



DR.
Ravi Assomull

KNOW YOUR NUMBERS

Your cardiovascular health tracker – blood markers, body composition and home blood pressure.

FULL NAME

DATE OF BIRTH

TODAY'S DATE

SEX

REVIEWING CLINICIAN

NEXT REVIEW DATE

Section 1 — Metabolic Blood Markers

What follows is a brief, plain-English explanation of each blood marker we use to assess metabolic and cardiovascular health, the consequences of running outside the target range, and the protective benefit of staying within it. Normal ranges are quoted in U.K. units.

HbA1c

Units: mmol/mol (%)

HbA1c reflects your average blood glucose over the past 8–12 weeks by measuring how much sugar has stuck to your red blood cells. Persistently raised values signal that your body is struggling to manage glucose, which damages the inner lining of arteries and accelerates the build-up of fatty plaques. Keeping HbA1c in range protects against heart attack, stroke, kidney disease and progression to type 2 diabetes.

- **Normal:** <42 mmol/mol (<6.0%)
- **Pre-diabetes:** 42–47 mmol/mol (6.0–6.4%)
- **Diabetes:** ≥48 mmol/mol (≥6.5%)

Total Cholesterol

Units: mmol/L

Total cholesterol is the sum of all cholesterol carried in your blood. On its own it is a relatively crude marker — the breakdown into LDL, HDL and ApoB matters more. Persistently raised total cholesterol is associated with higher cardiovascular risk and should be interpreted alongside the other lipid markers in this booklet.

- **Optimal:** <5.0 mmol/L
- **Lower target:** If high risk or established CVD

LDL Cholesterol

Units: mmol/L

LDL particles ferry cholesterol to artery walls; the more LDL particles circulating, the more cholesterol is deposited and the faster plaques form. LDL is one of the most causally established drivers of heart attack and stroke. Keeping LDL low through diet, exercise and — where indicated — statins or other lipid-lowering therapy directly reduces lifetime cardiovascular risk.

- **General population:** <3.0 mmol/L
- **High risk:** <2.6 mmol/L
- **Very high risk / established CVD:** <1.8 mmol/L (ESC: <1.4 mmol/L)

HDL Cholesterol

Units: mmol/L

HDL helps remove cholesterol from artery walls and transports it back to the liver for disposal. Higher HDL is generally associated with lower cardiovascular risk, though the relationship is not strictly linear: extremely high HDL (>2.5 mmol/L) does not appear to confer additional benefit and may even be a marker of dysfunction.

- **Men:** ≥1.0 mmol/L
- **Women:** ≥1.2 mmol/L

Triglycerides

Units: mmol/L

Triglycerides are fats in the blood derived from food and from your liver. Raised levels typically track with insulin resistance, fatty liver and small-dense LDL particles, all of which raise cardiovascular risk. Lowering triglycerides through reduced refined carbohydrates and alcohol, regular exercise and weight loss has clear protective benefit.

- **Optimal (fasting):** <1.7 mmol/L
- **Borderline / raised:** 1.7–2.3 mmol/L
- **High:** >2.3 mmol/L

Lipoprotein(a) — Lp(a)

Units: nmol/L

Lp(a) is a genetically determined, LDL-like particle that significantly raises lifetime risk of heart attack, stroke and aortic stenosis. Your level is largely set for life, so this needs to be measured **ONLY ONCE**. Knowing your Lp(a) helps your doctor stratify your overall risk and decide how aggressively to treat your other lipid markers.

- **Optimal:** <75 nmol/L (≈30 mg/dL)
- **Raised — modest risk:** 75–125 nmol/L
- **High risk:** >125 nmol/L

Apolipoprotein B (ApoB)

Units: g/L

Every atherogenic particle — LDL, VLDL, IDL and Lp(a) — carries a single ApoB molecule, so ApoB is essentially a count of all the particles capable of driving plaque. It is a more accurate measure of cardiovascular risk than LDL-C alone, particularly in people with diabetes, raised triglycerides or metabolic syndrome.

- **General population:** <0.9 g/L
- **High risk:** <0.8 g/L
- **Very high risk:** <0.65 g/L

eGFRUnits: mL/min/1.73 m²

Estimated glomerular filtration rate gives a sense of how well your kidneys are filtering blood. It is relevant to heart health because chronic kidney disease is one of the strongest amplifiers of cardiovascular risk. A stable, normal-range eGFR over time is reassuring; a downward trend warrants investigation.

- **Normal:** ≥90 mL/min/1.73 m²
- **Mildly reduced:** 60–89
- **Chronic kidney disease:** <60

hs-CRP

Units: mg/L

High-sensitivity CRP detects low-grade vascular inflammation that standard CRP misses. Persistently raised hs-CRP is independently associated with higher rates of cardiovascular events, even in people whose cholesterol numbers look fine. If a single result is high, repeat the test — values can be transiently raised by infection or injury.

- **Low cardiovascular risk:** <1.0 mg/L
- **Average risk:** 1.0–3.0 mg/L
- **High risk:** >3.0 mg/L

Fasting Glucose

Units: mmol/L

This is your blood glucose after at least 8 hours without food. Repeated elevations indicate insulin resistance or pre-diabetes, both of which damage blood vessels and raise heart-attack risk well before diabetes is diagnosed. Keeping fasting glucose in range typically reflects good underlying metabolic health.

- **Normal:** <5.6 mmol/L
- **Pre-diabetes:** 5.6–6.9 mmol/L
- **Diabetes:** ≥7.0 mmol/L

Fasting Insulin

Units: mIU/L

Fasting insulin shows how hard your pancreas is working to keep glucose normal. Many people with normal fasting glucose still have raised insulin — an early sign of insulin resistance. Lowering fasting insulin through weight loss, regular exercise and a lower refined-carbohydrate diet reduces cardiometabolic risk well before glucose becomes abnormal.

- **Optimal:** <10 mIU/L
- **Tighter target (some labs):** <5 mIU/L

Metabolic Markers — Tracker

Record your results below. Lp(a) only needs to be measured **once** in a lifetime — fill in the result on its single date row when you have it. For the other markers, repeat measurements over time let you watch your trajectory.

Biomarker	Target / Range	Date 1	Result	Date 2	Result	Date 3	Result	Date 4	Result
HbA1c (mmol/mol)	<42 mmol/mol								
Fasting glucose	<5.6 mmol/L								
Fasting insulin	<10 mIU/L								
Total cholesterol	<5.0 mmol/L								
LDL cholesterol	<3.0 (CVD <1.8) mmol/L								
HDL cholesterol	M ≥1.0 / F ≥1.2 mmol/L								
Triglycerides	<1.7 mmol/L								
Apolipoprotein B	<0.9 g/L								
Lipoprotein(a)	<75 nmol/L (one-off)			—	—	—	—	—	—
hs-CRP	<1.0 mg/L (low risk)								
eGFR	≥90 mL/min/1.73m ²								

Tip: bring this booklet to every appointment so trends are easy to spot. If a result sits outside its target range, your cardiologist will discuss what (if any) action is needed.



Section 2 — Body Composition

Body fat distribution — especially visceral fat around the organs — predicts cardiovascular and metabolic risk far better than weight or BMI alone. Two people of identical weight can have very different metabolic profiles, and body composition tells the real story.

Gold standard — DEXA scan. A DEXA scan is the most accurate way to measure body composition, including regional fat distribution and visceral fat. If you have had one in the past 12 months, use those numbers in the table below.

Alternative — high-quality bioimpedance. If a DEXA scan is not available, a high-quality bioimpedance device is a reasonable substitute. I recommend either an **InBody** scale (available in many gyms and clinics — the most accurate option after DEXA) or, for home use, the **Withings Body Scan**, a multi-sensor scale that also performs segmental analysis and a 6-lead ECG.

Recommended home device — Withings Body Scan

Multi-sensor scale with segmental composition + 6-lead ECG.

<https://www.withings.com/uk/en/body-scan>

Tracker

Record results from each scan over time.

Metric	Healthy range	Date 1	Result	Date 2	Result	Date 3	Result
Body fat %	Men 11–22% Women 22–33%						
Lean / muscle mass (kg)	Track trajectory over time						
Visceral fat rating							
BMI (kg/m ²)	18.5–24.9						
Waist circumference (cm)	Men <94 Women <80						
Waist : height ratio	<0.5						

Section 3 — Home Blood Pressure

Office blood pressure is a single snapshot taken under stress. Home blood pressure, averaged over a week, is a much stronger predictor of cardiovascular events and is what modern guidelines use to direct treatment.

Home blood pressure targets

- **Optimal:** below 120 / 70 mmHg
- **Elevated:** 120–134 / 70–84 mmHg — improve lifestyle
- **High blood pressure:** 135 / 85 mmHg or above — treatment is usually needed
- **If you are already on treatment,** the usual aim is 120–129 / 70–79 mmHg

If your two numbers fall in different bands, the higher band applies.

How to record your blood pressure at home

- Use a validated **upper-arm** cuff (wrist devices are not recommended).
- Empty your bladder; avoid caffeine, smoking and exercise for 30 minutes beforehand.
- Sit with your back supported, legs uncrossed, feet flat on the floor.
- Rest your arm on a table so the cuff is at heart level.
- Sit quietly for **5 minutes** before the first reading.
- Take **two readings, one minute apart**, both morning and evening.
- Record both readings each session — the average is what matters.
- Repeat for **seven consecutive days**.

Tip: turn the page to find a 7-day diary that automatically calculates your weekly average. Show this average to your doctor — it is what guides any decision about medication.



Weekly Blood Pressure Tracker

Take two readings, one minute apart, both morning and evening, for seven consecutive days. Enter the **average** of your two readings in each cell. Day 1 is excluded from the weekly average (per ESC protocol). Your average will calculate automatically when this PDF is opened in Adobe Acrobat Reader.

Day	Date	Morning (mmHg / bpm)			Evening (mmHg / bpm)		
		Sys	Dia	Pulse	Sys	Dia	Pulse
1 (excluded)							
2							
3							
4							
5							
6							
7							
Avg	Days 2–7 (auto)						

Your weekly home blood pressure

Combined morning + evening average, days 2–7. Show this to your doctor.

SYSTOLIC

DIASTOLIC

PULSE