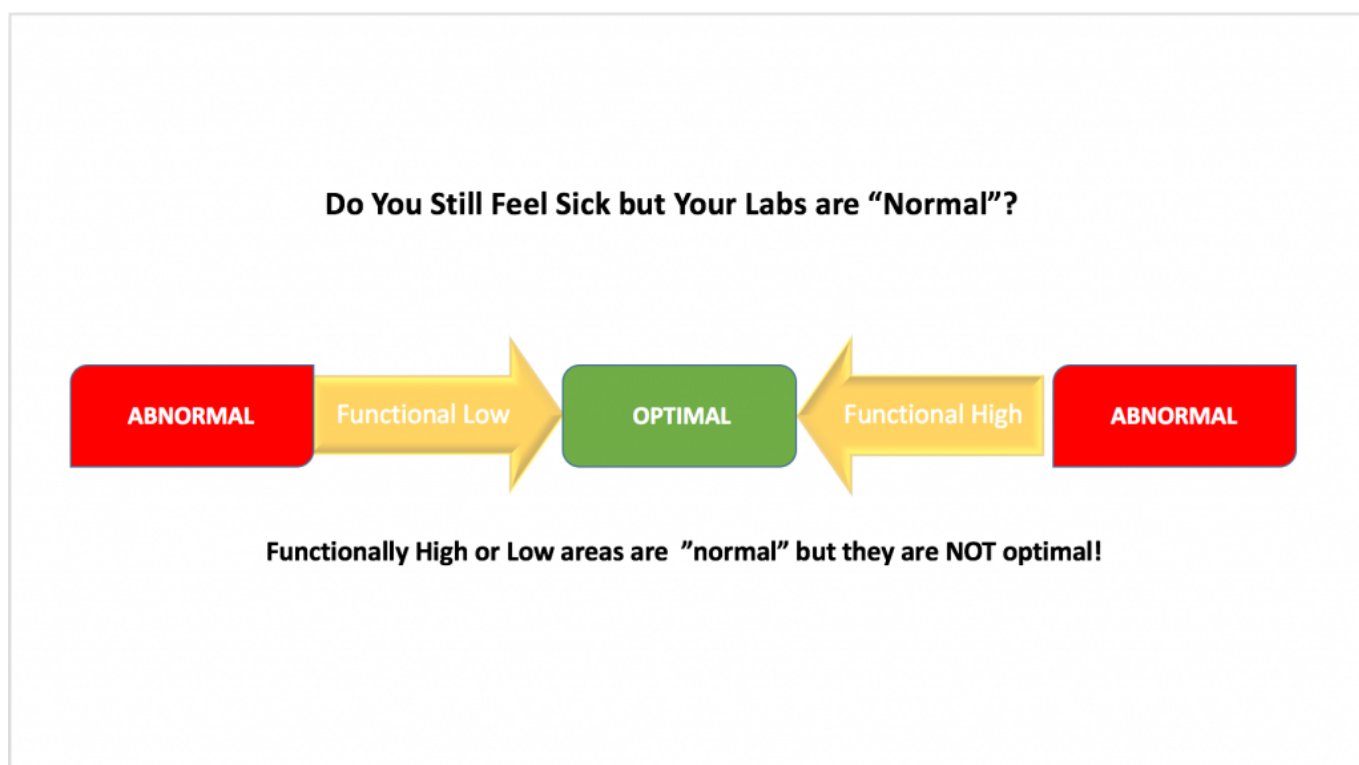


Functional vs Normal Labs

There are two lab ranges that coexist: pathological lab range and functional lab range. The pathological lab ranges are used to diagnose and see the progress of the disease. The functional lab range is used to see the first markers of the disease development. When I see a new patient and I hear “My previous healthcare provider checked my thyroid, kidney, liver ... (fill in the blank) function and it was normal” I do not know if the previous healthcare provider looked at functional (read “optimal”) or pathologic lab ranges. Therefore, I need to see the previous results or to run all new panel for thyroid or anything else that patient or me may be concerned with.



So, what do the pathological levels of lab values mean? It means that the lab results values are based on a bell curve analysis of all the patients who have been to the lab over a certain period of time. [“A bell curve is the most common type of distribution for a variable, and due to this fact, it is known as a normal distribution. The term “bell curve” comes from the fact that the graph used to depict a normal](#)

distribution consists of a bell-shaped line.”

The reference range depends on the health of the population that lives around that lab, thus, the same lab in several different cities may have different pathological ranges. Also, who goes to get lab tests done? In my practice, I see a lot of people who suffer from fatigue, hair loss, loss of libido, insomnia, anxiety, depression, diabetes, and general hormonal dysfunction. These are the patients I order the comprehensive lab analysis for and these are the patients who shape the bell curve at whatever lab they go to get their blood drawn. Let's face it: we are humans and most of us go to get a comprehensive physical or just a check-up when we do not feel well or we have concerns about our health. Thus, I hardly ever see healthy patients for the disease prevention and if I do, I hardly ever order an extensive workup for a patient with no concerns.

When I run a complete thyroid panel for my clients, two out of three people have a high reverse T3. For example, the range for the reverse T3 at Sonora Quest is 8-25, I often see levels of 26, 27, 28 when I check Reverse T3. I also see high functional levels of Reverse T3, such as 15-25. What does “functional” level mean? When I refer to “functional” levels of any labs, I mean “optimal” levels. So, in the example of Reverse T3 – “functional”, i.e. optimal levels would be <15, lab “normal” level of Reverse T3 would be 8-25.

Another common example is the level of hemoglobin A1C. This test measures the average blood sugar over the past 90 days.

It does not have to be done fasting, but can be obtained fasting as well. When I see a patient with the hem A1C at 5.5% (normal 5.7 or less, pre-diabetes 5.8-6.4, diabetes is 6.5 or higher), I am alarming the patient that he/she is just 0.2% away from the official pre-diabetes diagnosis. The ideal range would be < 5.0%. Should I wait for 6 – 12 months to alarm my patient that he already HAS pre-diabetes or should we together focus on lifestyle changes and diet to avoid the official pre-

diabetes diagnosis?

So, what is health? In my humble opinion, it is not just the absence of a disease (i.e. not just “normal” labs on the lab analysis). Health is the ability to function every day to the fullest, to have energy, healthy digestion and elimination EVERY day, to have a healthy emotional and mental response to stress triggers that you encounter EVERY day, no matter if you are a stay-at-home mom or a high-profile business person.

At Sprouts Health I use a Functional Approach to diagnosing and treating chronic conditions. I utilize the concepts of functional and integrative medicine to help my patients feel better, sleep better and have more energy. I focus on diagnosing a potential disease before it gets into a full swing and become a train that is hard to stop.