**Diagnosis of diabetes mellitus in **ASYMPTOMATIC **adults**

(If elderly, frail and asymptomatic, please consider whether screening is appropriate.)

**INITIAL lab glucose**
(random OR fasting)

- **random glucose** ≥11.1 mmol/L
- **fasting glucose** ≥7.0 mmol/L

**Take together on separate day**

**fasting & HbA\textsubscript{1C} glucose**

(Omit HbA\textsubscript{1C} if not suitable. See below.*)

- **random glucose** 7.8 – 11.0 mmol/L
- **fasting glucose** 6.1 – 6.9 mmol/L

**suitable for HbA\textsubscript{1C}?**

- **YES**
  - (repeat blood test on a separate day)

- **NO**

**OGTT (75 g)**

**not diabetic**

- ≤41 mmol/mol

**at risk of DM**

- 42 – 47 mmol/mol

**diabetes**

- ≥48 mmol/mol

**not diabetic**

- fasting glucose mmol/L ≤6.0
  - AND
  - 2-hr glucose mmol/L ≤7.7

**at risk of DM**

- 6.1 – 6.9 (IFG)
  - OR
  - 7.8 – 11.0 (IGT)

**diabetes**

- ≥ 7.0
  - OR
  - ≥ 11.1

**At risk of DM groups include:**

IFG = impaired fasting glucose
IGT = impaired glucose tolerance
HbA\textsubscript{1C} 42-47 mmol/mol

Consider lifestyle advice & annual HbA\textsubscript{1C} check for these groups

**Diagnosis must be based on laboratory glucose measurements**

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**1) Rapid onset of diabetes**

a. Suspected T1DM – see symptomatic patient flowchart
b. Drug-induced: steroids, anti-psychotics, immuno-suppressants – a fasting glucose may not be sufficient.
c. Pancreatic disease

**2) Conditions affecting Hb turnover / HbA\textsubscript{1C} assay**

a. Haemoglobinopathy
b. Anaemia (especially haemolytic)
c. Severe blood loss, Blood transfusion
d. Splenomegaly / Splenectomy
e. Renal dialysis +/- erythropoitein
f. Anti-retrovirals, ribavarin, dapsone

**3) Children**

* Pregnancy - see local guidelines for screening/referral
  a. HbA\textsubscript{1C} may be used to screen for pre-existing diabetes, but should NOT be used to screen for Gestational Diabetes (GDM)
  b. Note that the OGTT for GDM uses lower cut-offs:
     - Fasting glucose ≥5.1 mmol/L, 2-hr glucose ≥8.5 mmol/L

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*Not suitable for HbA\textsubscript{1C}*

- **1) Rapid onset of diabetes**
  a. Suspected T1DM – see symptomatic patient flowchart
  b. Drug-induced: steroids, anti-psychotics, immuno-suppressants – a fasting glucose may not be sufficient.
  c. Pancreatic disease

- **2) Conditions affecting Hb turnover / HbA\textsubscript{1C} assay**
  a. Haemoglobinopathy
  b. Anaemia (especially haemolytic)
  c. Severe blood loss, Blood transfusion
  d. Splenomegaly / Splenectomy
  e. Renal dialysis +/- erythropoitein
  f. Anti-retrovirals, ribavarin, dapsone

- **3) Children**

  * Pregnancy - see local guidelines for screening/referral
Diagnosis of diabetes mellitus in **SYMPTOMATIC** patients

**Symptomatic patient**

- Thirst, polyuria
- Unexpected weight loss
- Recurrent unexplained infection
- Blurring of vision
- Discoloured/ulcerated feet

**+**

- random glucose $\geq 11.1\text{ mmol/L}$
- fasting glucose $\geq 7.0\text{ mmol/L}$

**= DIABETES**

**Mild symptoms**

- ?ketotic

  - Full assessment & initiate management of Type 2 Diabetes

**CHILD**

- or Severe symptoms vomiting / dehydration

**or**

young age OR ketonuria (or ketonaemia*)

  - URGENT discussion with diabetes team (may need insulin therapy)

  - URGENT HOSPITAL ADMISSION

*ketones can be measured on some glucose meters