

NAME	DATE OF BIRTH
Lola	14 March 1984
AGE AT COLLECTION	SEX ASSIGNED AT BIRTH
42	Female
TEST	REPORTS
TruHealth	TruHealth
SAMPLE COLLECTED	RESULT REPORTED
2 September 2026	9 September 2026
RESULT REFERENCE	
SAMPLE-REPORT	

Your epigenetic wellness results

Your sample was read for the chemical marks on DNA that change as we age. Statistical models turn that pattern into the estimates in this report, each placed against the laboratory’s reference cohort of other people. The pages that follow explain what each one is and how to read it.

Measurements

113

Outside the laboratory’s range

6

LDL cholesterol · Apolipoprotein B · Omega-3 · CRP · Cholecalciferol (vitamin D) · Glyphosate

Sample processed and analysed by TruDiagnostic’s laboratory. Lola presents the laboratory’s estimates and their positions within its balanced reference cohort.

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory’s estimates.

Your epigenetic wellness results

Every measurement in this report is a position among people of the same age and sex in the laboratory's balanced reference cohort, grouped below by what the markers relate to.

What these are	Who you are compared with	How to read a bar
Estimates read from the methylation pattern of one sample. Where the name is a familiar one, such as a vitamin or a cholesterol fraction, the figure is what that pattern predicts for it.	People of the same sex and a similar age, drawn from the laboratory's balanced reference cohort. Each measurement is placed among them separately, so two figures for the same person can sit at opposite ends without disagreeing.	The shaded span is the laboratory's own range for that marker, or the middle of the cohort where it publishes none. The mark is this sample, and neither end of the scale is a target. The full guide is at the back.

What this report covers

Every section, how many measurements are in it, and how many of those sit outside a range the laboratory published.

SECTION	MEASUREMENTS	WITH A RANGE	OUTSIDE IT
Lipids and lipoproteins	18	9	2
Fatty acids	11	3	1
Glucose, energy and hormone markers	12	4	—
Amino acids and related metabolites	23	—	—
Inflammation markers	5	5	1
Immune cell profile	6	3	—
Liver, kidney and blood-cell markers	4	1	—
Vitamins, cofactors and antioxidants	16	9	1
Neurological and neurotransmitter markers	8	1	—
Tissue and cellular proteins	4	—	—
Environmental and lifestyle exposure markers	6	5	1

Measurements outside the laboratory's range

The laboratory publishes its own range for 40 of the measurements in this report. 6 sit outside it, listed here with the section each one is in.

LDL cholesterol	84.2 percentile	higher than 84%	Above range 0–80	Lipids and lipoproteins
Apolipoprotein B	81.7 percentile	higher than 82%	Above range 0–80	Lipids and lipoproteins
Omega-3	14.8 percentile	lower than 85%	Below range 20–100	Fatty acids
CRP	83.6 percentile	higher than 84%	Above range 0–80	Inflammation markers
Cholecalciferol (vitamin D)	17.5 percentile	lower than 83%	Below range 20–98	Vitamins, cofactors and antioxidants
Glyphosate	85.1 percentile	higher than 85%	Above range 0–80	Environmental and lifestyle exposure markers

Living with your results

General guidance that applies to everybody, whatever your figures say.

SLEEP



Most adults settle between seven and nine hours a night. Regularity counts for as much as the total: a bedtime and a waking time that stay put across the week.

MOVEMENT



World Health Organization guidance for adults is at least 150 minutes of moderate activity a week, or 75 minutes of vigorous activity, alongside muscle-strengthening work on at least two days. Its own summary of the evidence is short: some is good, more is better.

FOOD



Dietary guidance the world over converges on the same few points: at least five portions of a variety of fruit and vegetables a day, plenty of fibre, and fish twice a week, one of them oily. The Mediterranean pattern of vegetables, pulses, whole grains, olive oil and fish is the most studied of the named eating patterns.

ALCOHOL AND TOBACCO



Both leave methylation signatures the laboratory can read directly. Less of either is the direction every national guideline points in.

STRESS AND CONNECTION



Published work on methylation patterns includes measures of long-term stress and of social connection, alongside the behaviours above. What people find workable varies; the common thread in the research is regularity rather than intensity.

KEEPING A RECORD



Writing down what you changed and when is what makes the next result readable. Two samples six months apart say a great deal more when you can name what sat between them.

WHAT NEXT

Testing again

One sample is a position. Two are a direction, and the interval between them is what makes the second one readable.

THREE TO SIX MONTHS 

Methylation patterns move slowly. Three to six months between samples is long enough for a change to mean something; a fortnight is not. For this sample, that is any time from December 2026.

SIMILAR CONDITIONS 

Time of day, a recent illness and a recent vaccination can all move methylation readings on their own. Sampling under similar conditions each time keeps the comparison about you rather than about the week.

READ THEM TOGETHER 

Comparing two results is a different conversation from reading one. Where a measurement has moved, this report prints what it was alongside what it is.

Lipids and lipoproteins

Cholesterol is carried through blood in particles called lipoproteins; other lipids help form cell membranes. These rows group methylation-based estimates of those substances and particles.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80, unless a row states the laboratory’s own range for that marker · Related foods name sources of the substance, never a change to make

MEASUREMENT	VALUE	COHORT POSITION	POSITION	SINCE LAST SAMPLE
LDL cholesterol ↑ Above range Cholesterol carried on low-density lipoprotein particles.	84.2 percentile	 laboratory's range: 0–80	higher than 84%	
HDL cholesterol Cholesterol carried on high-density lipoprotein particles.	62.5 percentile	 laboratory's range: 10–100	higher than 63%	
Total triglycerides The total circulating triglycerides, the main form in which fat is carried in blood.	44.9 percentile	 laboratory's range: 0–80	lower than 55%	 was 42.4 · +2.5
VLDL-C Cholesterol carried on very-low-density lipoprotein particles.	51.3 percentile	 laboratory's range: 0–80	higher than 51%	 was 51.9 · –0.6

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory’s estimates.

LIPIDS AND LIPOPROTEINS, CONTINUED

Remnant cholesterol

40.1 percentile



lower than 60%

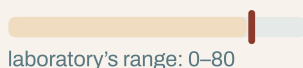


Cholesterol carried on triglyceride-rich remnant particles.

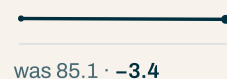
Apolipoprotein B

↑ Above range

81.7 percentile



higher than 82%



The structural protein carried by low-density and related lipoprotein particles.

Apolipoprotein A1

33.8 percentile

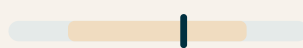


lower than 66%

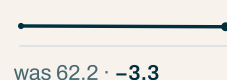
The main protein component of high-density lipoprotein particles.

Apolipoprotein E

58.9 percentile



higher than 59%



A lipoprotein component involved in lipid transport and clearance.

This is an estimate of how much of the protein is circulating, not of which of the three ApoE forms someone carries.

Apolipoprotein C2

24.9 percentile



lower than 75%



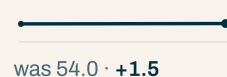
A small apolipoprotein that activates the enzyme clearing triglycerides from blood.

LDL particle size

55.5 percentile



higher than 56%



The average diameter of low-density lipoprotein particles.

HDL particle size

61.3 percentile

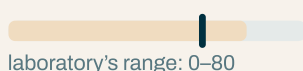


higher than 61%

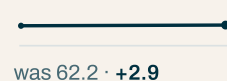
The average diameter of high-density lipoprotein particles.

VLDL particle size

65.1 percentile



higher than 65%



The average size of very-low-density lipoprotein particles.

PCSK9

52.9 percentile



higher than 53%

A protein that regulates how many LDL receptors the liver keeps on its surface.

Statins raise the amount of this protein in blood, and PCSK9 inhibitors lower it.

Phospholipase A2

42.7 percentile



lower than 57%

An enzyme that releases fatty acids from membrane phospholipids.

Sphingomyelins

53.8 percentile



higher than 54%



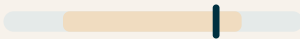
A family of fats found in cell membranes, including the insulating layers around nerve fibres.

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory's estimates.

LIPIDS AND LIPOPROTEINS, CONTINUED

Phosphatidylcholines

71.4 percentile



higher than 71%

The most abundant phospholipid class in cell membranes.

RELATED FOODS

Egg yolk

Soya lecithin

Sunflower lecithin

Liver

Total cholines

34.7 percentile



lower than 65%

was 35.7 · -1.0

Choline-containing compounds, used in cell membranes and signalling.

RELATED FOODS

Egg yolk

Liver

Soya beans

Peanuts

Cruciferous vegetables

Phosphoglycerides

40.3 percentile



lower than 60%

A family of fats built around glycerol that help form cell membranes.

Fatty acids

Fatty acids are building blocks of fats. This group includes omega-3, omega-6, saturated and unsaturated types. The values are methylation-based estimates expressed as percentiles.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80, unless a row states the laboratory's own range for that marker ·

Related foods name sources of the substance, never a change to make

MEASUREMENT

VALUE

COHORT POSITION

POSITION

Omega-3

↓ Below range

14.8 percentile



lower than 85%

laboratory's range: 20–100

An estimate associated with omega-3 fatty acids, a family of fats that includes EPA and DHA.

RELATED FOODS

Oily fish

Algae oil

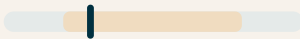
Flaxseed

Walnuts

Rapeseed oil

Omega-6

29.4 percentile



lower than 71%

An estimate associated with omega-6 fatty acids, a family of fats that includes linoleic acid.

Since your last sample: was 30.4 · -1.0

RELATED FOODS

Sunflower oil

Corn oil

Soya oil

Walnuts

Sesame seeds

Docosahexaenoic acid (DHA)

53.1 percentile



higher than 53%

laboratory's range: 20–100

A long-chain omega-3 fatty acid concentrated in brain and retinal tissue.

RELATED FOODS

Oily fish

Fish roe

Algae oil

Shellfish

Eicosapentaenoic acid (EPA)

56.6 percentile



higher than 57%

laboratory's range: 20–100

A long-chain omega-3 fatty acid obtained mainly from marine sources.

RELATED FOODS

Oily fish

Fish oil

Algae oil

Shellfish

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory's estimates.

FATTY ACIDS, CONTINUED

Docosapentaenoic acid (DPA)

66.1 percentile



higher than 66%

A long-chain omega-3 fatty acid intermediate between EPA and DHA.

RELATED FOODS [Oily fish](#) [Fish oil](#) [Fish roe](#) [Ruminant meat](#)

Linoleic acid

54.7 percentile



higher than 55%

An essential omega-6 fatty acid obtained from the diet.

RELATED FOODS [Sunflower oil](#) [Corn oil](#) [Soya oil](#) [Sesame seeds](#) [Walnuts](#)

Saturated fatty acids

63.2 percentile



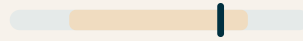
higher than 63%

The proportion of saturated fats among circulating fatty acids.

RELATED FOODS [Butter](#) [Cheese](#) [Coconut oil](#) [Palm oil](#) [Fatty meat](#)

Monounsaturated fatty acids

70.7 percentile



higher than 71%

The proportion of monounsaturated fats among circulating fatty acids.

Since your last sample: was 71.8 · -1.1

RELATED FOODS [Olive oil](#) [Rapeseed oil](#) [Avocado](#) [Almonds](#) [Hazelnuts](#)

Polyunsaturated fatty acids

41.9 percentile



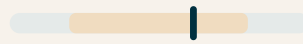
lower than 58%

The proportion of polyunsaturated fats among circulating fatty acids.

RELATED FOODS [Sunflower oil](#) [Soya oil](#) [Oily fish](#) [Walnuts](#) [Flaxseed](#)

Pentadecanoic acid

61.7 percentile



higher than 62%

An odd-chain saturated fatty acid associated with dairy fat intake.

RELATED FOODS [Whole milk](#) [Butter](#) [Cheese](#) [Ruminant meat](#)

Octadecadienedioate

42.1 percentile



lower than 58%

A dicarboxylic acid produced when fatty acids are oxidised at both ends.

Since your last sample: was 39.2 · +2.9

Glucose, energy and hormone markers

Glucose, ketones and related compounds help supply energy; hormones help coordinate how that energy is used and stored. These rows describe methylation-based estimates associated with those processes.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80, unless a row states the laboratory’s own range for that marker · Related foods name sources of the substance, never a change to make

MEASUREMENT	VALUE	COHORT POSITION	POSITION	SINCE LAST SAMPLE
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HbA1c	38.6 percentile	<div><div></div><div></div><div></div></div> laboratory’s range: 0–80	lower than 61%	<div><div></div><div></div><div></div></div> was 38.9 · –0.3
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HbA1c is haemoglobin with glucose attached. A conventional HbA1c test reflects blood sugar over preceding months; this row instead contains a methylation-based estimate associated with that measurement.

Fasting glucose	44.1 percentile	<div><div></div><div></div><div></div></div> laboratory’s range: 0–80	lower than 56%	<div><div></div><div></div><div></div></div> was 47.8 · –3.7
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Glucose is the sugar carried in blood for energy. This is a methylation-based estimate associated with fasting glucose.

Leptin	22.5 percentile	<div><div></div><div></div><div></div></div> laboratory’s range: 0–80	lower than 78%	<div><div></div><div></div><div></div></div> was 19.4 · +3.1
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A hormone released by fat tissue that signals energy stores to the brain.

Adiponectin	30.5 percentile	<div><div></div><div></div><div></div></div> laboratory’s range: 20–100	lower than 70%	
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A hormone released by fat tissue involved in glucose and fatty acid handling.

IGF-1	56.9 percentile	<div><div></div><div></div><div></div></div>	higher than 57%	<div><div></div><div></div><div></div></div> was 56.3 · +0.6
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Insulin-like growth factor 1, a hormone involved in growth and tissue maintenance.

Growth hormone given clinically, oral oestrogen and undernutrition each move this hormone in blood.

DHEA sulfate	54.5 percentile	<div><div></div><div></div><div></div></div>	higher than 55%	<div><div></div><div></div><div></div></div> was 53.5 · +1.0
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A circulating steroid hormone precursor produced mainly by the adrenal glands.

DHEA supplements and corticosteroids each move this hormone in blood.

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory’s estimates.

GLUCOSE, ENERGY AND HORMONE MARKERS, CONTINUED

3-hydroxybutyrate

65.3 percentile



higher than 65%

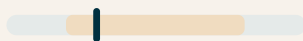


was 63.1 · +2.2

The main circulating ketone body, produced when fat is used for fuel.

Acetyl-L-carnitine

30.1 percentile



lower than 70%



was 26.4 · +3.7

A carnitine ester that carries acetyl groups, helping balance the molecules used in energy reactions inside mitochondria.

RELATED FOODS

Red meat

Poultry

Fish

Dairy

Inositol

35.3 percentile



lower than 65%



was 38.8 · -3.5

A sugar alcohol used in cell signalling molecules.

RELATED FOODS

Citrus fruit

Cantaloupe melon

Beans

Wholegrains

Nuts

Erythritol

42.3 percentile



lower than 58%



was 45.2 · -2.9

A sugar alcohol obtained from the diet and produced in small amounts by the body.

RELATED FOODS

Pears

Melon

Grapes

Mushrooms

Fermented foods

Alpha-ketoglutarate

61.4 percentile



higher than 61%

A compound used in the citric acid cycle, the series of reactions cells use to release energy from fuel.

Palmitoylcarnitine

55.6 percentile



higher than 56%



was 57.0 · -1.4

A long-chain fatty acid bound to carnitine for transport into mitochondria.

Amino acids and related metabolites

Amino acids are building blocks of proteins. Related compounds are made as the body and gut microbes process them; this section also groups related products of cellular metabolism.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80 · Related foods name sources of the substance, never a change to make

MEASUREMENT	VALUE	COHORT POSITION	POSITION
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Glycine	68.2 percentile		higher than 68%
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The smallest amino acid, used in collagen and glutathione synthesis.

RELATED FOODS Gelatine Bone broth Fish Dairy Legumes

Glutamine	48.8 percentile		lower than 51%
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The most abundant free amino acid in blood, used widely as a fuel.

Since your last sample: was 49.9 · -1.1

RELATED FOODS Beef Eggs Dairy Tofu White cabbage

Arginine	44.2 percentile		lower than 56%
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An amino acid and the substrate the body uses to make nitric oxide.

RELATED FOODS Pumpkin seeds Peanuts Soya beans Poultry Fish

Methionine	66.7 percentile		higher than 67%
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An essential sulfur-containing amino acid and the body's main methyl donor precursor.

RELATED FOODS Eggs Fish Brazil nuts Sesame seeds Poultry

Cysteine	47.8 percentile		lower than 52%
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A sulfur-containing amino acid and a building block of glutathione.

Since your last sample: was 51.3 · -3.5

RELATED FOODS Eggs Poultry Dairy Garlic Onions

Aspartic acid	69.8 percentile		higher than 70%
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An amino acid involved in the urea cycle and neurotransmission.

Since your last sample: was 71.6 · -1.8

RELATED FOODS Asparagus Avocado Beef Eggs Legumes

Asparagine	39.9 percentile		lower than 60%
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A non-essential amino acid used in protein synthesis.

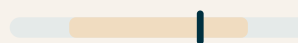
RELATED FOODS Asparagus Potatoes Eggs Dairy Beef

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory's estimates.

AMINO ACIDS AND RELATED METABOLITES, CONTINUED

Taurine

64.1 percentile



higher than 64%

An amino sulfonic acid involved in bile salt formation and cell hydration.

RELATED FOODS Shellfish Fish Poultry Red meat Dairy

Citrulline

34.7 percentile



lower than 65%

An amino acid produced in the urea cycle and by the gut lining.

Since your last sample: was 33.4 · +1.3

RELATED FOODS Watermelon Cucumber Pumpkin Bitter gourd

Betaine

53.6 percentile



higher than 54%

A methyl donor obtained from diet and from choline metabolism.

RELATED FOODS Wheat bran Beetroot Spinach Quinoa Shellfish

Spermidine

46.2 percentile



lower than 54%

A small molecule involved in cell growth and in processes that recycle components within cells.

RELATED FOODS Wheat germ Aged cheese Soya beans Mushrooms Peas

Cystathionine

41.5 percentile



lower than 59%

An intermediate formed when homocysteine is converted toward cysteine.

Homocitrulline

56.6 percentile



higher than 57%

An amino acid formed when lysine reacts with urea-derived cyanate.

Since your last sample: was 56.9 · -0.3

Dimethylarginine

54.7 percentile



higher than 55%

A methylated arginine derivative that competes with arginine in nitric oxide synthesis.

One combined figure for the symmetric and asymmetric forms.

Phenylacetylglutamine

31.6 percentile



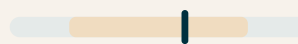
lower than 68%

A metabolite formed when gut bacteria process phenylalanine.

Since your last sample: was 31.7 · -0.1

Methionine sulfone

58.9 percentile



higher than 59%

An oxidised form of methionine.

Since your last sample: was 55.6 · +3.3

S-methylmethionine

40.4 percentile



lower than 60%

A methylated methionine derivative found in plant foods.

RELATED FOODS Cabbage Broccoli Asparagus Celery

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory's estimates.

AMINO ACIDS AND RELATED METABOLITES, CONTINUED

N-acetylcarnosine **41.0** percentile  lower than 59%

An acetylated form of the dipeptide carnosine.

N-acetylhistidine **62.0** percentile  higher than 62%

An acetylated form of the amino acid histidine.

N-acetylthreonine **51.9** percentile  higher than 52%

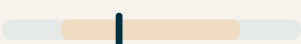
An acetylated form of the amino acid threonine.

Since your last sample: was 48.8 · +3.1

N-acetylvaline **24.3** percentile  lower than 76%

An acetylated form of the amino acid valine.

Since your last sample: was 25.9 · -1.6

N-carbamoylvaline **39.5** percentile  lower than 61%

A carbamoylated form of the amino acid valine.

Since your last sample: was 39.2 · +0.3

N6,N6-dimethyllysine **54.3** percentile  higher than 54%

A methylated lysine residue released when proteins are broken down.

Inflammation markers

Inflammation is part of the body's response to injury and infection. This group contains methylation-based estimates associated with proteins involved in that response.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80, unless a row states the laboratory's own range for that marker

MEASUREMENT	VALUE	COHORT POSITION	POSITION
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CRP ↑ Above range	83.6 percentile		higher than 84%
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A methylation-based estimate associated with C-reactive protein, an inflammation-related protein produced by the liver.

IL-6	47.9 percentile		lower than 52%
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A methylation-based estimate associated with interleukin-6, a signalling protein involved in inflammation.

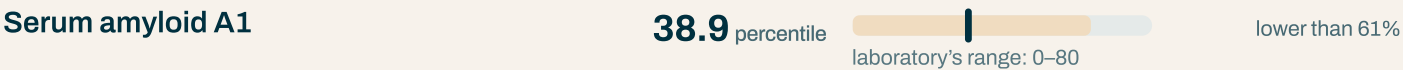
Since your last sample: was 50.3 · -2.4

Glycoprotein acetyls	40.9 percentile		lower than 59%
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A combined signal associated with sugar-bearing proteins in blood.

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory's estimates.

INFLAMMATION MARKERS, CONTINUED



An acute-phase protein released during the inflammatory response.



An enzyme released by neutrophils during the immune response.

Immune cell profile

White blood cells have different roles in recognising and responding to threats. These rows contain methylation-based estimates related to cell populations, counts and ratios. Two kinds of row sit together here: a share of the white-cell population, and an estimated count of one cell type. They answer different questions, so the same cell type can sit high on one and low on the other.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80, unless a row states the laboratory's own range for that marker

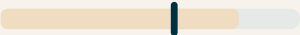
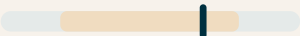
MEASUREMENT	VALUE	COHORT POSITION	POSITION
White blood cell count	21.5 percentile	<div></div>	lower than 79%
The total number of white blood cells, the cells of the immune system. <i>Since your last sample: was 23.3 · -1.8</i>			
Neutrophil count	56.1 percentile	<div></div>	higher than 56%
The number of neutrophils, the most abundant white blood cell. <i>Since your last sample: was 58.8 · -2.7</i>			
Lymphocyte count	52.7 percentile	<div></div>	higher than 53%
The number of lymphocytes, a class of immune cell.			
Neutrophil to lymphocyte ratio	43.1 percentile	<div></div> <div>laboratory's range: 0–80</div>	lower than 57%
Compares two white-cell populations estimated from the same sample.			
CD4/CD8 T cell ratio	52.3 percentile	<div></div> <div>laboratory's range: 30–80</div>	higher than 52%
Compares two T cell populations estimated from the same sample.			
Systemic immune-inflammation index	45.3 percentile	<div></div> <div>laboratory's range: 0–80</div>	lower than 55%
A methylation-based estimate related to an index conventionally calculated from platelet, neutrophil and lymphocyte counts.			

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory's estimates.

Liver, kidney and blood-cell markers

This group brings together substances processed by the liver and kidneys, along with red-blood-cell characteristics. The values are methylation-based estimates associated with those measurements.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80, unless a row states the laboratory's own range for that marker

MEASUREMENT	VALUE	COHORT POSITION	POSITION
Urate A product of purine breakdown, cleared by the kidneys.	59.6 percentile		higher than 60%
Cystatin C A protein produced at a steady rate by most cells and cleared by the kidneys.	58.3 percentile	laboratory's range: 0–80 	higher than 58%
Xanthine An intermediate in the breakdown of purines. <i>Since your last sample: was 61.2 · -4.0</i>	57.2 percentile		higher than 57%
Allantoin An oxidation product formed when urate reacts with oxidants. <i>Since your last sample: was 64.5 · +3.5</i>	68.0 percentile		higher than 68%

Vitamins, cofactors and antioxidants

Vitamins and cofactors help enzymes work; antioxidants participate in reactions that manage oxidation. These rows contain methylation-based estimates associated with those compounds and their breakdown products.

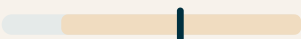
Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80, unless a row states the laboratory's own range for that marker · Related foods name sources of the substance, never a change to make

MEASUREMENT	VALUE	COHORT POSITION	POSITION
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Cholecalciferol (vitamin D) ↓ Below range	17.5 percentile	 laboratory's range: 20–98	lower than 83%
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Vitamin D3, obtained from sunlight exposure and diet.

RELATED FOODS Oily fish Cod liver oil Egg yolk Fortified spreads

Retinol (vitamin A)	59.7 percentile	 laboratory's range: 20–100	higher than 60%
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Vitamin A, used in vision, immune function and cell growth.

Since your last sample: was 61.5 · **-1.8**

RELATED FOODS Liver Cod liver oil Butter Cheese Egg yolk

Alpha-tocopherol	55.2 percentile	 laboratory's range: 20–100	higher than 55%
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The main circulating form of vitamin E, a fat-soluble antioxidant.

Since your last sample: was 54.4 · **+0.8**

RELATED FOODS Sunflower seeds Almonds Wheat germ oil Spinach Olive oil

Ascorbic acid 2-sulfate	51.1 percentile	 laboratory's range: 20–100	higher than 51%
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A sulfated metabolite of vitamin C.

Since your last sample: was 52.8 · **-1.7**

RELATED FOODS Citrus fruit Blackcurrants Peppers Broccoli Strawberries

Ascorbic acid 3-sulfate	42.1 percentile	 laboratory's range: 20–100	lower than 58%
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A sulfated metabolite of vitamin C.

Since your last sample: was 40.6 · **+1.5**

RELATED FOODS Citrus fruit Blackcurrants Peppers Broccoli Strawberries

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory's estimates.

VITAMINS, COFACTORS AND ANTIOXIDANTS, CONTINUED

Riboflavin (vitamin B2)

56.9 percentile



higher than 57%

Vitamin B2, a cofactor in energy metabolism.

RELATED FOODS Liver Milk Eggs Almonds Mushrooms

Nicotinamide

40.3 percentile



lower than 60%

A form of vitamin B3 used to make NAD, a molecule involved in cellular energy reactions.

Since your last sample: was 37.5 · +2.8

RELATED FOODS Liver Poultry Tuna Peanuts Mushrooms

Nicotinamide riboside

53.4 percentile



higher than 53%

A vitamin B3-related compound used to make NAD, a molecule involved in cellular energy reactions.

RELATED FOODS Cow's milk Whey Brewer's yeast

Pantothenic acid (vitamin B5)

74.3 percentile



higher than 74%

Vitamin B5, a precursor of coenzyme A in energy metabolism.

RELATED FOODS Liver Mushrooms Avocado Sunflower seeds Eggs

Pyridoxine (vitamin B6)

55.3 percentile



higher than 55%

Vitamin B6, a cofactor in amino acid and neurotransmitter metabolism.

RELATED FOODS Chickpeas Salmon Poultry Bananas Potatoes

Lutein

58.9 percentile



higher than 59%

A carotenoid concentrated in the retina, obtained from the diet.

RELATED FOODS Kale Spinach Sweetcorn Peas Egg yolk

Carotene diol

53.4 percentile



higher than 53%

A carotenoid found in the diet and carried in the blood.

RELATED FOODS Kale Spinach Sweetcorn Egg yolk

N1-methyl-2-pyridone-5-carboxamide

59.2 percentile



higher than 59%

A product the body forms as it breaks nicotinamide down and clears it.

RELATED FOODS Liver Poultry Tuna Peanuts Wholegrains

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory's estimates.

VITAMINS, COFACTORS AND ANTIOXIDANTS, CONTINUED

Ergothioneine

37.9 percentile  lower than 62%

A sulfur-containing compound obtained from the diet, notably mushrooms.

Since your last sample: was 40.5 · -2.6

RELATED FOODS

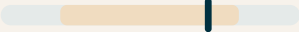
- Shiitake mushrooms
- Oyster mushrooms
- Black beans
- Oat bran
- Tempeh

Glutathione peroxidase 1

66.4 percentile  higher than 66%

A selenium-dependent enzyme that neutralises peroxides.

G6PD

69.4 percentile  higher than 69%

Glucose-6-phosphate dehydrogenase, an enzyme protecting cells from oxidative stress.

Neurological and neurotransmitter markers

This group contains compounds involved in nerve-cell signalling and related metabolic pathways. The values are methylation-based estimates.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80, unless a row states the laboratory’s own range for that marker

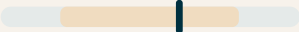
MEASUREMENT	VALUE	COHORT POSITION	POSITION
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Dopamine 3-O-sulfate

55.5 percentile  higher than 56%

A sulfated metabolite of dopamine.

Vanillylmandelic acid

59.9 percentile  higher than 60%

The main end product of adrenaline and noradrenaline breakdown.

Vanillic acid

65.4 percentile  higher than 65%

A metabolite of aromatic amino acid breakdown.

Since your last sample: was 61.4 · +4.0

Kynurenine

41.0 percentile  lower than 59%
laboratory’s range: 2–80

The first major product of tryptophan breakdown.

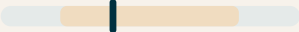
Since your last sample: was 37.9 · +3.1

Quinolinic acid

43.6 percentile  lower than 56%

A product of tryptophan breakdown on the pathway to NAD, a molecule involved in cellular energy reactions.

Neurogranin

37.6 percentile  lower than 62%

A protein concentrated in neurons and involved in synaptic signalling.

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory’s estimates.

NEUROLOGICAL AND NEUROTRANSMITTER MARKERS, CONTINUED

Progranulin

58.5 percentile

higher than 59%

A growth factor involved in tissue repair and cell signalling.

Since your last sample: was 60.6 · -2.1

VGF

41.5 percentile

lower than 59%

A protein precursor from which several nerve-signalling peptides are made.

Tissue and cellular proteins

Cells use proteins to make energy, organise DNA, maintain their surroundings and communicate. These rows group methylation-based estimates associated with those proteins.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80

MEASUREMENT	VALUE	COHORT POSITION	POSITION	SINCE LAST SAMPLE
Transforming growth factor beta	56.6 percentile	<div><div></div><div></div><div></div></div>	higher than 57%	<div><div></div></div> <div>was 59.0 · -2.4</div>
ATP synthase subunit beta	50.2 percentile	<div><div></div><div></div><div></div></div>	higher than 50%	
Heat shock protein 90-alpha	26.9 percentile	<div><div></div><div></div><div></div></div>	lower than 73%	<div><div></div></div> <div>was 30.1 · -3.2</div>
Dynamin-1-like protein	43.2 percentile	<div><div></div><div></div><div></div></div>	lower than 57%	<div><div></div></div> <div>was 46.2 · -3.0</div>

Environmental and lifestyle exposure markers

Methylation-based estimates associated with environmental compounds, tobacco and alcohol.

Bars run 0–100, a percentile among people of the same age and sex · the shaded span is the middle 60% of the cohort, 20–80, unless a row states the laboratory's own range for that marker

MEASUREMENT	VALUE	COHORT POSITION	POSITION
Bone lead estimate	77.2 percentile	<div><div></div></div> laboratory's range: 0–80	higher than 77%
A methylation-based prediction associated with lead accumulated in bone.			
Glyphosate ↑ Above range	85.1 percentile	<div><div></div></div> laboratory's range: 0–80	higher than 85%
Glyphosate is a herbicide. This row is a methylation-based estimate associated with it.			
PFOS	49.9 percentile	<div><div></div></div> laboratory's range: 0–80	lower than 50%
Perfluorooctanesulfonic acid (PFOS) is a persistent industrial compound. This row is a methylation-based estimate associated with it.			
PFOA	38.0 percentile	<div><div></div></div> laboratory's range: 0–80	lower than 62%
Perfluorooctanoic acid (PFOA) is a persistent industrial compound. This row is a methylation-based estimate associated with it.			
Hydroxypropylmercapturic acid	47.0 percentile	<div><div></div></div> laboratory's range: 0–80	lower than 53%
A product the body forms as it clears acrolein, a compound found in tobacco smoke, some cooking fumes and vehicle exhaust. Since your last sample: was 46.0 · +1.0			
2-hydroxyfluorene sulfate	49.8 percentile	<div><div></div></div>	lower than 50%
A sulfated metabolite of polycyclic aromatic hydrocarbons.			

Foods that come up

Polyphenol-rich foods	Berries, dark chocolate, green tea, olive oil, coffee.
Cruciferous vegetables	Broccoli, Brussels sprouts, kale, cauliflower, watercress.
Oily fish	Salmon, mackerel, sardines and anchovies: sources of the long-chain omega-3 fatty acids this report measures.

Sample processed and analysed by TruDiagnostic. Lola presents the laboratory's estimates.

Fermented foods	Kimchi, sauerkraut, kefir, live yoghurt, miso.
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Pulses and whole grains	Lentils, chickpeas, beans, oats, barley, rye.
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Compounds discussed in ageing research

Spermidine	A polyamine found in wheat germ, aged cheese, mushrooms and soy products, and sold as a supplement.
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Nicotinamide mononucleotide (NMN) and nicotinamide riboside (NR)	Two forms of vitamin B3 precursor studied in relation to cellular energy metabolism.
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Quercetin and related senolytics	A flavonoid found in onions, apples and capers, studied alongside other compounds in the senescent-cell literature.
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How these numbers are produced

WHAT DNA METHYLATION IS

Your DNA sequence stays the same throughout your life. Methylation is a chemical tag the body adds on top of it, and the pattern of those tags changes with age, environment and behaviour. The laboratory reads that pattern at around a million positions from one sample.

How to read this report

Reference for the pages above: how these estimates are produced, who each percentile compares you with, and how to read the bar.

WHY THESE ARE NOT BLOOD LEVELS

Many rows carry the name of a substance, such as a vitamin, a cholesterol fraction or an inflammatory protein. Each value is what the methylation pattern predicts for that substance. The pattern moves more slowly than a level in blood, so the figure can differ from a conventional blood test taken the same day. The fitness rows read the same way: a figure in kilograms, litres or metres per second is what the methylation pattern predicts a grip, breathing or walking test would record.

WHO THIS SAMPLE IS COMPARED WITH

Every percentile here compares your sample with people of the same sex and a similar age, within five years either way, drawn from a reference set the laboratory built from the Mass General Brigham Biobank and TruDiagnostic cohorts and put together to stand in for a population of ordinary health.

HOW TO READ THE PERCENTILE

A percentile places this sample among people of the same age and sex. A percentile of 61 means the measurement is higher than 61 per cent of them and lower than the remaining 39 per cent. It is a position among other people, not a score.

THE SHADED BAND ON EACH BAR

Where the laboratory publishes its own range for a marker, the bar is drawn against that range and prints the numbers it was drawn with. Where it publishes none, the shaded span covers the 20th to 80th percentile instead: the middle 60 per cent of the reference cohort, which describes where most of that group falls rather than a range anyone published. Above the 80th percentile the measurement is higher than 80 per cent of that group; below the 20th it is lower than 80 per cent of them. Neither end of the scale is a target.

A WORKED EXAMPLE

A measurement whose percentile is 61.3 puts the mark just past the middle of the bar, and the position column reads “higher than 61%”, meaning 61 per cent of the cohort measured lower. The same measurement at percentile 8 would put the mark near the left end, and the column would read “lower than 92%”. Both are the same number said in words.

HOW TO READ CHANGE OVER TIME

A change is shown only where an earlier sample exists for the same measurement, and a chart is drawn only for those. A single sample has nothing to compare against, so nothing is shown. Sampling, laboratory variation and model differences all move a number between two runs, so a small change is within what the method itself varies by.