

### Instructions

It is always best to use fasting labs to evaluate optimal status. In many cases, the optimal range corresponds, or is based on, the reference range. These are suggested number and are NOT set in stone. Optimal should always take into consideration the health associations. In other words, don't nit-pick on a lab that is just a little out of optimal if there are no other related markers out of place, nor implication with any of the 6 core centers of health.

**Important:** Lab values out of optimal range, yet still in lab range are not technically (frankly) high or low and should not be considered independent markers with meaning alone; rather, in context with related markers. It is suggested you mark these ranges with lower cases h (high) and l (low) in the right-hand open column, and out of lab ranges with capital H and L in the left-hand open column. You cannot have both Lab high and functionally high – be sure to only mark one.

**Bottom line** – These optimal levels on our worksheet are based on these reference ranges, and if your reference ranges are different, then you'll need to adjust the optimal range - with a few exceptions.

Exceptions:

- 1) Optimal Glucose is always 79 and 89.
- 2) Cholesterol should not really go below 160, though 155-160 may depend on the circumstances
- 3) LDL could potentially be higher optimally, as long as the particle size/distribution is favorable. Other cardio test variable and risks should be favorable as well.
- 4) Cholesterol HDL ratio should always be between 3 and 4.
- 5) Blood calcium is not a great indicator of stores and therefore need for supplementation. Calcium levels moves with protein/albumin so if protein is low and one is too acidic, you'd expect calcium to be low but you should not supplement with extra calcium until you correct the protein and the acidity and retest calcium. If calcium is low in the presence of acid/alkaline balance (by all measures) and there's a good fasting pro/alb, then consider calcium supplementation after diet is considered. \*If protein and albumin are optimal, calcium should be no less than 9.4
- 6) Fasting Protein should not go below 6.7. Albumin should not go in the 3s.
- 7) HgbA1C should always be in the low 5s, some even prefer in the high 4s.
- 8) Fasting Insulin should always be less than 10. Some feel it should be less than 5 in glucose challenged patients.

With everything else, if any of your reference ranges are different than mine, and we know the optimal is based on the reference, then the optimal range must be adjusted to reflect your different reference range.

Example:

My reference range for iron is 30-170 and my optimal is 50-130. Note that relationship....on the low end, optimal is 20 pts higher and on the high end, optimal is 40 points lower. If your reference range is 40-160 (different than mine), then your optimal range must be different than mine as well.

You chose the new optimal range based on the same relationship that you see, both between my ref and optimal and between mine and your references. In this case, you ref range is 10 higher at the bottom, and 10 lower at the top end - in other words, it's a tighter range. So, you already know your optimal range is going to be tighter than mine as well. It wouldn't be wrong to choose the 10/10 relationship and then choose to make your new optimal similar - 10 in from both



# Bloodwork “Optimal Values”

ends of optimal too....so, that would be 60 to 120. Technically anything between 55 and 60 on the low end and 120-125 on the high end would be right.

What you must remember...there is NO absolute way to do this - there are NO mathematical equations or ratios you can do to make this exact! Labs aren't perfect in the first place. Different folks will have slightly differing opinions on what's optimal. You're just eyeballing the relationship I have between ref and optimal and you are trying to pick something similar.

In the above example, if your reference was 30-200, you might choose optimal to be 50-160 - which is the same low end (our references had the same low end) but a higher high end (your reference was 30 pts higher than mine - so your reference can be 30 pts higher as well).

It's not always so mathematically easy but that's okay - just eyeball it and get close. Again, there's no perfect way and this does not have to be exact! Same reason why you don't pick on lab markers that are "close" to the optimal range (but out) unless you see them fitting into a pattern of imbalance.

Note: Especially related to the 6 subclinical defects (but in the absence of health conditions the grossly affect protein labs) ...Protein and albumin should be in the same relationship relatively. If albumin is optimally high and protein is normal or low, consider the possibility that protein could also be “falsely” elevated. Likewise, if someone has a normal albumin but a low total protein, consider treating the albumin as if it were high.

Note: In someone highly acidic, iron is permitted at lower levels. Correct the acidity, then reevaluate.

**Important:** For clarity – there is no such thing as optimally high or low, **only** functionally high or low and that is when results are in range but outside of optimal range!

## **Additional Notes:**

- 1) This form is developed for adult lab references. Lab results for children can sometimes be markedly different. This form may not be suitable for pediatric lab results. However, you can apply similar principles when interpreting optimal lab status for children
- 2) Lab results from other countries may vary widely and may use different forms of measurement. Be sure to compare apples to apples – convert metrics before comparing if necessary
- 3) Only **one date of labs per optimal values form** – do not mix lab dates. Exception may be when only one or two values are from another date but the date is added to the marker
- 4) Remember, fasting labs are preferred. Not all non-fasting labs can be interpreted the same. For example, a high glucose after breakfast may not represent an abnormal finding. Do not assess normalcy for indicators that can be elevated through caloric consumption. **ONLY use fasting labs for 6 core centers evaluation**
- 5) Nutrients generally should be in the top half of their range, but remember, in many cases it's about balance of nutrients (especially minerals), and caution for free mineral excess (as in calcium, sodium, and iron).

**For any clarification, please contact:**

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