile of the patient and allow you to begin to assemble your report of findings, which is the important “detective” work on your patient’s case. The difficulty is rarely deciding what treatments to give, but how to identify the underlying causes to specifically treat.

Many of the most important clues you pick up are not necessarily
associated with the symptom picture your patient initially presents with, but are representative of deeper areas of dysfunction or imbalance. For instance you have a patient that presents with a clear case of hypochlorhydria, blood sugar dysregulation and adrenal insufficiency. Their symptomology clearly points to these three dysfunctions as being the most important to focus on initially. Your physical exam, in-office testing, and blood test analysis all confirm this. However, you suspect that there may be a thyroid dysfunction hiding out on a deeper level. Their symptoms suggest it and you noticed a number of signs of hypothyroidism on your physical exam, even though their thyroid panel was normal. This is where take-home testing is extremely useful.

You can focus your treatment plan to help resolve the upper gastrointestinal, adrenal, and blood sugar dysregulation. You can also suggest to your patient that their thyroid may be in a state of imbalance and you would like them to perform a simple take-home test to check their thyroid function.

You will find that implementing these tests into your practice will engage your patients and improve treatment compliance. Additionally, a stronger sense of patient accountability is created when you involve them more fully in your data gathering process. I also find that these take home tests serve as a great practice-building tool as frequently a patient will share their take-home tests with others and refer you new patients.
SOME OF THE TYPES OF TESTS YOU CAN PREPARE AS TAKE-HOME TESTS INCLUDE THE FOLLOWING:

1. Hydrochloric acid challenge testing
2. Bowel transit time testing
3. Blood glucose monitoring across the day before and after meals
4. Zinc taste testing
5. Basal body temperature testing for the thyroid
6. Iodine testing
7. Metabolic pH assessment
8. Salivary pH challenge testing
9. Diet/Pulse testing for food allergies and sensitivities

AN EXAMPLE OF A TAKE-HOME TEST: BASAL BODY TEMPERATURE TESTING FOR THYROID FUNCTION

BACKGROUND

+++There is considerable evidence that blood tests often fail to detect hypothyroidism. It appears that many individuals have "tissue resistance" to thyroid hormone, analogous to insulin resistance. For this reason it is useful to have other means of detecting an under-active thyroid gland, and the basal body temperature test is a means to do this.

+++The basal body temperature test is designed to measure the
core body temperature over time. It assesses both axillary and oral temperature across the day to give a complete picture of all the controlling factors that contribute to basal metabolism.

+++A low axillary temperature first thing in the morning is suggestive of hypothyroidism. The axillary temperature is used because it closely correlates with thyroid function.

+++Oral temperatures, taken across the day, help assess the adrenal contribution to basal metabolism and can indicate blood sugar swings, particularly if the before and after lunch temperatures are significantly different.

+++Axillary and oral temperatures are taken for two days and compared to verify the absence of oral lesions that may cause an elevated oral temperature unrelated to basal metabolic status.

+++It has been suggested that a lowered basal body temperature may be due to a deficiency of essential trace minerals (zinc, copper, and selenium) rather than a deficiency of thyroid hormone. These minerals are essential for the peripheral conversion of T4 into T3.

WHEN WOULD YOU SUGGEST THIS TEST?

1. To assess the hormonal influences on metabolism
2. To help identify sub-clinical hypothyroidism
3. To identify adrenal and blood sugar influences on basal
metabolism

WHEN TO TAKE THE TEST

+++For pre-menopausal women the temperature should be taken starting the second day of menstruation. This is because a temperature rise occurs around the time of ovulation, which may lead to incorrect interpretation of the test. If they miss a day, that is OK, but they should be sure to finish the testing before ovulation.

+++For men, and for women who are menopausal or post-menopausal. It makes no difference when the temperatures are taken. However, they should not do the test if they have an infection or any other condition that would raise their temperature.

SUPPLIES NEEDED

1. A copy of a handout explaining the test.
2. A basal body thermometer.

DIRECTIONS

1. Your patients should use either a mercury thermometer (a basal body thermometer is more accurate), or a good quality digital thermometer. They will need to shake down the mercury thermometer down the night before to 96 degrees or less and put it by the bedside.

2. In the morning, as soon as they wake up, they put the thermometer deep in their armpit for ten minutes and record the temperature to 1/10 of a degree. They need to do this
before getting out of bed, having anything to eat or drink, or engaging in any activity. This will measure their lowest temperature of the day, which correlates with thyroid gland function.

3. All of the temperature readings are recorded on the handout you give the patient

4. Have them record their axillary temperature for 2 days and then average it out.

5. Next shake the thermometer down and immediately take an oral temperature for 3 minutes. They record this temperature as “a.m. by mouth” for 7 days.

6. Repeat the oral temperature at three hour intervals for 7 days.

7. Record the time when meals are consumed. They should make note of the foods eaten on back of the handout. This can help determine foods that may be causing blood sugar swings.

8. Note when activity has changed (i.e. I went for a walk).

9. They bring the form filled out and your office should work out the averages.

**OPTIMAL RESULTS**

The normal axillary temperature should ideally be 97.8 -- 98.2F.
The normal oral temperature should ideally be 98.6F.
Axillary and oral temperatures should be within 1 degree F of each other.
CLINICAL IMPLICATIONS

+++If the average first morning axillary temperature is below 97.6 suspect hypothyroidism and low basal metabolism. Evaluate this with other clinical findings for hypothyroidism (symptomology and blood tests)

+++If the average oral temperature is below 98.4 suspect hypothyroidism and low basal metabolic activity. Evaluate this with other clinical findings for hypothyroidism.

+++If you see oral temperature fluctuations across the day consider blood sugar dysregulation. When activity levels are constant, variations in oral temperature throughout the day may indicate blood sugar swings, especially if the before and after lunch temperatures are significantly different (i.e. low prior to lunch and higher after lunch, often ½ to 1½ degree variation)


This concludes your FREE Functional Diagnosis Special Report. I hope you can see the possibilities available to you to make a big difference in your diagnostic offerings to your patients. The techniques in this report are not that difficult to implement into your practice. They are simple techniques that can be learned and implemented quickly. I am constantly researching
and updating my diagnostic skills and in doing so I hope that I can help you too.

**You can learn the exact in-depth details of everything you see in this special report by following the links below.**

- **Functional Signs and Symptoms Analysis**

- **Full Blood Chemistry Analysis System**

- **How To Make Money with an In-Office Lab**

- **Physical Exam Reference and Charting System**

- **Take-Home Testing Book**

- **Dr. Weatherby's Functional Diagnosis Shop**