New Leaf Health

Mineral Balancing · Metabolic Restoration

Blood Panel Companion Report

Sarah Sample

Hormone, Blood Sugar, Inflammation and Blood Count Panel

Drawn April 20, 2026 · Day 3 of your cycle

A companion to your Results Review — this covers the new bloodwork only

A Note Before We Begin

Sarah, this panel was run to answer specific questions — what your blood sugar is actually doing, where your PCOS sits, and why your weight has been so resistant. It answered all three.

Some of what came back needs attention, and I will be straightforward with you about it. But the part you have been most frustrated by now has a measurable explanation, and it is not the one you have been blaming yourself for.

One note on timing. This was drawn on day 3 of your cycle, which is the right day for the hormone markers, and you were one week into your blend. That week is too short to have changed these numbers. So this is your starting line, not a progress report — which is exactly what I wanted it to be.

Why the Scale Has Not Moved

I want to start here, because this is the question you asked me.

Leptin

Your result: 15.5 ng/mL

Where I would like it: 5–10 ng/mL

Leptin is a hormone your fat tissue makes. Its job is to tell your brain how much stored energy you are carrying, so your brain can set your appetite and your metabolic rate accordingly. When it is working, leptin says "we have plenty" and hunger settles down.

When leptin runs high for a long stretch, the brain stops registering the message. The signal is being sent — loudly — and not received. Your brain then operates as though stores are low, which means appetite stays switched on and your body holds onto weight rather than releasing it.

This is called leptin resistance, and at 15.5 you have it.

Here is what that means practically. When you cut your food sharply for a week and the scale did not move, that was not a failure of effort. It was a body that is not currently hearing its own signals, being asked to respond quickly. It cannot yet.

This is a common finding, and one that rarely gets measured. Now that we have it on paper we can work with it.

Leptin sensitivity is restored the same way we are already working — steady blood sugar, minerals, sleep, and lowering inflammation. It responds. It simply responds on the order of months rather than weeks, and it tends to shift before the scale does.

Your Blood Sugar

Marker	Your Result	Where I Want It
Hemoglobin A1c	**5.9 %**	4.8 – 5.1 %
Fasting Insulin	**8.3 uIU/mL**	Under 6 uIU/mL
Fasting Glucose (March draw)	**77 mg/dL**	85 – 95 mg/dL

Your A1c is the number I most want to move. It reflects roughly a three-month average of your blood sugar, so it is not affected by what you ate that morning or that week. At 5.9 it is running higher than I want to see, and it sits in the range that is generally described as pre-diabetic. With diabetes on both sides of your family, this is worth taking seriously now, while it is very much reversible.

Read alongside your fasting glucose of 77 from March, these two numbers together confirm what we suspected. An A1c of 5.9 says you are spending real time running high. A fasting glucose of 77 says you are also dropping low. That is the swing in both directions — the rise, then the crash that leaves you shaky and reaching for something quick.

Your insulin at 8.3 is above where I want it, though not dramatically so. That is a relief, because it means we are catching this early rather than late.

One thing that may be inflating the A1c slightly: low iron can raise this number somewhat on its own. As your iron stores rebuild, some of this may come down without any other change.

Your Hormones — What Your PCOS Actually Looks Like

This is the most useful part of the panel, and it changes how I want to approach your cycle.

Marker	Your Result	Reference / Notes
Testosterone, Total	**29 ng/dL**	2–45 — comfortably normal
Testosterone, Free	**4.4 pg/mL**	0.2–5.0 — near the top
Testosterone, Bioavailable	**8.4 ng/dL**	0.5–8.5 — at the ceiling
Sex Hormone Binding Globulin	**24 nmol/L**	17–124 — low end
DHEA Sulfate	**237 mcg/dL**	19–237 — top of range
Androstenedione	**121 ng/dL**	51–213 — mid range
FSH	**6.3 mIU/mL**	2.5–10.2 — normal
LH	**4.4 mIU/mL**	1.9–12.5 — normal
Estradiol	**38 pg/mL**	30–144 — appropriate for day 3
Progesterone	**0.6 ng/mL**	Under 1.0 — appropriate for day 3

What these are telling us

Your total testosterone is normal. If we had only measured that, we would have concluded there was no androgen problem at all — and we would have been wrong.

Testosterone travels through your blood in two states: bound to a carrier protein called SHBG, where it is held in reserve and inactive, or free, where it is available to act on your skin, your hair follicles and your ovaries. Only the free portion does anything.

Your SHBG is low at 24. With less carrier protein available, more of your testosterone is circulating free — and your free and bioavailable readings are both sitting at the very top of their ranges. So you have a normal amount of testosterone and an unusually high proportion of it active. That is what is driving the cycle irregularity, the acne around your period, and the hair changes.

The part that ties it together

What lowers SHBG? Insulin. The higher your insulin runs, the less carrier protein your liver makes, and the more free testosterone ends up circulating.

Your blood sugar and your PCOS are not two separate problems sitting side by side. They are one problem expressing itself in two places. Which means the work we are already doing on blood sugar is also the work on your cycle.

Two pieces of genuinely good news

Your LH and FSH came back normal and in the usual proportion to one another. There is a form of PCOS driven from the pituitary, where these two run badly out of balance, and it is considerably harder to shift. You do not have that form. Yours is the blood-sugar-driven kind, which is the more responsive of the two.

And your estradiol and progesterone are both exactly where they should be for day 3 of a cycle. They do not tell us much on their own at this point in the month — that is expected — but they give us a clean baseline to measure against later.

Your DHEA Sulfate is sitting at the very top of its range. That one comes from your adrenal glands rather than your ovaries, and it is consistent with the stress load your mineral test already showed. It is a second, smaller contributor to the same picture.

Your Blood Count

Marker	Your Result	Reference / Notes
Hemoglobin	**12.1 g/dL**	I aim for around 13 — was 13.1 in March
Hematocrit	**37.6 %**	35.9–46.0
MCV — red cell size	**86.2 fL**	81.4–101.7 — normal
MCH	**27.8 pg**	27.0–33.0 — at the low end
MCHC	**32.2 g/dL**	31.6–35.4 — at the low end
Platelet Count	**413 Thousand/uL**	140–400 — slightly elevated
White Blood Cells	**6.0 Thousand/uL**	3.8–10.8 — normal, with a normal differential

Your white cells and your full differential are normal, which is reassuring — there is no sign of infection or anything unusual in that part of the count.

The red cell side is where your iron is now showing itself. Your ferritin, which measures stored iron, was 12 in March when I would like it between 20 and 50. What we are seeing here is that shortage starting to reach the red cells themselves: your hemoglobin has come down, and the two markers that describe how much hemoglobin is packed into each cell are both sitting at the bottom of their ranges. Your platelets have risen slightly, which commonly accompanies low iron.

One honest caveat on the hemoglobin. In March you were running dehydrated, and dehydration concentrates the blood, which pushes hemoglobin up. You are drinking considerably more now. So part of the change from 13.1 to 12.1 reflects better hydration rather than a true drop. The rest of the picture, though, points the same direction, and I would rather move on this than wait.

This matters beyond energy. Iron is required for your body to convert thyroid hormone into its active form, which is a piece we already knew needed work.

Inflammation

hs-CRP

April: 8.3 mg/L · March: 6.2 mg/L

Where I would like it: under 1.0 mg/L

This is a general marker of inflammation somewhere in the body. It does not identify a location or a cause — it tells us the process is active.

Two readings seven weeks apart, both elevated and the second higher than the first, mean this is not a passing thing. I am not going to dress that up.

Several of the things we already know about are capable of driving it: blood sugar running high and low, the signalling from your fat tissue that your leptin result reflects, low iron, the gum bleeding you reported, and the joint pain you have been carrying. All of those are things we are working on, and all of them can bring this number down.

This is one of the markers included in the panel I want to run again at three months. If it has not started to move by then, we will look further.

The Three Things That Move These Numbers Most

Everything on your supplement list matters. But three things you do yourself will move these particular numbers further and faster than anything I can send you, and I want to be clear about all three.

1. Protein at every meal — starting with breakfast

Protein is the single most useful lever you have on your A1c, your insulin and your SHBG.

Here is why. Carbohydrate eaten on its own raises blood sugar quickly, and your body answers with insulin. A meal built around protein raises it gently, and asks far less of your insulin. Every meal without protein is another insulin spike; every meal with it is one avoided. Over three months, that difference is what your A1c is measuring.

And insulin is also what lowers your SHBG — the carrier protein that keeps testosterone in reserve. So protein at every meal is not only blood sugar work. It is working directly on your cycle, your skin and the hair changes, through the same pathway.

What a full serving actually looks like

This is where most people fall short without realising it. A serving of protein is larger than it feels, and several foods that seem protein-rich carry less than you would expect. Aim for around 30 grams at each meal.

Food	One Full Serving	Protein
Beef, chicken, pork or turkey	A piece the size of your palm — about 4 oz cooked	**about 30 g**
Eggs	3 eggs with an ounce of cheese	**about 25 g**
Cottage cheese	1 cup	**about 25 g**
Canned salmon or sardines	One tin, or half a cup	**about 20 g**
Bone broth protein powder	1 scoop	**about 20 g**
Your homemade yogurt	1 cup	**about 8–10 g**
Pumpkin seeds	A small handful	**about 9 g**
Cheese	One ounce — about the size of your thumb	**about 7 g**
Peanut butter	2 tablespoons	**about 7 g**
Beans or lentils	Half a cup, cooked	**about 7 g**

Two eggs is twelve grams. That is a start, not a serving — which is why three eggs with cheese was the change I asked for rather than simply "eat eggs."

A cup of your yogurt comes to eight or ten grams, considerably less than most people assume. It is good food and I am not asking you to give it up. It simply needs company — cottage cheese alongside it, a spoonful of peanut butter stirred through, seeds on top, or a scoop of bone broth protein, which you will not taste.

If you would rather not count anything, use your hand. A portion of meat the size of your palm, at every meal, eaten before the rest of what is on your plate. That gets you close enough.

Breakfast is the one that matters most

What you eat first sets the pattern for the whole day. A breakfast of bread, sugar and coffee puts the first spike and crash in place before eight in the morning, and you spend the rest of the day chasing it — hungry sooner, reaching for something quick, and asking your adrenals to cover the gaps.

A protein-centered breakfast, eaten within about an hour of waking, flattens that whole pattern. Not a smaller breakfast — a sturdier one, with the protein first. Eggs are the obvious answer, and if you are not hungry for eggs there are other ways to do it. Cottage cheese, your own yogurt with protein added, leftover meat from supper. The form is flexible; the protein is not.

The same holds at the other end of the day. A real supper with protein in it does more for you than a light one. Eating too little is its own kind of stress on the body, and it works against the very thing you are hoping for.

2. Managing your stress

I would not raise this if it were only a matter of comfort. It shows up in your results directly.

Your DHEA Sulfate came back at the very top of its range, and that one comes from your adrenal glands. Your mineral test showed those glands already working at a fast pace. Both of those are measures of load, not of attitude.

Stress hormones raise blood sugar on their own, without any food involved. That means it is entirely possible to eat well and still see an A1c like yours, if the load is high enough. They also make leptin harder for your brain to hear, and they encourage your body to store weight around the middle rather than release it. So the stress piece and the weight piece are not separate conversations.

What helps is less dramatic than people expect. Sleep, protected as well as your household allows. Eating regularly, because skipping meals and eating too little both register as stress. Getting outside most days. Gentle movement rather than punishing exercise — hard workouts on top of a low-food week add to the load rather than relieving it.

You told me about the ongoing situation and that the end is not in sight. I am not going to pretend that is something you can simply decide to stop carrying. But what you can do is make sure your body has what it needs to carry it — fed, watered, rested, and supported with the minerals we are rebuilding. That is not a small thing, and it is within reach.

3. Movement — particularly after meals

There is one thing your muscles can do that nothing on your supplement list can replicate. Working muscle pulls sugar out of your blood directly, without insulin being involved at all. It is the only lever you have that lowers blood sugar without asking your insulin to do the work.

Which means movement acts on your A1c, your insulin and your SHBG through the same chain as your protein does — and the two together do considerably more than either alone.

Start with a walk after supper

Ten or fifteen minutes of easy walking after a meal takes a meaningful bite out of the blood sugar rise that meal would otherwise produce. Not a brisk march — a walk. Around the yard, down the lane, with a child or two in tow if that is what gets you out the door.

The timing is what makes it work. The same walk two hours later does far less than the same walk twenty minutes after you eat.

Once that feels ordinary, adding some gentle strength or core work gives you more of the tissue that stores sugar in the first place, which improves the picture further. I am glad to send you a simple routine to start from — you do not need equipment or a great deal of time.

One caution, and it matters given what we just covered about stress. Hard, punishing exercise on top of a week of eating too little adds to your load rather than relieving it, and your body reads it as one more demand. Gentle and consistent will do more for you here than intense and occasional. A short walk most days beats an exhausting hour once a week, by a wide margin.

You told me at the beginning that what you wanted was to be accountable and to stick with something. A walk after supper is small enough to actually keep, which is precisely why I am starting you there rather than somewhere more ambitious.

What This Changes

Most of your protocol stays exactly as it is. These results add two things and put more weight behind a third.

Added	Why
Myo-inositol	One serving at night. This is the best-studied nutrient there is for the exact form of PCOS your results show. Your blend contains a small amount, but the amount that actually improves insulin and cycle regularity is considerably larger, so it needs to be taken on its own alongside it.
Alpha lipoic acid	One serving daily. Works with myo-inositol to improve how your cells respond to insulin. The two together do more than either alone.
Lactoferrin and beef spleen — more emphasis	Already on your list, and now the priority has risen. Please be consistent with these daily rather than when you remember.

Everything else continues unchanged — your blend, your Gallbladder ND, Avea, your electrolytes and your lithium orotate.

And the three things in the previous section — protein at every meal, your stress load, and a walk after supper — act more directly on the A1c and the insulin than anything in this table. You already have the food guide; you do not need anything new.

Testing

Test	When and Why
Functional Lab Panel — 3 months	One draw that covers all three of the markers I want to follow — your iron levels including ferritin and ceruloplasmin, your inflammation marker, and your A1c. Three months rather than six, because I want to confirm your iron stores are rebuilding before your red cells drift further. It also happens to be the right interval for the A1c, which reflects roughly a three-month average, so a repeat at that point reads as genuine change rather than normal variation.
HTMA retest — 6 months	At six months, as planned. Your minerals need the full window before a retest tells us anything useful.

What to Expect

Timeframe	What Usually Happens
Weeks 1 – 4	Sleep and energy move first, along with the pain relief you are already noticing. The between-meal crashes tend to soften early as well, once protein is anchoring your first meal.
Months 1 – 3	Blood sugar steadies and cravings ease. Iron stores begin to rebuild, which usually shows up as better stamina through the afternoon. This is the window where I expect the A1c and the inflammation marker to start moving, and we will recheck both at three months.
Months 3 – 6	Cycle regularity, PMS and skin respond here. Hormones follow nutrition, so they move later than energy does. Leptin sensitivity also improves across this window, and that is generally when weight begins to shift rather than before.
Ongoing	Weight follows the repair rather than leading it. As insulin comes down, SHBG rises, free testosterone falls, and your cycle and your metabolism both get easier. At six months we retest everything together and see how far it has come.

A Closing Word

Sarah,

You told me it was hard to follow how you could eat well for a week, add exercise, and watch the scale sit still. These results answer that.

Your leptin is high enough that your brain is not currently receiving its own signals about stored energy. Your insulin is running above where it should be, which is lowering the carrier protein that normally keeps testosterone in reserve. Your iron stores are low enough to be reaching your red cells. Every one of those is a physical, measurable reason that a week of good effort would not show up on a scale.

None of it means the effort was wasted. It means the effort is going into repair that has to happen before the number will move. Your body has been running on depleted resources for a long time, through several pregnancies and surgeries and a hard season, and it is going to take longer than a week to refill.

You are not broken. You are depleted. And that is something we can work with.

Please reach out with any questions as you look this over — I would much rather hear from you than have you wondering.

If at any point in time you experience adverse effects or constipation from your supplements let me know. We may need to adjust the dose and/or add in additional binder support.

Your HTMA results provide a detailed snapshot of your mineral status at this moment in time. Because your body is always adapting and healing, these results — and the recommendations based on them — are considered accurate for about six months.

To ensure continued accuracy and effectiveness of your mineral protocol, retesting at that time is required before continuing or adjusting supplementation.

Barbie Fisher