Guideline for the Diagnosis of type 2 Diabetes Mellitus

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Diagnosis of Type 2 Diabetes Mellitus and Impaired Glucose Regulation - Testing Strategy

Opportunistic case finding in asymptomatic people from high risk groups

- Dyslipidaemia
- Hypertension
- Obesity (abdominal)
- Previous gestational Diabetes Mellitus
- Previous Polycystic ovaries
- Coronary heart disease
- Stroke
- Family history
- Previous impaired glucose regulation
- Those taking Olanzapine/Clozapine require annual testing

Two diagnostic blood glucose values required
† Fig. 1

Seek diabetes diagnosis in patients with symptoms

- Thirst
- Polyuria
- Abscess
- Pruritus Vulvae
- Weight loss
- Infections
- Fatigue
- Erectile Dysfunction
- Blurred vision
- Numb feet
- Foot ulcers
- Incontinence

One diagnostic blood glucose value sufficient in patients with typical symptoms of diabetes*

Fig. 2

Testing strategy
Diabetes Mellitus and Impaired Glucose Regulation

- Normal result - re-test in 3 years or annually if 3 or more risk factors †
- ≤5.5 mmol/l

Random blood glucose

- 5.6 – 11.0 mmol/L

- ≥11.1 mmol/l

Diabetes confirmed if typical symptoms. Perform FPG if patient asymptomatic. Consider 2nd test

Notes

Early diagnosis reduces morbidity and mortality by allowing use of protective treatments.

* Second test should initially be a fasting blood glucose

Diabetes confirmed if typical symptoms. Perform FPG if patient asymptomatic. Consider 2nd test

Must be a laboratory specimen. Strip tests not suitable for initial diagnosis of a life-long condition.

Normal result - re-test in 3 years or annually if 3 or more risk factors †
Impaired Glucose Tolerance (IGT) confirmed
Fasting glucose <7.0 & 2hr glucose 7.8-11.0 mmol/L
Fasting glucose ≥ 6.1 mmol/L & 2hr glucose ≤ 7.7 mmol/L

Normal fasting result re-test annually. Consider OGTT if 3 or more risk factors?

6.1-6.9 mmol/L

Fasting Blood Glucose

≤6.0 mmol/L

≥7.0 mmol/L

75g Oral glucose Tolerance Test

2 hr glucose ≥ 11.1 mmol/L

Diabetes confirmed

Diabetes confirmed if typical symptoms.
Repeat fasting blood glucose if patient asymptomatic
If repeat fasting blood glucose <7.0mmol/L do OGTT

6.1-6.9 mmol/L

Impaired Fasting Glucose confirmed

Fasting glucose ≥ 6.1 mmol/L & 2hr glucose ≤ 7.7 mmol/L

Impaired Glucose Tolerance (IGT) confirmed

Follow guidelines for management of Impaired Glucose Regulation

Fasting glucose ≤ 6.0 & 2hr glucose ≤ 7.7 mmol/L

Normal Fasting Glucose confirmed

Repeat test strategy in 3 years or annually if 3 or more risk factors

Notes: Advise patient to stop smoking 10 hours prior to test and during test.

10 hour overnight fast, water permitted.

Oral glucose tolerance test must be performed under controlled conditions.
10 hour fast (water permitted).
3-5 days normal diet before test.
Resting during test – not walking.
Eating not permitted during test.
Fasting venous glucose drink – 75g glucose liquid (polycal) over 5 minutes.
Venous glucose exactly 2 hours after finishing polycal

Notes
References
