

Patient questionnaire

By conducting the two-part diabetes risk score developed by the German Institute of Human Nutrition (DIfE), it is possible to estimate the personal risk of a patient for developing type 2 diabetes within the next 5 years.

Age

How old are you (years)?

<input type="checkbox"/> <35	0 points	<input type="checkbox"/> 55-59	13 points
<input type="checkbox"/> 35-39	1 point	<input type="checkbox"/> 60-64	16 points
<input type="checkbox"/> 40-44	4 points	<input type="checkbox"/> 65-69	19 points
<input type="checkbox"/> 45-49	7 points	<input type="checkbox"/> 70-74	22 points
<input type="checkbox"/> 50-54	10 points	<input type="checkbox"/> ≥ 75	25 points

Physical activity

Are you physically active at least 5 hours a week? (e.g., sport, gardening, cycling)

<input type="checkbox"/> No	1 point	<input type="checkbox"/> Yes	0 points
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High blood pressure

Have you ever been told by a doctor that you have high blood pressure?

<input type="checkbox"/> No	0 points	<input type="checkbox"/> Yes	5 points
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Consumption of whole grain bread/rolls and muesli

How many slices of whole grain bread/rolls and portions of muesli (1 portion = 3 tablespoons) do you eat daily?

<input type="checkbox"/> 0	5 points	<input type="checkbox"/> 3	2 points
<input type="checkbox"/> 1	4 points	<input type="checkbox"/> 4	1 point
<input type="checkbox"/> 2	3 points	<input type="checkbox"/> >4	0 points

Consumption of meat

How often do you eat beef, pork or lamb (not processed meat like hot dogs, bacon, sausage, or salami)?

<input type="checkbox"/> Never or rarely	0 points
<input type="checkbox"/> 1-2 times per week	1 point
<input type="checkbox"/> 3-4 times per week	3 points
<input type="checkbox"/> 5-6 times per week	5 points
<input type="checkbox"/> Daily	6 points
<input type="checkbox"/> Several times a day	8 points

Coffee

How many cups of coffee do you drink per day?

<input type="checkbox"/> 0-1	3 points
<input type="checkbox"/> 2-5	2 points
<input type="checkbox"/> >5	0 points

Smoking

What is your smoking status?

<input type="checkbox"/> I never smoked.	0 points
<input type="checkbox"/> I used to smoke on average less than 20 cigarettes a day.	1 point
<input type="checkbox"/> I used to smoke on average 20 or more cigarettes a day.	5 points
<input type="checkbox"/> I smoke on average less than 20 cigarettes a day.	2 points
<input type="checkbox"/> I smoke on average 20 or more cigarettes a day.	8 points

Height

What is your height in centimetres?

<input type="checkbox"/> < 152	11 points	<input type="checkbox"/> 176-183	3 points
<input type="checkbox"/> 152-159	9 points	<input type="checkbox"/> 184-191	1 point
<input type="checkbox"/> 160-167	7 points	<input type="checkbox"/> ≥ 192	0 points
<input type="checkbox"/> 168-175	5 points		

Waistline

What is your waist in centimetres?

<input type="checkbox"/> <75	0 points	<input type="checkbox"/> 100-104	24 points
<input type="checkbox"/> 75-79	4 points	<input type="checkbox"/> 105-109	28 points
<input type="checkbox"/> 80-84	8 points	<input type="checkbox"/> 110-114	32 points
<input type="checkbox"/> 85-89	12 points	<input type="checkbox"/> 115-119	36 points
<input type="checkbox"/> 90-94	16 points	<input type="checkbox"/> ≥ 120	40 points
<input type="checkbox"/> 95-99	20 points		

Diabetes in the family

Have your parents been diagnosed with type 2 diabetes?

<input type="checkbox"/> No, or I don't know.	0 points
<input type="checkbox"/> Yes, one parent has type 2 diabetes.	6 points
<input type="checkbox"/> Yes, both parents have type 2 diabetes.	11 points

Have at least one of your siblings been diagnosed with type 2 diabetes?

<input type="checkbox"/> No, or I don't know.	0 points
<input type="checkbox"/> Yes, at least one of my siblings has type 2 diabetes.	6 points

Add up the number of points corresponding to the answers given.

SUM

points

By using the following tables
you can determine the patient's diabetes risk.

Evaluating the diabetes risk based on DRS points

DRS points	< 46	46-56	57-63	> 63
diabetes risk	low	still low	elevated	high to very high

In order to determine the diabetes risk more accurately and to rule out the possibility of a clinically manifest diabetes in patients with more than 57 points, the HbA_{1c} or fasting blood sugar level should also be determined.

Risk evaluation based on DRS points plus HbA_{1c} or fasting glucose test

HbA _{1c} / fasting glucose	DRS points			
	< 46	46-56	57-63	> 63
5.7-6.4% (39-46 mmol/mol) / 100-125 mg/dl (5.6-6.9 mmol/l)	still low	elevated	high to very high	high to very high
< 5.7% (< 39 mmol/mol) / < 100 mg/dl (< 5.6 mmol/l)	low	still low	elevated	high to very high

Disease probability within 5 years

Of 100 individuals with the data given, x individuals will develop type 2 diabetes within the next 5 years.

determined risk	x diseased individuals
low risk	< 2
still low risk	approx. 2-5
elevated risk	approx. 6-10
high to very high risk	> 10

Recommendations for action

- 1) The patient should be informed of the significance of the test results.
- 2) Patients with an "elevated" risk should be advised on modifiable risk factors, especially as to waist circumference, nutrition, smoking behaviour and physical activity (see the additional Information sheet "Factors that influence the risk of type 2 diabetes"). A follow-up examination should be carried out after a maximum of 3 years.
- 3) In patients with a "high to very high" risk – depending on their risk profile – measures should be taken towards weight reduction (waist circumference as target parameter), dietary changes (increasing whole-grain consumption, decreasing meat consumption), ways to quit smoking and increasing physical activity. A follow-up examination should be carried out after 1 year.
- 4) In the case of clinically manifest diabetes (HbA_{1c} ≥ 6.5%, equivalent to 48 mmol/mol; fasting blood sugar ≥ 126 mg/dl, equivalent to 7.0 mmol/l), a lifestyle intervention should be carried out as well. At the same time, a decision should be made on appropriate medication intervention.