START HERE

Your results, in focus

Michael Smith · Age 52 · Male · Born 15 January 1974

1 Put heart health first

LDL 3.89 mmol/L · ApoB 1.23 g/L · Lp(a) 139 nmol/L

These related findings deserve a cardiovascular risk review. Blood pressure, smoking and family history help decide what to do next. [1]

2 Put the sugar flags in context

A1c 5.7% · Fasting glucose 6.00 mmol/L

Below Diabetes Canada’s prediabetes thresholds. Review risk and trends; the U.S. definition differs. See page 2. [2,3]

3 Clarify the iron and bilirubin results

Iron saturation 54% · Total bilirubin 22.2 µmol/L

Both are above the source laboratory’s limits. They need context and possible repeat testing; they do not establish a diagnosis on their own. [4,5]

Also reassuring: blood-cell counts, electrolytes and liver enzymes are within the source laboratory’s intervals.

For the follow-up: bring previous results, blood-pressure readings, family history and a complete medicine and supplement list.

A fictional educational example, not a personal treatment plan. This revision has not been recorded as pharmacist-approved. Full values: pages 4–6. Sources and method: page 7.

UNDERSTAND THE PRIORITIES

Heart health & blood sugar

Read the cholesterol results together

LDL cholesterol (**3.89 mmol/L**), non-HDL cholesterol (**4.35 mmol/L**) and ApoB (**1.23 g/L**) describe related aspects of cholesterol carried by particles that can contribute to artery disease. All are above the laboratory's comparisons. HDL of 1.79 mmol/L and triglycerides of 0.88 mmol/L are favourable findings, but do not cancel this pattern. [1]

Lp(a) adds useful context

Lp(a) is **139 nmol/L**. It is largely inherited and is a cardiovascular risk modifier. The next conversation is about overall risk and how much LDL lowering would be appropriate. This sample lacks blood pressure, smoking status and medical history, so no personal risk score or medicine choice is assigned. [1]

hs-CRP 2.7 mg/L: an inflammation marker that may inform risk assessment. Illness and other factors can affect it; it does not locate a cause. [1]

Why Canada and the U.S. use different labels

Prediabetes definition	A1c	Fasting glucose
Diabetes Canada [2]	6.0–6.4%	6.1–6.9 mmol/L
U.S. ADA [3]	5.7–6.4%	100–125 mg/dL (about 5.6–6.9 mmol/L)
This sample	5.7%	108 mg/dL = 6.00 mmol/L

The definitions differ; the measured values do not. Risk changes gradually rather than switching at a cut-off. Review the trend and decide whether and when to repeat testing. A1c reflects roughly the past 2–3 months; fasting glucose is a single-time measurement. [2,3]

A FOCUSED FOLLOW-UP

What to clarify next

Iron: check whether the pattern persists

Transferrin saturation is **54%** (source interval 20–48%); ferritin is **248 µg/L** (38–380). Raised saturation with ferritin in range does not prove iron overload, and ferritin alone cannot settle the question. Review previous results, iron-containing supplements and family history. A clinician can decide whether to repeat the iron studies and investigate persistent elevation. [4]

Bilirubin: a small rise needs context

Total bilirubin is **22.2 µmol/L** (original: 1.3 mg/dL; upper comparison 1.2). AST, ALT, ALP and GGT are within their source intervals. This does not establish liver disease or Gilbert syndrome. Symptoms, previous values and, if indicated, direct and indirect bilirubin can help explain the result. [5]

Kidneys: one result is not a diagnosis

Creatinine is **87.5 µmol/L** and eGFR is **89 mL/min/1.73 m²**. This eGFR alone does not diagnose chronic kidney disease. Persistence and other signs of kidney damage matter. No urine albumin-to-creatinine ratio (ACR) was provided. Discuss whether it is relevant to the person’s risk. [6]

Three questions for the next visit

1. What is my overall cardiovascular risk?
2. Which findings should be repeated, and when?
3. Would any change to medicines or supplements help?

Other results: vitamin D is within the source laboratory’s interval. That alone is not a reason to increase supplements; there is no universal prevention target for healthy adults. [7] An insulin value alone does not diagnose insulin resistance. [9]

CANADIAN UNITS

Results · part 1

H = flagged high in the source report. Laboratory comparisons are converted to the same units; they are not personal treatment targets.

Measurement	Result	Source comparison
Total cholesterol	**6.14 H mmol/L**	<5.18
HDL cholesterol	**1.79 mmol/L**	≥1.04
Triglycerides	**0.88 mmol/L**	<1.70
LDL cholesterol	**3.89 H mmol/L**	<2.59
Total cholesterol / HDL	**3.4**	<5.0
Non-HDL cholesterol	**4.35 H mmol/L**	<3.37
ApoB	**1.23 H g/L**	<0.90
Lipoprotein(a) · Lp(a)	**139 H nmol/L**	<75
hs-CRP	**2.7 mg/L**	<1.0*
Homocysteine	**8.5 µmol/L**	≤15.2
Fasting glucose	**6.00 H mmol/L**	3.61–5.50
A1c	**5.7 H %**	<5.7
Insulin	**6.3 µIU/mL**	≤18.4
Iron	**30.4 µmol/L**	9.0–32.2
Iron-binding capacity (TIBC)	**56.7 µmol/L**	44.8–76.1
Transferrin saturation	**54 H %**	20–48
Ferritin	**248 µg/L**	38–380
Urea (from BUN)	**5.71 mmol/L**	2.50–8.93
Creatinine	**87.5 µmol/L**	61.9–114.9
eGFR	**89 mL/min/1.73 m²**	≥60
BUN / creatinine ratio	**Not reported**	6–22
Sodium	**141 mmol/L**	135–146
Potassium	**4.2 mmol/L**	3.5–5.3

* hs-CRP: the source labels <1.0 mg/L “optimal”; it does not flag 2.7 as H. LDL comparisons vary with risk. BUN/creatinine ratio was not reported because both values were in range. Insulin retains the source unit.

CANADIAN UNITS

Results · part 2

H = flagged high in the source report. Laboratory comparisons are converted to the same units; they are not personal treatment targets.

Measurement	Result	Source comparison
Chloride	**103 mmol/L**	98–110
Carbon dioxide	**27 mmol/L**	20–32
Calcium	**2.38 mmol/L**	2.15–2.58
Total protein	**72 g/L**	61–81
Albumin	**45 g/L**	36–51
Globulin	**27 g/L**	19–37
Albumin / globulin	**1.7**	1.0–2.5
Total bilirubin	**22.2 H µmol/L**	3.4–20.5
Alkaline phosphatase (ALP)	**49 U/L**	35–144
AST	**24 U/L**	10–35
ALT	**23 U/L**	9–46
GGT	**48 U/L**	3–85
Uric acid	**327 µmol/L**	238–476
Vitamin D · 25-OH, total	**102 nmol/L**	75–250
White blood cells	**7.1 10^9/L**	3.8–10.8
Red blood cells	**5.31 10^{12}/L**	4.20–5.80
Hemoglobin	**162 g/L**	132–171
Hematocrit	**49.2 %**	39.4–51.1
MCV	**92.7 fL**	81.4–101.7
MCH	**30.5 pg**	27.0–33.0
MCHC	**329 g/L**	316–354
RDW	**12.7 %**	11.0–15.0
Platelets	**283 10^9/L**	140–400
Mean platelet volume	**10.5 fL**	7.5–12.5

Comparisons and flags come from the source laboratory, including its age- and sex-specific intervals. Values have been rounded after conversion. The original Quest PDF contains the complete method and interpretation notes.

APPENDIX · SOURCE UNITS

Original values

These 47 entries preserve the source numbers, units and flags. NR = not reported. Complete intervals and interpretation notes remain in the Quest document.

Measurement	Source value
Total cholesterol	237 H mg/dL
HDL cholesterol	69 mg/dL
Triglycerides	78 mg/dL
LDL cholesterol	150 H mg/dL
Total cholesterol / HDL	3.4
Non-HDL cholesterol	168 H mg/dL
ApoB	123 H mg/dL
Lipoprotein(a) · Lp(a)	139 H nmol/L
hs-CRP	2.7 mg/L
Homocysteine	8.5 µmol/L
Fasting glucose	108 H mg/dL
A1c	5.7 H %
Insulin	6.3 µIU/mL
Iron	170 µg/dL
Iron-binding capacity (TIBC)	317 µg/dL
Transferrin saturation	54 H %
Ferritin	248 ng/mL
Urea nitrogen (BUN)	16 mg/dL
Creatinine	0.99 mg/dL
eGFR	89 mL/min/1.73 m²
BUN / creatinine ratio	NR
Sodium	141 mmol/L
Potassium	4.2 mmol/L
Chloride	103 mmol/L

Measurement	Source value
Carbon dioxide	27 mmol/L
Calcium	9.5 mg/dL
Total protein	7.2 g/dL
Albumin	4.5 g/dL
Globulin	2.7 g/dL
Albumin / globulin	1.7
Total bilirubin	1.3 H mg/dL
Alkaline phosphatase (ALP)	49 U/L
AST	24 U/L
ALT	23 U/L
GGT	48 U/L
Uric acid	5.5 mg/dL
Vitamin D · 25-OH, total	41 ng/mL
White blood cells	7.1 10^3/µL
Red blood cells	5.31 10^6/µL
Hemoglobin	16.2 g/dL
Hematocrit	49.2 %
MCV	92.7 fL
MCH	30.5 pg
MCHC	32.9 g/dL
RDW	12.7 %
Platelets	283 10^3/µL
Mean platelet volume	10.5 fL

A TRANSPARENT REPORT

Sources & method

What this example represents

Michael Smith is a fictional identity. Values come from the de-identified Quest sample shown on BioMarco, collected on 16 February 2026. No symptoms, medical history, medicines or earlier results were invented. This AI-assisted revision has no recorded clinical approval. Every actual patient report requires its own pharmacist assessment and approval.

How to read the comparisons

A laboratory interval, a diagnostic threshold and a treatment target serve different purposes. An H flag reproduces the source flag only; it is not a severity or urgency score. Clinical context and changes over time guide interpretation.

Conversions and data fidelity [8]

Factors applied to original units: cholesterol ×0.0259; triglycerides ×0.0113; glucose ×0.05551; BUN to urea ×0.357; calcium ×0.25; iron and TIBC ×0.179; creatinine ×88.4; bilirubin ×17.104; uric acid ×59.5; vitamin D ×2.496; proteins and hemoglobin ×10; ApoB ×0.01. Ferritin: ng/mL = µg/L. Cell counts are restated per litre. Lp(a) has no mass conversion. Displays and comparison limits are rounded only after conversion.

References · checked 3 November 2026

[1] Canadian Cardiovascular Society · Primary prevention tool (October 2026)

[2] Diabetes Canada · Screening for and diagnosing diabetes

[3] American Diabetes Association · Diabetes diagnosis

[4] BC Guidelines · High ferritin and iron overload (2021)

[5] MedlinePlus · Bilirubin blood test

[6] KDIGO · Chronic kidney disease guideline (2024)

[7] Endocrine Society · Vitamin D for prevention of disease (2024)

[8] AMA Manual of Style · SI conversion table

[9] MedlinePlus · Insulin in blood test

Educational example; not valid for medical care or a prescription. Laboratory documents do not imply endorsement of BioMarco. New severe symptoms need medical assessment without waiting for a report.