Metabolic Temperature Graph

Dr. Rind's Metabolic Temperature Graph™ is a method for measuring and interpreting daily temperatures to gain insight into metabolic energy issues associated with both adrenal and thyroid function. To get a brief understanding of Dr. Rind's approach towards identifying and correcting metabolic energy problems read his overview on Metabolic Therapy™.

Track Your Temperature: A Quick and Easy Way to Determine Metabolic Health

If you're not feeling quite up to par, take your temperature. Not to determine if you've got a fever – rather, temperatures reflect an individual's metabolic energy state. The average daytime temperature of a healthy individual is 98.6 thus making 98.6 the optimal (as opposed to normal*) temperature. Lower than optimal temperatures reflect a lower than optimal metabolic state which is usually controlled by the thyroid mechanism. Wide variability of temperature reflects an unstable or fatigued adrenal system. Thus, on the road to health, one wants to go from low and/or unstable temperatures to 98.6 and stable if possible.

The Metabolic Temperature Graph™ is an extremely valuable feedback tool that provides a roadmap with which one can see whether they are moving toward or away from a healthy metabolic state. It provides insight as to whether therapeutic efforts are working or not working, as the case may be. This feedback helps guide the treatment program on a daily basis. It is very important to follow the directions provided to create your own Metabolic Temperature Graph™ as soon as you know you are having a problem with your thyroid and/or adrenals or you suffer from any of the symptoms associated with low metabolic energy. This will provide you a baseline to work from. Once corrective actions are underway, the temperature pattern will show you how your health is progressing.

*Optimal as opposed to Normal. The frequently used term of 'normal' refers to a mathematical or statistical situation. Thus, a 'normal' state of health probably means you have some medical problems. It may be normal to die at 76 yrs of age, but at 75 years old, you may decide that what you really want is 'optimal' health as opposed to 'normal'. Normal is not the same as optimal, whether it relates to longevity of life, a body temperature or a lab test result.

Recognizing Adrenal and Thyroid Correction Patterns

Although I have documented over a dozen typical temperature correction patterns for an equal number of metabolic dysfunction profiles, adrenal and thyroid temperature correction patterns are the most prevalent.

Is My Adrenal Therapy Working?

Below is a typical temperature pattern showing what we might see in a person receiving proper adrenal support, having an average to good response.
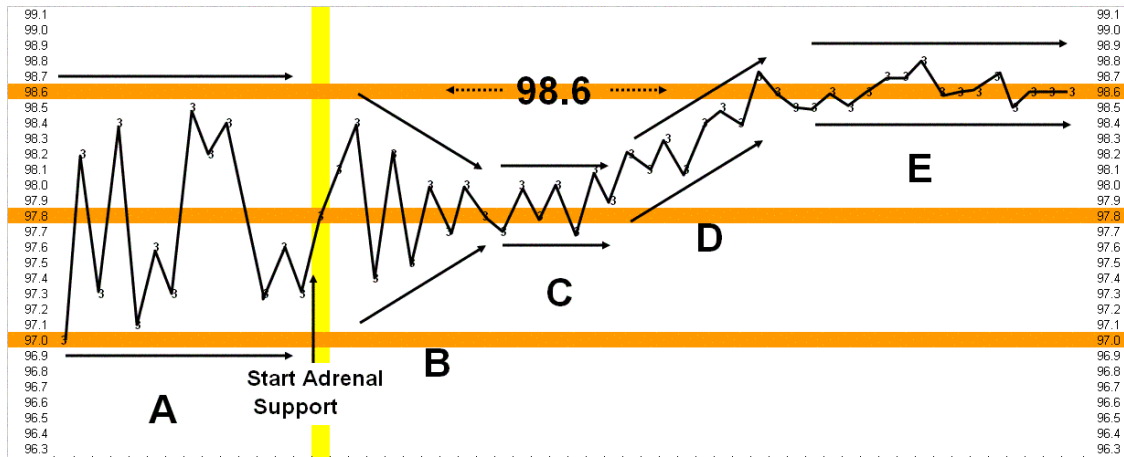
Diagram Key and Explanation:

A. Unstable temps: adrenal fatigue. Core temperatures have wide variations. They tend to rise in warm weather and fall in cold weather.

B. Decreasing variability: with adrenal support, as the adrenal gland function improves, variability decreases (temps become more stable)

C. Low but stable: after the temperatures have stabilized they still remain low but relatively stable.

D. Stable and rising: after a period of being stable, the next phase of improvement is a gradual rise in average core temperature.

E. Stable 98.6º F: This is typical of a healthy metabolic state.

If the adrenal support is working well, phases A through D can each last from one week to several months depending on the individual. In any given individual each of the phases seems to last approximately the same length of time (i.e. short period vs. long period). Some phases can blend together. For example, A and D can combine into an upwardly stabilizing pattern without C being present. I have actually seen some people go directly from A to E. To go from A to E can take as little as 1-2 weeks or as long as a few months. Hopefully, phase E will be permanent. If the adrenal fatigue is more severe (usually of longer duration), each of phases A through D tends to last longer and phase E tends to be less secure. If no progress is seen in 2-3 months, there is usually another problem present, such as toxicity etc.

Is My Thyroid Therapy Working?

Below is a typical temperature pattern showing what we might see in a person receiving proper thyroid support, having an average to good response. When there are only problems with the thyroid, the pattern is amazingly stable and we tend to see straight line patterns.
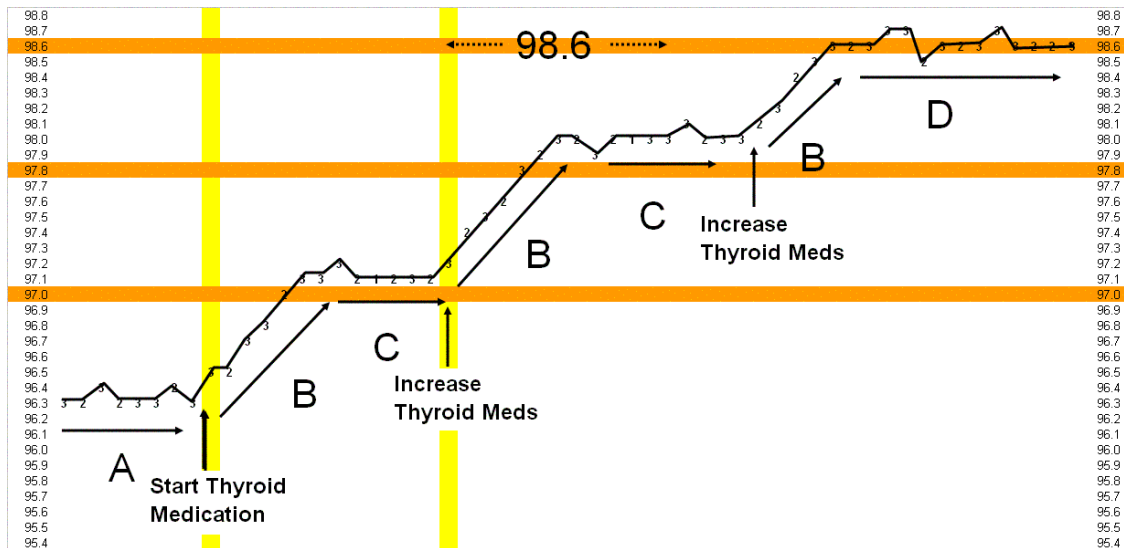
Diagram Key and Explanation:

A. Stable at Low: Baseline temperatures. Low temperature reflects lower than optimal thyroid activity

B. Stable and Rising: After starting or increasing the dose of thyroid hormone replacement medication, the temperature steadily rises.

C. Stable but Plateaued: The temperatures plateau at the metabolic level to which the current dosage of thyroid replacement medication can take it.

D. Stable 98.6º F: Eventually when the proper dose of thyroid replacement medication is reached, the temperature is stable at 98.6. Note that if the adrenals can not handle this level of energy, we tend to see an expansion pattern followed by a drop in temperature (see typical temperature patterns)

How to Take and Plot Temperatures
## How to measure temperatures

Temperatures are measured orally. Make sure the thermometer is placed deep under the tongue. Take three temperatures approximately three hours apart, starting approximately three hours after waking up. For example, if one wakes up at 6 AM, measure temperatures around 9AM, 12 Noon, and 3 PM. Try to avoid taking temperatures after activity or eating and drinking for at least 20 minutes. Even climbing a flight of stairs can raise one's temperature for short period of time. Taking one's temperature several times in a row will yield temperatures that rise each time. This is usually due to the muscular activity of the tongue and mouth. So, take only one reading. I have found digital oral thermometers most appropriate for monitoring metabolism. There are many good models available. I have found the Lumiscope Digital Thermometer to be one of the most accurate for the price and use these with my patients. I do not recommend mercury thermometers because: they expose you and the environment to toxic mercury when they break; they are too slow; and, the accuracy depends on leaving them in your mouth the same length of time each time you measure. I do not recommend axillary temperatures because the axillae are relatively cooler and more variable in people with stressed adrenals. Ear thermometers are the least accurate of all.

How to plot the temperatures

1. **Edited note inserted from Molly – plot each temperature measurement taken for the day in order to use as a guide for how adrenal and overall endocrine health is flowing across the day/night.** For Dr. Rind's purposes he has you Plot only the daily average on a graph. Write clearly, use black ink if possible (it copies and faxes better).

2. Instead of using a dot or 'x' in graph cell, use a number that reflects the number of temperatures you took that day. Thus, if you took three temperatures, write a 3 in the cell that reflects the average of those three

temperatures. Or if you only took one temperature, write a 1 in the cell that reflects that one temperature. They should look like this, respectively:

or
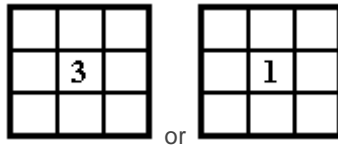
3. Indicate on the chart, where appropriate, any meaningful events. For example, starting a new medication or supplement, changing a dose, illness, stress, "had a great day", "felt tired...depressed today", menses, "worked all night", "slept more than usual" etc. These are very important when interpreting the graph. In cases where there is a change in temperature pattern, it is helpful to consider any possible events or changes in hindsight that may provide value in the interpretation.

4. Connect the numbers with a line. If you miss taking temperatures for a given day, do not run the line through that day. Simply stop and restart the line. Color highlighting makes the graph easier to analyze (see color sample).

Use these Unmarked and Sample graphs to get started. Remember that the Metabolic Temperature Graph™ is really a navigational map in disguise. The more accurately you fill it in, the more detailed and helpful the map. It will help you navigate toward 98.6⁰ F and better health. Note that it is better to do a temperature graph that is imperfect with fewer than three temperatures daily, too much or too little time between temperatures, and too close to physical activity or rest than to not do one at all.

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Interpreting Results

Interpreting the collected data is both a science and art. These are a few of the basic principles.

o Thermal activity reflects metabolic activity. A low temperature means low metabolism and vice versa. For example, the temperature typically found in someone who is old, frail, pale and weak is low and typically ranges from 95 to 97 degrees if no infection is present. A healthy person will have an average temperature of 98.6 degrees, but may have a 100 degree or higher temperature in a hyperthyroid state or as high as a 104 to 105 degree temperature if there is a fever present these are high metabolic states.

o Wide variability in daily temperatures indicates a weak adrenal function since the adrenal glands help the body maintain stability. Good adrenal function produces a stable temperature. As adrenal function improves, the temperature variability decreases and vice versa. As adrenals get stressed (either from emotional stress, excess metabolic stimulation such as excessive thyroid stimulation, or for other reasons), the variability increases.

o In a hypothyroid state, the day-to-day averages are low and very stable. In a hypoadrenal state including adrenal exhaustion or adrenal stress, the temperatures are low and unstable -- one day they may average 96 degrees and one to two degrees higher the next day.

o If the temperature graph is the road map, the explanatory notes are the road signs. Without them, the pattern changes become very difficult to interpret. These notes provide context for the temperature data. They also reveal what components of the treatment program are working and what components or other factors are not.

o Descriptions for typical patterns that one can observe include: