Adrenal Mastery: At-Home and In-Office Tests

Test Procedures Included:

Konisburg Adrenal Fatigue Test

Adrenal stress is a very common cause of health challenges. It's important to identify and correct the underlying cause of adrenal stress. Testing at regular intervals is advised.

This simple urine test, called the Konisburg test, is widely used by functional medicine practitioners as an indirect measure of adrenal function. It measures the amount of chloride displaced in your urine. Minerals such as sodium, potassium, and magnesium are bound to chloride and are displaced due to either high or low adrenal activity.

This test can determine fairly precisely whether you are in sympathetic dominant mode or if your adrenals are tired. It's a qualitative test, not a quantitative measure, meaning that it's either positive or negative, and the actual result is not used to determine the degree of fatigue or overcompensation.

The test also gives you information about how burdened your kidneys are and can infer deficiency of magnesium, potassium, and calcium.

Materials:

- ❑ A fresh urine sample
- ❑ A dropper
- ❑ A disposable plastic test tube
- ❑ *Konisburg indicator – potassium chromate
- ❑ *Titrating agent – silver nitrate
- ❑ *Ordering available through:
  Apex Energetics
  www.apexenergetics.com
  or call 1-800-736-4381

Procedure:

1. In a clean test tube, add one drop Konisburg indicator.
2. Add 10 drops urine.
3. Mix well by inverting the tube a few times.
4. While counting the drops, add the titrating agent one drop at a time, inverting the test tube after each drop.
5. Continue until an orange or red color rapidly occurs.
6. Record results.

Interpretation of Results:

- ❑ **17 to 25 drops:** normal adrenal activity
- ❑ **1 to 16 drops:** adrenal stress
- ❑ **26+ drops:** adrenal fatigue

Vitamin C Flush

How to do a Vitamin C (Ascorbate) Calibration Protocol ("Vitamin C Flush") to Determine Individual, Functional Need for Vitamin C

This material is provided from a mentor of mine, Dr. Russ Jaffe, MD: http://www.drrusselljaffe.com/

Which Vitamin C Is Best to Use:

It is preferable to use a 100% l-ascorbate, fully reduced, buffered mineral ascorbate form of Vitamin C that contains a proper balance of the major essential buffering minerals: 1) potassium, 2) magnesium, 3) calcium, and 4) zinc. No dl-ascorbate or d-ascorbate should be used as the d-ascorbate form is not absorbed by humans: people take up only the l-ascorbate. Per gram of ascorbate, we find best outcomes, patient compliance, and satisfaction from a balanced mineral content of potassium (66 mg.), calcium (27 mg.), magnesium (11 mg.), and zinc (400 mcg.).

This means that if you were taking a half-teaspoon of buffered ascorbate that has no masking or "inert" agents in it, you would have 1.5 grams of Vitamin C and potassium, 99 mg.; calcium, 40 mg.; magnesium, 16 mg.; and zinc, 600 mcg. If there is less than 1.5 grams of Vitamin C per half-teaspoon, there is likely to be a hidden or masking agent that may cause digestive or immune problems. Perque brand is highly recommended.

How to do an Ascorbate Calibration "Vitamin C Flush":

When possible, it is best to start on an empty stomach, first thing in the morning. Allow yourself that day to finish the "flush". Most people saturate their Vitamin C need within a few hours. Occasionally, the need is much greater, and it may take a number of hours to complete the initial calibration "flush".

Dissolve each half-teaspoon (1.5 grams) of fully reduced, buffered mineral l-ascorbate powder (Vitamin C powder, Perque brand is highly recommended) in 2 or more ounces of water. Plan to count and record each dosage. After dissolving the powder and allowing any effervescence to dissipate (typically dissolves within two minutes), drink the beverage. The amount of Vitamin C needed depends on how quickly your body uses it up.

Below are suggestions for how to best determine your needs based on how healthy you are:

- A **healthy person** begins with a level half-teaspoon dissolved in 1-2 ounces of water every 15 minutes.
- A **moderately healthy person** begins with 1 teaspoon every 15 minutes.
- A **person in ill health** begins with 2 teaspoons every 15 minutes.
- If after four doses there is no gurgling or rumbling in the gut, you should double the initial dosage and continue every 15 minutes.

Continue with these instructions at the proper time intervals until you reach a watery stool or an enema-like evacuation of liquid from the rectum. This is as if a quart or so of liquid is expressed from the rectum. **Caution:** Do not stop at loose stool. You want to energize the body to "flush out" toxins and reduce the risk that they may recirculate and induce problems. At this time stop consuming the buffered Vitamin C for the day. **However**, if your calibration dosage is more than 50 grams of Vitamin C, you should consume a dosage of Vitamin C of at least 10% of the total needed to induce the "flush" later in the afternoon or evening.

Many people find that preparing a "batch" of Vitamin C allows for easier, timelier consumption of the beverage rather than making up a new batch at each interval.

Example: 30 grams (10 teaspoons) may be dissolved in 10-20 ounces of liquid. If this method is chosen, we recommend using a capped, dark bottle to avoid air or light (photo-) oxidation of the Vitamin C. Dissolved Vitamin C is stable for a day if kept cool or cold and tightly sealed.

Changing Vitamin C Need:

As you become healthier, Vitamin C is used more efficiently and is better conserved in your body and less will be needed to achieve the desired effect. As your need decreases, you may notice loosening of your stool indicating that your body is consuming Vitamin C more efficiently and your need has decreased. That is the time to taper your intake.

Daily Consumption of Vitamin C After the Flush:

Between calibrations, consume 75% of the total Vitamin C you need to induce the flush. You may use a liquid, powder, or a capsule and take two to four or more doses per day. The usual need for a person in a state of good health is 2-10 grams/day.

Hints for Calculating Daily Therapeutic Vitamin C Requirement:

- ❑ Total the number of teaspoons consumed during the flush.
- ❑ Total the number of 1/2 level teaspoons = 1.5 grams or 1 level teaspoon = 3 grams.
- ❑ Multiply number of teaspoons times 3 (each teaspoon contains 3 grams of Vitamin C)
- ❑ Then calculate 75% of the total. This is your current daily recommended dose of Vitamin C.

Vitamin C Amount Calculation Chart:

Number of level ½ tsps. = 1.5 gms. per ½ teaspoon	Number of level tsps. = 3 gms. Per teaspoon	Total grams of Vitamin C consumed for calibration	Daily recommended dose in grams (75% of calibration total)
6	3	9	4.5
10	5	15	7.5
25	12.5	37.5	19
90	45	135	67.5

Outcome of Vitamin C Flush:

Many people report a subjective sense of improved well-being after the completion of a Vitamin C calibration. This may be of short duration, initially, but is a promising sign for long-term improvement. As toxins are eliminated from the body and as it is energized through the action of the Vitamin C, you should feel progressively better for longer periods of time.

Repeat of Vitamin C Calibration:

For most rapid progress, once per week is recommended. You select the frequency that meets your needs. As you repair, you may find that your need for Vitamin C increases until a consistent dose of Vitamin C is maintained.

Potential Reservations Regarding Vitamin C Calibration Process:

Be sure to consume adequate water with each Vitamin C dose. A concern about fluid or electrolyte loss from the stool is thus minimized. Some people report gas or fullness while doing the Vitamin C calibration “flush”, but that is almost always due to dissolving the Vitamin C in too little water or rushing the procedure. Room temperature liquid is best for absorption. Cramps may occur, though rarely, and it is usually because too little fluid is used to dissolve the Vitamin C.

Helpful Hints and Insights:

- Most people find that the flush is easy to do. Since the amount of time can vary quite a bit, it is best to do your first Vitamin C calibration on a day when you can stay home for most of the day. Once you have done a Vitamin C calibration/flush, you will have a better idea of how much time is needed.
- For most people, it takes somewhere between 3-8 teaspoons of Vitamin C to flush. It could differ for others: 15, 20, or more than 50 grams depending on your health status and how quickly your body uses up Vitamin C.
- Sometimes people remain bloated for the rest of the day of calibration. Occasionally, people have loose stools for a day or so after doing the Vitamin C flush.
- Some people have reported hot stools that seem to burn the anus after several evacuations. If so, you can use a natural salve, such as calendula ointment, to soothe the area. This tends to cease after the first few times you do the calibration.
- People with hemorrhoids, irritable bowel disease, or inflammatory bowel disease may find that the Vitamin C activates their tissues in the healing process. They may need to increase Vitamin C and bioflavonoids slowly over time before doing a Vitamin C calibration.
- Usually, people find that they feel better than they have in a very long time after the first Vitamin C flush. Some report a greater sense of well-being after the second or third. The overall consensus is that as time goes on doing these calibrations helps people feel increasingly better.

Supporting Supplementation:

When introducing higher dosages of Vitamin C, your cellular machinery works harder and more efficiently. The following supplements may be helpful.

When energy disturbances, cramps, and magnesium deficits are likely:

- Magnesium: 200 mg magnesium citrate or magnesium glycinate, twice a day

When digestive problems and inflammation are significant:

- Probiotics: 50 – 100 billion organisms in divided doses throughout the day or probiotic foods with each meal
- Anti-inflammatory nutrients and herbs: including queritin, digestive enzymes, turmeric and ginger
- Mucilaginous seeds and herbs: such as slippery elm, marshmallow, DGL licorice, plantain, chia seeds, or flax seeds

Scientifically Shown Homeostatic Benefits Vitamin C Promotes or Enhances:

- ❑ Scurvy resistance: improved blood vessel and cardiovascular integrity
- ❑ Enhances hormone healthy and reduces hormone unhealthy actions
- ❑ Enhances neurotransmitter functions healthy and reduces unhealthy actions
- ❑ Promotes immune system healthy and reduces unhealthy actions
- ❑ Enhances nitrous oxide (NO) functions
- ❑ Enhances and repairs detoxification functions
- ❑ Enhances ATP energy compound production
- ❑ Enhances healthy bone formation
- ❑ Enhances and rebuilds glutathione functions
- ❑ Promotes iron balance [uptake and release]
- ❑ Reduces bioaccumulation of toxins
- ❑ Improves transit time
- ❑ Protects DNA from oxidative damage
- ❑ Reduces toxic minerals in body
- ❑ Enhances natural anti-cancer surveillance
- ❑ Direct tumor cytolytic effects

Scientifically Disproven Effects that Vitamin C Promotes or Enhances:

- ❑ Immortality
- ❑ Fenton reactions in vivo
- ❑ B-12 remains active in vivo
- ❑ DNA replication error theory not confirmed in vivo

Vitamin C: Its Scientific Significance for Human Health:

Vitamin C (ascorbic acid or l-ascorbate) is nature's most potent, safer antioxidant cofactor. Vitamin C has gotten a fair amount of attention from the media in the last few years, including whether it is helpful, neutral, or harmful in limiting the number of colds, their symptoms, and their duration.

- ❑ Vitamin C aids in the maintenance of cellular membranes, cellular respiration, the peroxidase cleansing system, the restoration of vitamin E / selenomethionine complexes, and sulfhydryl enzymes such as glutathione synthetase, thereby helping to detoxify various drugs and chemicals.
- ❑ Vitamin C is also involved in hormone biosynthesis and maintaining the integrity of connective tissue, cartilage, capillaries, bones, and teeth. Vitamin C is, therefore, important in wound repair and tissue healing.

- Vitamin C has been shown to increase cellular resistance to many common viral infections (most probably due to its interferon-like activity) and enhance specific parameters of immune function.

All of these actions of Vitamin C are related to its antioxidant or reducing or electron donating abilities. The use of Vitamin C in health and disease is complex and sometimes misunderstood, although much less so when one considers the following facts and supportive background information.

While almost all animals and plants synthesize their own Vitamin C, exceptions are guinea pigs, monkeys, and humans. The first two of those eat mostly fresh Vitamin C-rich foods: fruits and vegetation. Non-human animals, when adjusted for size and weight, make the equivalent of 5 to 15 grams of Vitamin C a day, mostly in their livers and when stress free. Production can more than double when the animal is distressed.

Our genetic ancestors once had the ability to synthesize Vitamin C but appear to have lost it years ago. One enzyme is missing in a 6-enzyme process converting glucose to Vitamin C. Scientists estimate that without this mutation, when healthy we would be making 10-30 grams of Vitamin C a day throughout our lives and more when we are unwell or distressed.

Vitamin C Need:

Many of us eat only small amounts of Vitamin C-rich foods. Also, our food supply contains less and less Vitamin C because of premature food harvesting, artificial ripening, and food processing.

Studies of the effects of Vitamin C seem to be confusing.

- Generally, when small doses are used (1 gram or less), little to no significant effects were reported. When larger doses are given (20-200 grams/day), significant positive changes are typically reported.
- Almost all conditions, acute or chronic, can have shortened courses and patients respond favorable. Vitamin C (in the pure, buffered, l-ascorbate) has virtually no side effects. Vitamin C has been given up to 300 grams per day, taken intravenously, without reported side effects.

This approach to determining your need for Vitamin C is of the next generation and builds upon the experience gained with “bowel tolerance” determination of Vitamin C need. Your liver would be making Vitamin C steadily, with increases commensurate with distress, if we had not lost that key enzyme. Thus, for best health, it is important to take Vitamin C regularly and steadily.

Often gas, cramps, and diarrhea occur at rather low doses of Vitamin C (below 10 grams). There are many possibilities for this that are addressed above in the additional supplements recommended as helpful in selected cases.

If you wish to or must stop Vitamin C for any reason, it is quite important to taper gradually. If you stop too quickly, it doesn't give your body time to accommodate to the change, and your body will continue to metabolize and excrete large amounts. You must reduce your Vitamin C level by several grams/day over a sufficient period (depending on how much you were taking) to prevent this from occurring.

Using the C Flush is important. Many helpful things happen at the Vitamin C saturation level that will not happen otherwise. Doses for 50 grams to 200 grams or more a day are usual for immune dysfunction states like cancer, chronic viral and bacterial infections, and other serious inflammatory or autoimmune diseases. We recommend appropriate doses throughout life and see l-ascorbate used effectively to charge up the cellular electron pool, promoting cellular healing and metabolism, purging the body of foreign invaders, and providing a base on which to build health.

Over a period of Vitamin C use, the amount of Vitamin C necessary to achieve bowel tolerance changes and fluctuates. During stress or illness, many time more can be taken (and is appropriate to take) than at other times. As healing occurs and health becomes more balanced, the amounts of Vitamin C should also change accordingly. Vitamin C can be useful to you. Use it wisely and you will be well rewarded.

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For additional information, questions, and clinical comments on this Vitamin C Calibration protocol, please contact PERQUE LLC, Client Services Department, 44621 Guilford Drive, Suite150, Ashburn, VA 20147, Tel: 800.525.7372 • Fax: 703.450.2995
E-mail: clientservices2@PERQUE.com Web: www.PERQUE.com

Salivary pH Challenge

The Salivary pH Challenge test is a dynamic measurement of your body's alkaline mineral reserves. These reserves are one of the systems your body uses to correct acid and alkaline imbalances.

During this test you will challenge your body with acid in the form of lemon juice to determine whether your body has the reserves to appropriately respond to an acid challenge. In an ideal situation, the initial acidity of the lemon juice will cause your saliva to become more alkaline in order to buffer the acidity of the lemon juice over the course of a few minutes. Your body does this by mobilizing the necessary alkaline minerals.

This test also allows us to see how stress and sympathetic dominance impact mineral reserves in your body. Increasing levels of stress can cause the loss of your primary mineral reserves.

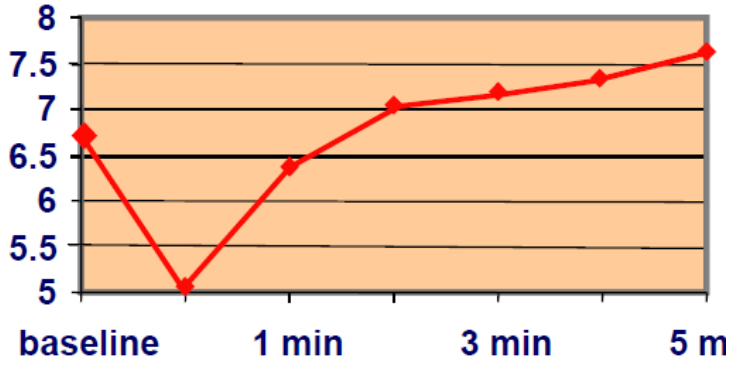
Materials:

- ❑ Fresh lemon juice, pH paper

Procedure:

1. Cut seven 2-inch strips of pH paper and lay them out on paper towel.
2. Prepare your lemon juice drink: 1 tablespoon each of fresh lemon juice and water.
3. To take a saliva pH reading, make a pool of saliva in your mouth and dip half of the pH strip into this pool of saliva, remove, and compare the color of the dipped pH strip to the test indicator chart that comes with the pH paper. Do not put the whole strip in your mouth or hold it in for too long.
4. Record this first reading as a baseline on the Saliva pH Challenge Tracking Chart.
5. Drink the lemon drink, check your saliva pH again, and start timing.
6. Test and record your saliva pH every minute for 5 minutes.
7. Record all your results on the Saliva pH Challenge Tracking Chart.

Normal Result for Salivary pH Challenge:



Salivary pH Challenge Tracking Chart

Name						
Date	**Baseline**	**After 1 Minute**	**After 2 Minutes**	**After 3 Minutes**	**After 4 Minutes**	**After 5 Minutes**

Zinc Taste Test and Zinc Challenge

Zinc is one of the most important trace minerals and is frequently found deficient. It is essential for tissue growth, skin integrity, immunity, adrenal function, blood sugar control, and essential fatty acid regulation.

Zinc deficiency can lead to a number of problems including infertility, lowered immunity, poor wound healing, thyroid imbalance, adrenal imbalance and inefficient digestion.

The zinc taste test is an excellent test for assessing zinc deficiency. The zinc challenge will help determine how zinc deficient you are and what type of supplementation you may need.

The zinc taste test is an easy method of assessing your zinc levels that can be performed at home to establish a baseline then repeated to assess the effectiveness of supplementation.

Zinc Taste Test

Materials:

- ❑ Liquid zinc solution
- ❑ Stopwatch or timer

Procedure:

1. Make sure your mouth is free of strong tastes such as mint. Have a stopwatch, timer, or watch with a second hand on it, because you will be timing how soon you taste the zinc taste test solution.
2. Measure out 1 tablespoon of liquid zinc, put it into your mouth, hold and swish around your mouth, but do not swallow.
3. Start timing as soon as the solution is in your mouth and note when you first taste the solution. Swallow after 30 seconds.
4. On the form below, note the time it took to first taste the solution and describe the strength of taste or presence of an after taste in the column marked Initial test.

Zinc Taste Test Chart

Name					
	Time to Taste Solution	**Describe Strength of Taste or After-Taste** *Circle the best description*			
Initial Test		Immediate taste, strongly metallic	Moderate taste, delayed metallic	No taste initially Sweet or bitter	Tasteless or tastes like water
		Level 1	Level 2	Level 3	Level 4
		No Need for Further Testing		**Do Zinc Challenge**	

Zinc Taste Test Interpretation

Level	Interpretation	Description
1	**Optimal** Zinc Levels	An immediate, unpleasant, strongly metallic taste occurs within a few seconds.
2	**Mild** Zinc Deficiency	A definite, but not strongly unpleasant taste, is noted within 4-6 seconds and tends to intensify over time. Metallic taste is delayed.
3	**Moderate** Zinc Deficiency	No taste initially, but develops in 7-13 seconds. Possibly sweet or bitter.
4	**Extreme** Zinc Deficiency	Tasteless – tastes like water.

Zinc Challenge

The Zinc Challenge is used to assess how zinc deficient you may be.

Procedure:

1. Follow the same directions for doing the Zinc Taste Test.
2. Repeat the test successively, resting 30 seconds between tests.
3. Note on the Zinc Challenge Tracking Chart the time it took to taste the solution and the strength of taste.
4. Repeat this process until you have a strong immediate taste, or you perform 6 successive tests with no taste noted. At this point discontinue the testing.

Zinc Challenge Tracking Chart

Name					
	Time to Taste Zinc	**Describe Strength of Taste or After-Taste** *Circle the best description*			
Challenge #1		Immediate taste, strongly metallic.	Moderate taste, delayed metallic.	No taste initially. Sweet or bitter.	Tasteless or tastes like water.
Challenge #2		Immediate taste, strongly metallic.	Moderate taste, delayed metallic.	No taste initially. Sweet or bitter.	Tasteless or tastes like water.
Challenge #3		Immediate taste, strongly metallic.	Moderate taste, delayed metallic.	No taste initially. Sweet or bitter.	Tasteless or tastes like water.
Challenge #4		Immediate taste, strongly metallic.	Moderate taste, delayed metallic.	No taste initially. Sweet or bitter.	Tasteless or tastes like water.
Challenge #5		Immediate taste, strongly metallic.	Moderate taste, delayed metallic.	No taste initially. Sweet or bitter.	Tasteless or tastes like water.
Challenge #6		Immediate taste, strongly metallic.	Moderate taste, delayed metallic.	No taste initially. Sweet or bitter.	Tasteless or tastes like water.

Zinc Challenge Interpretation

Level from Zinc Taste Test	Interpretation	Description
1	Optimal Zinc Levels	• No need for zinc supplementation. Repeat zinc taste test once a month or anytime you're in a particularly stressful situation, exposed to people who are ill, or experiencing signs of zinc deficiency.
2	Mild Zinc Deficiency	• Supplement with liquid zinc: 1 teaspoon twice a day on an empty stomach. • Retest in 1 month.

If your score was Level 3 or 4, use the table below to determine your next action steps.

# Challenges to Metallic Taste	Interpretation	Action Plan
1	Moderate Zinc Deficiency	• Supplement with liquid zinc: 1 teaspoon twice a day on an empty stomach. • Retest after 1 bottle.
2	Significant Zinc Deficiency	• Supplement with liquid zinc: 1 teaspoon twice a day on an empty stomach. • Retest after 2 bottles.
3	Moderately Severe Zinc Deficiency	• Supplement with liquid zinc: 1 teaspoon twice a day on an empty stomach. • Retest after 3 bottles.
4	Severe Zinc Deficiency	• Supplement with liquid zinc: 1 teaspoon twice a day on an empty stomach. • Retest after 4 bottles.
5	Very Severe Zinc Deficiency	• Supplement with liquid zinc: 1 teaspoon twice a day on an empty stomach. • Retest after 5 bottles.
6	Extremely Depleted of Zinc	• Supplement with liquid zinc: 1 teaspoon twice a day on an empty stomach. • Retest after 6 bottles.
Did not achieve metallic taste	(Probably other nutrient deficiencies confounding the test.)	• Supplement with liquid zinc: 1 teaspoon twice a day on an empty stomach. • Test homocysteine and look for high iron/low hemoglobin, low liver enzyme levels, and other signs of Vitamin B6 deficiency; supplement if indicated. • Test white blood cell zinc and magnesium and supplement as indicated.

** If zinc levels are still low after the recommended supplementation, switch to 45 mg twice a day of zinc picolinate or zinc citrate and take for 60 days. Redo the Zinc Taste Test.

OXIDATA™ Anti-Oxidant Test

Free radical damage to your body tissues have been linked to all the major health challenges – heart disease, diabetes, cancer, autoimmune disease, infections…the list goes on. Too many free radicals over a period of time lead to chronic diseases, cell damage, and faster aging.

Causes of free radical damage:

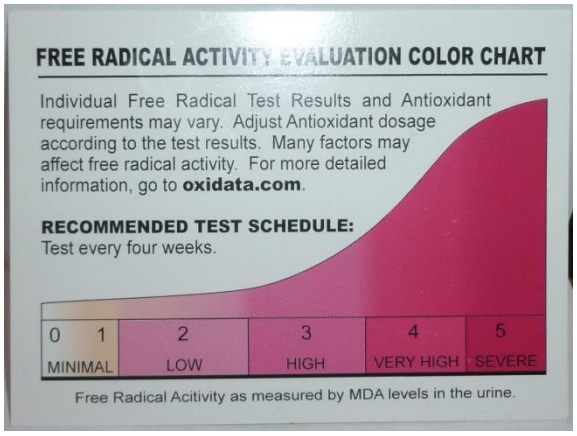
- ❑ Heavy metals and petrochemicals in the environment and in our foods
- ❑ Over-the-counter and prescription drugs
- ❑ Cooked oils and fats
- ❑ Radiation
- ❑ Viruses, yeast and bacteria in the system
- ❑ Low dietary anti-oxidants
- ❑ Mental/emotional stress

Free radicals are like wild fire. When you have inadequate anti-oxidant activity, free radicals attack normal, healthy tissue which is the trigger for disease and rapid aging. Anti-oxidant supplementation is a popular approach to improving health. But how do you know if your supplementation is working?

The Oxidata test enables you to determine the degree of stress on your body caused by free radical activity. The test measures a free radical called **malondialdehyde** (MDA) in your urine. It's a measure of the overall antioxidant capacity of the body. This urine test is 40 to 50 times more reliable than a MDA blood test, one of the standards used in clinical laboratory testing. It's also much easier and less expensive than a blood test. Test accuracy is within the range of 90%.

Materials:

- ❑ Oxidata test kit: includes a tiny ampoule containing the reagent, a urine collection cup, and a dropper
- ❑ You can order the test kit at http://www.drritamarie.com/go/Oxidata



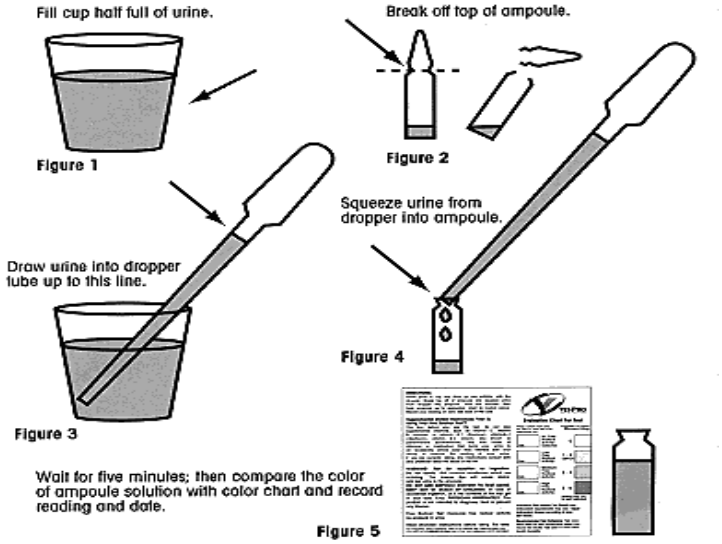
Procedure:

1. Collect a fresh urine sample.
2. Draw up the urine into the dropper and add the specified number of drops to the vial.
3. Let it sit for 5 minutes to develop.
4. Compare the color to the card and interpret the results.

There are some diet and supplement restrictions to pay attention to the day before you take the test.

Avoid taking vitamin C, vitamin B complex, or any individual B vitamins such as vitamin B-1 (thiamine), vitamin B-2 (riboflavin), or vitamin B-3 (niacin).

Use the test at least once a week if the initial test shows high oxidative stress, then reduce to once or twice a month after antioxidant supplementation has reduced it to a normal level.



Oxidata Test Results Tracking Chart

Name	

Date	**Oxidata Value**	**Follow-up Actions**