Diagnostic Criteria and Target and Screening

DIABETES CLASSIFICATION			
TYPE 1 DIABETES (INCLUDES LADA)-CONSIDER IN LEAN INDIVIDUALS AND/OR WITH RAPID ONSET OF SYMPTOMS	Diabetes that is the result of pancreatic beta cell destruction with ccnsequent insulin deficiency, which is prone to ketoacidosis and includes cases due to an autoimmune process and those with unknown etiology of beta cell destruction. Age of onset mostly before 25 but can occur at any age. LATENT AUTOIMMUNE DIABETES IN ADULTS (LADA), the term used to describe the small number of people with apparent type 2 diabetes who appear to have immune-mediated loss of pancreatic beta cells.		
TYPE 2 DIABETES	May range from predominant insulin resistance with relative insulin defiency to a predominant secretory defect with insulin resistance. Ketosis is not as common but may occur, especially in youth.		
GESTATIONAL DIABETES MELLITUS	Refers to glucose intolerance with first onset or first recognition during pregnancy.		
OTHER SPECIFIC TYPES	Includes a wide variety of uncommon conditions, primarily specific genetically defined forms of diabetes or diabetes associated with other diseases or drug use.		
PREDIABETES	A practical and convenient term referring to impaired fasting glucose (IFG), impaired glucose tolerance (IGT) or a glycated hemoglobin (A1C) of 6% to 6.4%, each of which places individuals at high risk of developing diabetes and its complications. Refer patients to Nova Scotia Health Community Wellness programs at www.healthyns.ca		
DIAGNOSTIC CRITERIA FOR ADULTS (EXCLUDES PREGNANCY)			
FASTING GLUCOSE	greater than or equal to 7.0 mmol/L	DIABETES	
A1C (DO NOT USE IF T1 DM SUSPECTED	greater than or equal to 6.5%		
75 g, 2-HOUR Oral Glucose Tolerance Test (OGTT)	greater than or equal to 11.1 mmol/L		
RANDOM GLUCOSE, PLASMA GLUCOSE (PG)	greater than or equal to 11.1 mmol/L		
FASTING GLUCOSE	greater than or equal to 7.0 mmol/L		
DIAGNOSTIC CRITERIA FOR PREGNANCY			
Universal collection of HbA1c with prenatal bloodwork performed as early as possible in the antenatal period and ADD a fasting glucose to initial bloodwork for pregnant persons with strong risk factors for developing GDM (i.e., prediabetes, previous GDM, multiple gestation, BMI greater than 40, Polycystic ovary syndrome (PCOS), corticosteriod use, glycosuria, member of high-risk population (Indigenous, Hispanic, South Asian, African Canadian) or risk of inaccurate HbA1c results (i.e., hemoglobinopathies, CKD). Identify prenatal bloodwork and indicate "DO NOT CANCEL HbA1c TESTING-PREGNANCY" on requisition to ensure lab completes the test.			
TIMING - BEFORE 20 WEEKS			
A1C	greater than or equal to 5.7%	GESTATIONAL DIABETES MELLITUS (GDM)	REFER IMMEDIATELY TO DIABETES CENTRE
FASTING GLUCOSE	greater than or equal to 5.3 mmol/L		
A1C	A1C greater than or equal to 6.5%	OVERT DIABETES	
FASTING GLUCOSE	Fasting plasma glucose (FPG) greater than or equal to 7 mmol/L		
TIMING - 24-28 WEEKS GESTATION - ONLY IF GDM OR OVERT DIABETES NOT DIAGNOSED IN INITIAL SCREEN			
50-g, 1-hour Glucose challenge test (GCT)	1-hour Venous Plasma Glucose (VPG) less than 7.8 mmol/L	NO GDM	
	1-hour VPG 7.8 mmol/L to 11 mmol/L	-------	ADMINISTER 75 g, 2-hour OGTT (SEE BELOW)
	1-hour VPG greater than or equal to 11.1 mmol/L	GDM	REFER IMMEDIATELY TO DIABETES CENTRE
75 g, 2-hour Oral glucose tolerance test (OGTT)	Fasting VPG greater than or equal to 5.3 mmol/L	GDM	REFER IMMEDIATELY TO DIABETES CENTRE
	1-hour VGP greater than or equal to 10.6 mmol/L		
	2-hour PG greater than or equal to 9 mmol/L		
DIAGNOSTIC CRITERIA FOR CHILDREN AND YOUTH			
DIAGNOSIS WITH GLUCOSE, NOT A1C. WITH polyuria/polydipsia, immediately dip urine for glucose or do meter reading (due to risk of DKA). A1C CAN BE USED TO SCREEN FOR T2D. Clinical assessment of other obesity-related comorbidities should be conducted when considering screening for T2D in youth (e.g., hypertension, dislipidemia, non-alcoholic fatty liver disease, polycystic ovary syndrome, obstructive sleep apnea).			
RECOMMENDED TARGETS AND SCREENING (ABCDEF)			
A1C	Measure every 3 months or every 6 months if at glycemic target, in stable condition, and with no treatment changes. Target for most: A1C 7% or less Target for adults with T2D to reduce the risk of CKD and retinopathy if at low risk of hypoglycemia: A1C 6.5% or less Target for functionally dependent, hypoglycemia risk or unawareness. limited life expectancy, frail elderly: A1C 7.1%-8.5% Target for pediatric T1D: A1C 7.5% or less. Caution is required to minimize hypoglycemia. Target for pediatric T2D: A1C 7% or less		
BLOOD GLUCOSE	Non-pregnant adults: Fasting or pre-prandial PG: 4-7 mmol/L AND 2-hour PG: 5-10 mmol/L. Pediatric T1D: FPG: 4-8 mmol/L, 2 hour PG 5-10 mmol/L. Caution is required to minimize hypoglycemia. Children and youth who have had severe or excessive hypoglycemia or have hypoglycemia unawareness: consider pre-prandial PG target of 6-10 mmol/L (AND higher A1C)		
BLOOD PRESSURE	Measure at diagnosis and every visit thereafter. If on treatment, assess for risk of falls. Target: less than 130/80 mmHg		
CARDIAC	ECG every 3-5 years after age 40 OR with diabetes complications. Atherosclerotic cardiovascular disease (ASCVD), heart failure, OR age greater than 60 years with two cardiovascular (CV) risk factors recommended to ADD or SUBSTITUTE AHA with cardiorenal benefit. CV risk factors: tobacco use, dyslipidemia, hypertension		
CHOLESTEROL	Adults: at diagnosis and annually as clinically indicated. Pediatrics: screen at 12 and 17 years of age. Target: LDL-C less than 2.0 mmol/L (or 50% reduction from baseline)		
DIABETES DISTRESS	Screen depressive and anxious symptoms by interview or 2-item diabetes distress scale		
EYES	T1D: annually; T2D: every 1-2 years; Pediatrics: annually at 15 years with 5 years duration		
FOOT	Annual Monofilament (more if abnormal). Diabetic Foot Assessment: skin, nails, structure, sensation, mobility, vascular, foot care, foot care education		
KIDNEY FUNCTION	Adults: At diagnosis and annually thereafter. Pediatric T1D: at 12 years with 5 years duration. Target ACR: below 2.0 mg/mmo; AND eGFR: 60 mL/min. For those with CKD (GFR less than 60 mL/min or proteinuria), consider SGLT2i (if not T1D) for renal protection.		
THYROID DISEASE	Pediatric T1D: Serum TSH level plus thyroid peroxidas antibodies at diagnosis and every 2 years thereafter unless positive		

Reference:

1. Diabetes Canada Clinical Practice Guidelines Expert Committee. Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada.
2. Reproductive Care Program of Nova Scotia. Practice Resource: Recommendations for Gestational Diabetes Mellitus (GMD) Screening in NS
3. 2022 International Society for Pediatric and Adolescent diabetes (ISPAD)