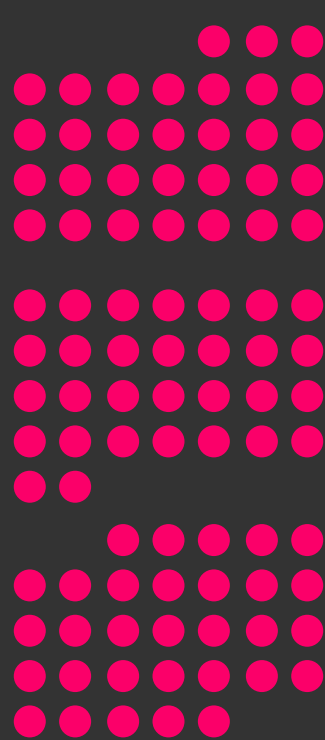


A1C

The A1C test is a blood test used to diagnose diabetes and assess how well someone is managing their diabetes.



YOUR A1C VALUE

is a number that reflects your **average blood glucose (BG)** over the past 2-3 months*



Red blood cells live 2-3 months, so A1C reflects the hemoglobin's exposure to glucose over that time.

Glucose

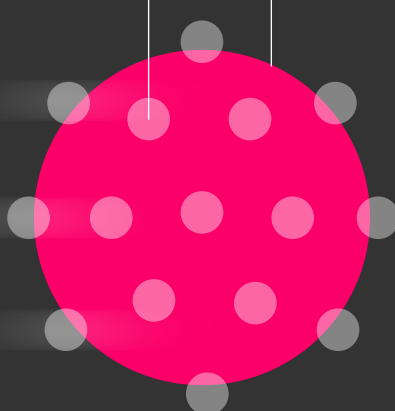
is a sugar that enters your bloodstream from the foods you eat.

Hemoglobin

is a protein in your red blood cells that carries oxygen throughout your body.

The foods we eat contribute to increased glucose levels in the blood.

The higher the glucose, the more glucose is attached to hemoglobin.



A1C

measures the total amount of glucose that has attached to your hemoglobin over time.

This amount is reflected as a percentage (e.g., 7.0%) or as a ratio (e.g., 53 mmol/mol).

$$\text{Avg. BG (mg/dL)} = 28.7 \times \text{A1C(\%)} - 46.7$$

$$\text{A1C (mmol/mol)} = 10.93 \times \text{A1C(\%)} - 23.5$$

A1C to Average BG conversion table

No diabetes

A1C (%)	BG (mg/dL)	BG (mmol/L)	A1C (mmol/mol)
5.0	97	5.4	31
5.1	100	5.5	32
5.2	103	5.7	33
5.3	105	5.9	34
5.4	108	6.0	36
5.5	111	6.2	37
5.6	114	6.3	38

Pre-diabetes

A1C (%)	BG (mg/dL)	BG (mmol/L)	A1C (mmol/mol)
5.7	117	6.5	39
5.8	120	6.6	40
5.9	123	6.8	41
6.0	126	7.0	42
6.1	128	7.1	43
6.2	131	7.3	44
6.3	134	7.4	45
6.4	137	7.6	46

Diabetes

A1C (%)	BG (mg/dL)	BG (mmol/L)	A1C (mmol/mol)
6.5	140	7.8	48
6.6	143	7.9	49
6.7	146	8.1	50
6.8	148	8.2	51
6.9	151	8.4	52
7.0	154	8.6	53
7.1	157	8.7	54
7.2	160	8.9	55
7.3	163	9.0	56
7.4	166	9.2	57
7.5	169	9.4	58
7.6	171	9.5	60
7.7	174	9.7	61
7.8	177	9.8	62
7.9	180	10.0	63
8.0	183	10.2	64
8.1	186	10.3	65
8.2	189	10.5	66
8.3	192	10.6	67
8.4	194	10.8	68
8.5	197	10.9	69
8.6	200	11.1	70

A1C (%)	BG (mg/dL)	BG (mmol/L)	A1C (mmol/mol)
8.7	203	11.3	72
8.8	206	11.4	73
8.9	209	11.6	74
9.0	212	11.7	75
9.1	214	11.9	76
9.2	217	12.1	77
9.3	220	12.2	78
9.4	223	12.4	79
9.5	226	12.5	80
9.6	229	12.7	81
9.7	232	12.9	83
9.8	235	13.0	84
9.9	237	13.2	85
10.0	240	13.3	86
10.1	243	13.5	87
10.2	246	13.7	88
10.3	249	13.8	89
10.4	252	14.0	90
10.5	255	14.1	91
10.6	258	14.3	92
10.7	260	14.5	93
10.8	263	14.6	95
10.9	266	14.8	96

A1C (%)	BG (mg/dL)	BG (mmol/L)	A1C (mmol/mol)
11.0	269	14.9	97
11.1	272	15.1	98
11.2	275	15.3	99
11.3	278	15.4	100
11.4	280	15.6	101
11.5	283	15.7	102
11.6	286	15.9	103
11.7	289	16.0	104
11.8	292	16.2	105
11.9	295	16.4	107
12.0	298	16.5	108
12.1	301	16.7	109
12.2	303	16.8	110
12.3	306	17.0	111
12.4	309	17.2	112
12.5	312	17.3	113
12.6	315	17.5	114
12.7	318	17.6	115
12.8	321	17.8	116
12.9	324	18.0	117
13.0	326	18.1	119
13.1	329	18.3	120

The term "A1C" is shorthand for "HbA1c" and "glycated hemoglobin." Hemoglobin is "glycated" when glucose becomes chemically attached to hemoglobin molecules in the blood.

References:

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