Please note: Recommendations are presented for screening asymptomatic adults for type 2 diabetes using blood tests. These recommendations do not apply to adults already diagnosed with type 2 diabetes, those at risk for type 1 diabetes, or those with symptoms of diabetes. Symptoms of diabetes include: unusual thirst, frequent urination, weight change (gain or loss), extreme fatigue or lack of energy, blurred vision, frequent and recurring infections, cuts and bruises that are slow to heal, and/or tingling or numbness in the hands or feet.

### SCREENING FOR TYPE 2 DIABETES IN THE ADULT POPULATION

2012

**Instructions**

1. Using the Risk Calculator below, determine your patient’s risk. Then continue to page 2 for further instructions. Please note that there is a corresponding Type 2 Diabetes Risk Calculator for Patients.

Please note: Recommendations are presented for screening asymptomatic adults for type 2 diabetes using blood tests. These recommendations do not apply to adults already diagnosed with type 2 diabetes, those at risk for type 1 diabetes, or those with symptoms of diabetes. Symptoms of diabetes include: unusual thirst, frequent urination, weight change (gain or loss), extreme fatigue or lack of energy, blurred vision, frequent and recurring infections, cuts and bruises that are slow to heal, and/or tingling or numbness in the hands or feet.

### Type 2 Diabetes Risk Calculator for Clinicians

1. **How old is your patient?**
   - 18-44 years (0 points)
   - 45-54 years (2 points)
   - 55-64 years (3 points)
   - 65 years and older (4 points)

2. **What is your patient’s body-mass index (BMI)/BMI category?** - (See Appendix 1 for a BMI chart or visit www.bmi-calculator.net for a BMI calculator.)
   - Normal (Lower than 25.0 kg/m²) (0 points)
   - Overweight (25.0-29.9 kg/m²) (1 point)
   - Obese (30.0 kg/m² or higher) (3 points)

3. **What is your patient’s waist circumference?**
   Waist circumference is measured below the ribs (usually at the level of the navel).
   - **MEN**
     - Less than 94 cm (less than ~37 inches) (0 points)
     - 94-102 cm (~37-40 inches) (3 points)
     - More than 102 cm (more than ~40 inches) (4 points)
   - **WOMEN**
     - Less than 80 cm (less than ~31 inches) (0 points)
     - 80-88 cm (~31-35 inches) (3 points)
     - More than 88 cm (more than ~35 inches) (4 points)

4. **Is your patient physically active for more than 30 minutes every day? This includes physical activity during work, leisure, or regular daily routine.**
   - Yes (0 points)
   - No (2 points)

5. **How often does your patient eat vegetables and fruits?**
   - Every day (0 points)
   - Not every day (1 point)

6. **Has your patient ever taken medication for high blood pressure on a regular basis?**
   - No (0 points)
   - Yes (2 points)

7. **Has your patient ever been found to have high blood glucose (e.g. in a health examination, during an illness, during pregnancy)?**
   - No (0 points)
   - Yes (5 points)

8. **Have any members of your patient’s immediate family or other relatives been diagnosed with diabetes (type 1 or type 2)? This question applies to blood relatives only.**
   - No (0 points)
   - Yes: grandparent, aunt, uncle, or first cousin (but not own parent, brother, sister, or child) (3 points)
   - Yes: parent, brother, sister, or own child (5 points)

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1. Source: Finnish Diabetes Risk Score (FINDRISC) questionnaire by Adjunct Professor Jaana Lindström, Diabetes Prevention Unit, Department of Chronic Disease Prevention, National Institute for Health and Welfare, Helsinki, Finland and Professor Jaakko Tuomilehto, Center for Vascular Prevention, Danube-University Krems, Krems, Austria
SCREENING FOR TYPE 2
DIABETES
IN THE ADULT POPULATION
2012

INSTRUCTIONS

1) Add up points from the previous page to determine your PATIENT’S TOTAL RISK SCORE: _____ POINTS

2) Use your patient’s results from the risk calculator in the flow chart below to determine the Canadian Task Force on Preventive Health Care (CTFPHC)’s screening recommendations.

Total Risk Score

- Low to Moderate Risk
  - 0-14 points
    - 1-17% chance of developing diabetes within 10 years
    - We recommend not screening for type 2 diabetes.

- High Risk
  - 15-20 points
    - 33% chance of developing diabetes within 10 years
    - We recommend screening every 3-5 years with A1C.*

- Very High Risk
  - 21+ points
    - 50% chance of developing diabetes within 10 years
    - We recommend annual screening with A1C.*

RISK CALCULATOR

The CTFPHC selected FINDRISC as the preferred risk questionnaire because it has been validated, has similar test accuracy to the Canadian Diabetes Risk Questionnaire: CANRISK. Its use has led to improved patient important outcomes (e.g. reduced incidence of diabetes when combined with an educational intervention). Patient important outcomes are outcomes that are of particular relevance to and valued by patients, including things like quality of life, pain control or other symptom relief, etc. The literature review did not identify any studies reporting on the impact of CANRISK on patient important outcomes. CANRISK has only been validated in a cross sectional convenience sample of patients and is longer than FINDRISC. There is no evidence to guide the optimal frequency of risk calculation. Based on evidence for screening interval, the CTFPHC suggests risk calculation at least every 3-5 years for adults 18+ years of age.

FINDRISC QUESTIONNAIRE: www.diabetes.fi/files/1100/Type2diabetesRiskTest_.jpg

SCREENING TEST

*The CTFPHC selected A1C as the preferred screening test, but noted that the fasting glucose measurement and the glucose tolerance test are acceptable alternatives. A1C is commonly referred to as glycated hemoglobin, glycosylated hemoglobin, hemoglobin A1c, HbA1c, Hb1c, or HbA1c. A1C of 6.5% is recommended as the cut point for diagnosing diabetes but a value less than 6.5% does not exclude diabetes diagnosed using glucose tests. A1C should be measured using a standardized, validated assay.