

Diabetes Risk Assessment v3

Client Review Document

Overview

The Diabetes Risk Assessment is an online screening application that identifies people at high risk for undiagnosed type 2 diabetes and prediabetes. It also provides educational content about risk factors for developing type 2 diabetes and health complications related to diabetes.

Main Scientific Basis

People at high risk for undiagnosed diabetes or prediabetes should be evaluated by a clinician. This risk is estimated using a screening score developed by Bang and colleagues in 2009.¹ Other independent factors that increase the risk of developing diabetes or its complications come from the 2019 ADA Standards of Medical Care in Diabetes.²

Product Description

The Diabetes Risk Assessment screens for individuals at high risk of undiagnosed high blood sugar. It does not diagnose diabetes or prediabetes.

It takes approximately five minutes to answer the questions included in the application. Answers determine the risk of undiagnosed high blood sugar and the severity of independent risk factors for developing diabetes or its complications.

Key Results Provided (Client Portal)

Although this application is not designed specifically for people with type 1 or type 2 diabetes, they can complete the assessment and receive relevant, personalized results. The primary result for these individuals is categorized as “existing diabetes” in the Client Portal. Primary messaging is based on the following self-reported data:

- Those whose A1C is within the recommended range
- Those whose A1C is not within the recommended range
- Those who do not know their A1C

The Bang¹ screening score identifies people at high risk for undiagnosed diabetes (score of 5 or greater) and those at high risk for undiagnosed prediabetes (score of 4). The Diabetes Risk Assessment categorizes all individuals with a score of 4 or greater as “very high risk” in the Client Portal. The primary messaging for these people is to get a clinical evaluation for diabetes.

Individuals without diabetes and with a score of less than 4 using the Bang algorithm are categorized in the Client Portal as follows:

- History of gestational diabetes or prediabetes; categorized as “high risk”

- Report of other diabetes risk factor(s); categorized as “moderate risk”
- Unable to answer all of the risk factor questions; categorized as “more info needed”
- All remaining people; categorized as “low risk”

The primary messaging for people identified in the first 3 bullets is to discuss the results with a clinician. For people at low risk, the primary message is to begin routine blood sugar testing at age 45 (or earlier if indicated).

Follow-up messaging, emails, and programs can be developed to align with all of these categories.

Diabetes Risk Factors

People who complete the online assessment are informed that these risk factors impact the chance of developing diabetes, prediabetes, or complications of diabetes:^{1,2,3}

- High A1C or fasting blood sugar
- Gestational diabetes
- Family history of diabetes in parent or sibling
- Older age
- Male sex
- Overweight or a larger waist size*
- High blood pressure
- Abnormal cholesterol
- Physical inactivity
- History of smoking

*Sex- and ethnicity-based cut points for BMI and waist size are applied throughout the application. Asian-American men and women have lower cut points for both measures.^{3,4}

References

1. Bang H, Edwards AM, Bombback AS, et al. Development and validation of a patient self-assessment score for diabetes risk. *Ann Intern Med.* 2009;151:775-783.
<https://doi.org/10.7326/0003-4819-151-11-200912010-00005>
2. American Diabetes Association. Classification and Diagnosis of Diabetes: Standards of Medical Care in Diabetes - 2019. *Diabetes Care.* 2019;42(Supplement 1): S13-S28.
<https://doi.org/10.2337/dc19-S002>.
3. Hsu WC, Araneta MRG, Kanaya AM, Chiang JL, Fujimoto W. BMI Cut Points to Identify At-Risk Asian Americans for Type 2 Diabetes Screening. *Diabetes Care.* 2015;38:150–158. doi: <https://doi.org/10.2337/dc14-2391>.
4. Grundy SM, Cleeman JI, Daniels SR, et al. Diagnosis and management of the metabolic syndrome: an American Heart Association/National Heart, Lung, and Blood Institute Scientific Statement. *Circulation.* 2005;112:2735-2752