TOGETHER, UNPROCESSED

Reading Your Lipid Panel

A companion to Bloodwork Literacy — Part 2

What your cholesterol numbers actually mean,
and how to read your own panel.

A Note From Kim

I didn't find this guide in a textbook.

I found them in the middle of a life that had already asked too much of me. Fifty years of figuring out how to keep going when my body was screaming stop, when my nervous system had been running on threat mode for so long that calm actually felt dangerous.

I'm not a doctor. I'm not a therapist. What I am is someone who did the work, read the research, tested everything on myself, and built a team of people who believe the same thing I do — that your body already knows how to heal. It just needs permission and a little direction.

Every number in this guide is backed by real science. I just made it readable instead of a textbook.

Welcome to Together Unprocessed. I'm genuinely glad you're here.

Kim and the Team

Cholesterol, in plain terms

Your blood is mostly water. Fat doesn't dissolve in water. So your body uses little trucks.

Cholesterol is something your body needs. Every cell uses it. Your body makes hormones and vitamin D out of it. Your liver makes most of it on its own — what you eat is only a small part of the total.

Here is the part most people aren't told. Your blood is mostly water. Fats — including cholesterol — don't dissolve in water. So your body packs the cholesterol into tiny carriers and sends them through the bloodstream. Think of them as little trucks.

Your liver is the factory where most of these trucks are built and loaded. Your blood vessels are the highways. The cargo is cholesterol and fats. There are a few different kinds of truck, each with its own job.

VLDL — the loaded delivery truck

Built in the liver, packed with fat. It heads out into the bloodstream and drops off its load at tissues that need it for energy or storage.

LDL — the cholesterol delivery truck

What's left of the VLDL truck once it has dropped off most of its fat. Now it's smaller, and what it's carrying is mostly cholesterol. It delivers that cholesterol to cells that need it. You may have heard LDL called "bad cholesterol." It isn't — it's a truck doing a job your body asked it to do.

HDL — the return truck

HDL goes the other way. It picks cholesterol up from your tissues and brings it back to the liver. You may have heard HDL called "good cholesterol." It isn't good or bad either — it's the return truck. The body needs both directions.

> *Your lipid panel measures how much cholesterol is on each kind of truck. That's it. It doesn't count how many trucks are on the road. It doesn't check whether any of the trucks are damaged. We'll come back to that on page 4.*

Your numbers, in both unit systems

What the panel reports, and what those numbers mean.

Your lab report uses one of two unit systems. The US uses mg/dL. Most of the rest of the world uses mmol/L. The numbers below show both, so you can read your panel no matter where you live.

TOTAL CHOLESTEROL

The total amount of cholesterol the trucks are carrying, all kinds added together. On its own, this number tells you very little. The breakdown is what matters.

→ Under 200 mg/dL (5.2 mmol/L) — commonly called “desirable.”
→ 200–239 mg/dL (5.2–6.2 mmol/L) — commonly called “borderline high.”
→ 240 mg/dL (6.2 mmol/L) and over — commonly called “high.”

LDL CHOLESTEROL

How much cholesterol the LDL trucks are carrying. On most panels, this number is calculated from the other numbers — it isn’t measured directly.

→ Under 100 mg/dL (2.6 mmol/L) — commonly called “optimal.”
→ 100–129 mg/dL (2.6–3.3 mmol/L) — commonly called “near optimal.”
→ 130–159 mg/dL (3.4–4.1 mmol/L) — commonly called “borderline high.”
→ 160 mg/dL (4.1 mmol/L) and over — commonly called “high.”

HDL CHOLESTEROL

How much cholesterol the return trucks are carrying.

→ Under 40 mg/dL (1.0 mmol/L) for men, under 50 mg/dL (1.3 mmol/L) for women — commonly called “low.”
→ 60 mg/dL (1.5 mmol/L) and over — often called “protective.”

TRIGLYCERIDES

These are the fats themselves, riding around in the bloodstream. They go up and down quickly depending on what you ate, drank, and did in the last day or two. That’s why panels are usually drawn fasting.

→ Under 150 mg/dL (1.7 mmol/L) — commonly called “normal.”
→ 150–199 mg/dL (1.7–2.2 mmol/L) — commonly called “borderline high.”
→ 200 mg/dL (2.3 mmol/L) and over — commonly called “high.”

> **ABOUT THOSE THRESHOLD WORDS**
> *The words in quotes — “desirable,” “high,” “optimal,” “normal” — aren’t measurements of your body. They’re categories chosen by expert committees, based on where they want treatment to start. The categories can move from one decade to the next. A number called “acceptable” twenty years ago can be called “high” today, without your body changing at all.*

The one ratio worth calculating

Two of your numbers, divided by each other, tell you more than either one alone.

Most labs print your numbers separately and leave it at that. But there's a simple calculation you can do that gives you a much better picture of what's happening in your body. It uses two of the numbers you already have.

HOW TO CALCULATE IT

1. Find your triglycerides number on the panel.
2. Find your HDL number on the same panel.
3. Divide your triglycerides by your HDL.
4. That's your TG:HDL ratio.

> **A QUICK EXAMPLE**
> *If your triglycerides are 125 and your HDL is 55, then 125 ÷ 55 = 2.3. Your ratio is 2.3. (Make sure both numbers are in the same units — both in mg/dL, or both in mmol/L. Don't mix them.)*

WHY THIS RATIO TELLS YOU SOMETHING

Triglycerides and HDL respond to the same things — what you eat, how stressed you are, how well your body is handling sugar. When metabolism is working well, triglycerides tend to be low and HDL tends to be higher. When metabolism is struggling, triglycerides climb and HDL drops. The ratio captures both of those movements in one number.

WHAT THE NUMBER MEANS

→ Conventional cutoffs call under 2.0 "desirable."

→ But "desirable" is calibrated to the typical person — and the typical person is not metabolically healthy on a large scale.

→ When metabolism is genuinely working well, this ratio usually sits between 0.5 and 1.0.

→ That range is what the ratio looks like when the body is doing what it's supposed to.

> *Calculate your ratio. Write it down. Then calculate it again next time you have bloodwork. The direction it's moving — over months and years, under similar conditions — tells you more than any single number on the panel.*

What the panel doesn’t tell you

Two things the standard test doesn’t measure — that matter a lot.

Remember the trucks. Your panel measures how much cholesterol the trucks are carrying. But it doesn’t answer two questions that turn out to matter quite a lot.

1. HOW MANY TRUCKS ARE ON THE ROAD

Two people can have the same amount of total cholesterol but very different numbers of trucks carrying it. One person might have a small number of large, lightly-loaded trucks. Another might have a large number of small, packed trucks. The panel reports the same LDL number for both.

The difference matters. More trucks on the road means more traffic at the cell walls — and more chances for something to go wrong. There’s a test called ApoB that actually counts the trucks directly. Most labs can run it if you ask. It usually isn’t on the standard panel.

2. WHETHER THE TRUCKS ARE DAMAGED

An undamaged truck and a rusted, beat-up truck doing the same delivery aren’t the same thing. Cholesterol trucks can get damaged on the road — their outer shells can react with things in the bloodstream, and the structure changes. Damaged trucks behave differently than healthy ones, and they’re the ones that show up where plaque forms in arteries.

The standard panel can’t tell the difference between a healthy truck and a damaged one. It reports the same number either way. There are specialty tests (like oxidised LDL) that can measure damage, but they’re not part of the routine panel.

> **WHAT DAMAGES THE TRUCKS**
> *The biggest things known to damage cholesterol trucks: industrial seed oils (their fragile fats end up in the truck’s outer shell, where they react with oxygen), too much sugar (it reacts chemically with the proteins on the truck), chronic inflammation, and ongoing high blood sugar. None of these show up directly on a lipid panel. The panel is showing you the trucks. What’s damaging them is happening somewhere else.*

Read your trend, not your snapshot

One panel is a photo. Three panels are a movie.

If you only have one set of numbers, you have a photo. A photo can be flattering, or it can catch you at a bad moment. You can't tell from one photo which one it is.

Three panels, taken over a year or two under similar conditions, are a movie. They show you which direction you're heading. That's the part that actually matters.

WHY ONE PANEL IS NOISY

→ Triglycerides respond to what you ate in the last day or two.
→ HDL can shift after recent illness, alcohol, or hard exercise.
→ LDL is usually calculated from the other numbers — so anything that moves those moves LDL too.
→ A single panel is one point. You can't see the line from one point.

HOW TO MAKE YOUR PANELS COMPARABLE

If you want to compare today's panel to last year's, the two need to be drawn under similar conditions. Otherwise you're comparing a morning photo to an evening photo and concluding the person changed.

✓ Fast for the same length of time before each draw (usually 12 hours).
✓ Get the draw at the same time of day. Morning is easiest to repeat.
✓ Don't do hard exercise the day before either draw.
✓ Don't get drawn during or right after an illness — wait a week or two.
✓ Keep a note of which medications and supplements you're taking.
✓ If you're tracking over years, note where you are in your menstrual cycle, perimenopause, or menopause.

> *Keep a small note when you get each panel — what you ate, what you did, how you slept, what you're taking. Without that note, you can't tell whether your numbers moved because of you or because of the day. With it, you can usually tell at a glance.*

What to do with what you've learned

Questions to ask of your own panels, and what to bring to your doctor.

Here's what to do once you have your numbers in front of you.

LOOK AT YOUR NUMBERS

1. Find your total cholesterol, LDL, HDL, and triglycerides.
2. Calculate your TG:HDL ratio — triglycerides divided by HDL.
3. Write the ratio down. Date it. Note what you'd eaten and how you'd slept.
4. Look at any previous panels you have. Calculate the ratio for those too.

ASK YOURSELF A FEW THINGS

→ Which direction is my TG:HDL ratio heading over time?

→ Were any of my past panels drawn under unusual conditions — after illness, on a stressful day, after a holiday?

→ If anything has shifted, what changed in my life or my eating before each draw?

→ Am I looking at one strange number, or a real trend?

WHAT TO BRING TO YOUR DOCTOR

→ The trend, not just your latest panel.

→ The conditions for each draw — what you'd eaten, what you'd done, what you were taking.

→ A specific question. "Check my cholesterol" is vague. "I want to see how my triglycerides have moved over two years and whether I should add an ApoB test" is specific.

→ If your LDL has come up and you want to know more about it, ask whether they can run an ApoB test to count the particles directly.

> *Your panel is one tool. It's not a verdict on you. The most useful thing you can do with it is read it against your own previous panels, under similar conditions, over time. That's how you get from a photo to a movie — and the movie is what actually shows you what your body is doing.*

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You don't need to fix this today.

You just need to know you're not alone.

@togetherunprocessed

Everything we share comes from our own journeys and experiences.
We're not doctors, and nothing here is meant as medical advice.
Always make decisions about your health with a trusted professional.