Prediabetes Care

Purpose
To promote the early detection and management of prediabetes and prevention/delay of type 2 diabetes for adults.

Defining Prediabetes
Individuals considered as having prediabetes have one of the following:
1. Fasting plasma blood glucose in the 100-125 mg/dl range are considered as having impaired fasting glucose (IFG);
2. Impaired glucose tolerance (IGT) if at two-hours of an oral glucose (75 grams) tolerance test individuals have a blood glucose of 140-199 mg/dl; or
3. Individuals with a Hemoglobin A1c of 5.7 to 6.4%.

Key Messages
- 79 million Americans—35% of adults aged 20 years and older—have prediabetes.
- Half of all Americans aged 65 years and older have prediabetes.
- Without lifestyle changes to improve their health, 15% to 30% of people with prediabetes will develop type 2 diabetes within 5 years.
- While there are not local estimates about the proportion of the population with pre-diabetes, statewide an estimated 25% have this condition.

Key Recommendations*
Who should get screened:
- Testing to detect type 2 diabetes and prediabetes in asymptomatic people should be considered in adults of any age who are overweight or obese (BMI ≥ 25 kg/m2) or Asian Americans with BMI ≥ 23 kg/m2 and who have one or more additional risk factors for diabetes:
    o Physical inactivity
    o First-degree relative with diabetes
    o Member of a high-risk racial/ethnic group (i.e. African American, Latino, Native American, Asian American, Pacific Islanders)
    o GDM or history of baby ≥ 9 lb
    o Hypertension (≥ 140/90 mmHg or on therapy for hypertension)
    o HDL cholesterol level <35 mg/dL (0.90 mmol/L) and/or a triglyceride level >250 mg/dL (2.82 mmol/L)
    o Polycystic ovarian syndrome
    o A1C ≥ 5.7%, IGT, or IFG on previous testing
    o Other clinical conditions associated with insulin resistance (e.g. severe obesity, acanthosis nigricans)
    o History CVD
  In those without these risk factors, testing should begin at age 45 years. *(B)*
- Women with a history of Gestational diabetes mellitus (GDM) should have lifelong screening for the development of diabetes or prediabetes at least every 3 years. *(B)*

Testing:
- To test for diabetes or prediabetes, the A1C, FPG, or 2-h 75-g OGTT are appropriate. *(B)*
- If test results are normal, repeat testing at least at 3-year intervals is reasonable. *(C)*

Prevention/Delay of Type 2 Diabetes:
- At least annual monitoring for the development of diabetes in those with prediabetes is suggested. *(E)*
- Women with a history of Gestational diabetes mellitus (GDM) found to have prediabetes should receive lifestyle interventions or metformin to prevent diabetes. *(A)*
- Patients with impaired glucose tolerance (IGT) *(A)*, impaired fasting glucose (IFG) *(E)*, or an A1C 5.7–6.4% *(E)* should be referred to an effective ongoing support program targeting weight loss of 7% of body weight and increasing physical activity to at least 150 min/week of moderate activity such as walking.
- Follow-up counseling appears to be important for success. *(B)*

A=clear evidence from well-conducted, generalizable randomized control trials; B=supportive evidence from well-conducted cohort studies; C=supportive evidence from poorly controlled or uncontrolled studies; E=expert consensus or clinical experience

Guidelines are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines should be followed in most cases, but there is an understanding that, depending on the patient, the setting, the circumstances, or other factors, care can and should be tailored to fit individual needs.

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Treatment Plan:

- Among individuals at high risk for developing type 2 diabetes, structured programs that emphasize lifestyle changes that include moderate weight loss (7% of body weight) and regular physical activity (150 min/week), with dietary strategies including reduced calories and reduced intake of dietary fat, can reduce the risk for developing diabetes and are therefore recommended. *(A)*
- Metformin therapy for prevention of type 2 diabetes may be considered in those with impaired glucose tolerance (IGT) *(A)*, impaired fasting glucose (IFG) *(E)*, or an A1C 5.7 – 6.4% *(E)*, especially for those with BMI >35 kg/m2, aged < 60 years, and women with prior Gestational diabetes mellitus (GDM). *(A)*
- In those identified with prediabetes, identify and, if appropriate, treat other cardiovascular disease (CVD) risk factors. *(B)*
- Screening for and treatment of modifiable risk factors for CVD is suggested. *(B)*
- Individuals who have prediabetes or diabetes should receive individualized medical nutrition therapy (MNT) as needed to achieve treatment goals, preferably provided by a registered dietitian familiar with the components of diabetes MNT. *(A)*
- Diabetes self-management education (DSME) and diabetes self-management support (DSMS) programs are appropriate venues for people with prediabetes to receive education and support to develop and maintain behaviors that can prevent or delay the onset of diabetes. *(C)*

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