



Clinical Care Guidelines for: Diabetes

OBJECTIVE

Guide the appropriate diagnosis and management of Diabetes.

GUIDELINE

Care to be provided in accordance with the current recommendation from the American Diabetes Association (ADA)

[American Diabetes Association \(ADA\) Standards of Medical Care in Diabetes 2011](#)

ASSESSMENT & DIAGNOSIS

CRITERIA FOR DIABETES MELLITUS DIAGNOSIS:

- Hemoglobin A_{1c} \geq 6.5%; OR
- Fasting Plasma Glucose (FPG) \geq 126mg/dL (7.0mmol/L); OR
 - Fasting = no caloric intake for > 8 hours
- 2-hour plasma glucose \geq 200mg/dL (11.1mmol/L) during an Oral Glucose Tolerance Test (OGTT); OR
 - OGTT is defined by the WHO as using a 75g load of anhydrous glucose dissolved in water
- Patient presentation with classic symptoms of hyperglycemia or hyperglycemic crisis, accompanied by a random plasma glucose \geq 200mg/dL (11.1mmol/L)

**Repeat testing necessary to confirm diagnosis

**Once a diagnosis of diabetes mellitus has been confirmed, it is imperative that the patient be evaluated for comorbidities and potential complications of hyperglycemia including: cardiovascular disease (hypertension, dyslipidemia, coagulation disorders, coronary heart disease); thyroid dysfunction; nephropathy; retinopathy; and neuropathy.

GLYCEMIC CONTROL:

- Self Monitoring of Blood Glucose (SMBG)
 - Patients receiving multiple insulin injections or using an insulin pump should test their blood glucose \geq 3 times/day.
 - Target Preprandial Plasma Glucose: 70-130mg/dL (3.9-7.2mmol/L)
 - Target Peak Postprandial Plasma Glucose < 180mg/dL (<10.0mmol/L)
 - Generally 1-2 hours after start of a meal
 - Patients treated with less frequent insulin injections, or non-insulin therapies should strongly consider using SMBG.
- Hemoglobin A_{1c} should be obtained twice a year for well-controlled diabetic patients, and four times a year for patients undergoing therapy change(s) or those not meeting their glycemic goals.
 - Target A_{1c} <7%
 - Use of a lower goal A_{1c} may be considered if it can be achieved without causing significant hypoglycemia or other adverse effects.
 - Use of a higher goal A_{1c} may be considered in patients with a history of severe hypoglycemia, limited life expectancy, advanced micro- or macrovascular complications, extensive comorbid conditions, and those with long-standing diabetes who are unable to attain the standard goal despite DSME, SMBG, and effective doses of multiple hypoglycemic agents including insulin.

TREATMENT

NON-PHARMACOLOGIC:

- Diabetic patients should receive Diabetes Self-Management Education (DSME) upon diagnosis, and as needed thereafter.
- Diabetic patients should receive individualized Medical Nutrition Therapy (MNT) from a registered dietician.
- Weight loss (if necessary) and at least 150 minutes/week of moderate-intensity aerobic exercise should be encouraged.
 - Patients receiving insulin or insulin secretagogue therapy should ingest additional carbohydrates prior to exercising if their pre-exercise glucose levels are <100mg/dL (5.6mmol/L).
- Bariatric surgery may be considered for Type II diabetic patients with a BMI > 35kg/m², who are unable to achieve proper glycemic control through lifestyle modification and pharmacologic therapy.

PHARMACOLOGIC:

- Type I Diabetes Mellitus
 - Successful management of Type I DM consists of the following:
 - Multiple dose insulin injections (3-4 injections per day of basal and prandial insulin), or Continuous Subcutaneous Insulin Infusion.
 - Insulin analogs are often used in order to minimize hypoglycemia.
 - Calculation of prandial insulin dosing based upon carbohydrate intake, premeal plasma glucose, and anticipated activity.
- Type II Diabetes Mellitus
 - Upon initial diagnosis, initiation of metformin along with lifestyle modifications (exercise and MNT) is recommended first-line.
 - It is recommended that additional hypoglycemic agents, including insulin, are added to the treatment regimen in a stepwise fashion as needed in order to achieve and maintain glycemic goals.
 - Additions to the treatment regimen should consist of agents from different pharmacological classes.
 - Emphasis should be placed on the achievement and maintenance of glycemic goals; rather than the selection of specific medications and their particular sequencing.
 - It is recommended that patients presenting with weight loss or other severe hyperglycemic signs/symptoms begin insulin therapy upon diagnosis.
- Management of Hypoglycemia
 - If patient is conscious, administer 15-20g of oral glucose (carbohydrate)
 - Should their plasma glucose level still indicate hypoglycemia 15 minutes post-treatment, re-administer treatment.
 - Once plasma glucose normalizes, patient should be instructed to eat a snack/meal to prevent further hypoglycemia.
 - Glucagon rescue kits should be prescribed to all diabetic patients at high risk for developing hypoglycemia.
- Immunizations
 - All diabetic patients > 6 months of age should receive an annual influenza vaccine.
 - All diabetic patients ≥ 2 years of age should receive the pneumococcal polysaccharide vaccine.
 - Revaccination is recommended for individuals > 64 years of age who were previously immunized when they were < 65 years of age, or if it has been > 5 years since their previous vaccination.

REFERENCES

[American Diabetes Association \(ADA\) Standards of Medical Care in Diabetes 2011](#)