ESSENTIAL MESSAGES FROM ESC GUIDELINES

Committee for Practice Guidelines
To improve the quality of clinical practice and patient care in Europe

Diabetes
GUIDELINES ON DIABETES, PRE-DIABETES AND CARDIOVASCULAR DISEASES

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ESC ESSENTIAL MESSAGES

ESC GUIDELINES ON DIABETES, PRE-DIABETES AND CARDIOVASCULAR DISEASES DEVELOPED IN COLLABORATION WITH EASD*

The Task Force on diabetes, pre-diabetes and cardiovascular diseases of the European Society of Cardiology (ESC) and developed in collaboration with the European Association for the Study of Diabetes (EASD)

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Take home messages

1 - Diabetes mellitus is
   - A metabolic disorder characterized by chronic hyperglycaemia resulting from defects in insulin secretion or action, or a combination of both.
   - ≈ 95% comprised by T2DM.
   - An important contributor to vascular damage inducing a high risk of macro-and microvascular complications.

2 - Identification
   - Screening for T2DM can be implemented using a non-invasive risk score (e.g. FINDRISC) supplemented by the assessment of glycaemia in people at high risk.
   - Diagnosis of DM can be made by the measurement of FPG (≥7.0 mmol/L), 2hPG (≥11.1 mmol/L) or HbA1c (≥6.5%).
   - HbA1c <6.5% does not exclude a diagnosis of diabetes which should be further investigated by OGTT in people at high risk of disturbed glucose metabolism.
   - Abnormal PG or HbA1c test results should be repeated to confirm the diagnosis.

3 - Prevention
   - Progression of IGT to DM can be delayed by lifestyle intervention in about 50% of individuals.
   - The intervention effect is sustained after lifestyle counselling has ceased.
   - Pharmacotherapies (α-glucosidase inhibitors, metformin, glitazones, insulin, ARBs) can delay progression to DM in people with IGT whilst the drug is taken.

4 - Assessment of individual cardiovascular risk
   - Classical risk factors (family history, lifestyle, smoking, hypertension, dyslipidaemia).
   - Glycaemic status.
   - Macrovascular disease (coronary, cerebrovascular and peripheral artery disease, heart failure).
   - Microvascular disease (retinopathy, nephropathy, neuropathy).
   - Arrhythmias especially atrial fibrillation.

5 - Multifactorial management of cardiovascular risk
   - Patient education and empowerment.
   - Life style advice.
   - Smoking cessation.
   - Personalised treatment of blood pressure, lipids, glucose and thrombotic risk.

6 - Life style intervention
   - Daily consumption of vegetable and fruits.
   - Increased dietary fibre intake.
   - Moderate intake of simple carbohydrates.
   - Reduced total dietary fat intake.
   - Replacement of saturated fat by monounsaturated or polyunsaturated fat.
   - Physical activity ≥30 min/day or at least 150 min/week.
   - Weight reduction ≥5% if BMI ≥25 kg/m².
   - Moderate alcohol consumption.
Take home messages

7 - Key targets* for prevention of cardiovascular disease
- BP <140/85 mmHg.
- LDL cholesterol <1.8 mmol/L (<70 mg/dL).
- HbA1c <7% (<53 mmol/mol).
*These targets should be applied with individual needs taken into account.

8 - Multifactorial medical management
- A combination of blood pressure lowering agents is often required to achieve control and RAAS blockade should be part of the treatment.
- Lipid control is based on statins.
- Antiplatelet therapy is recommended for secondary prevention of CVD.
- A combination of glucose lowering agents is often required to achieve glycaemic control and metformin should be considered as first line treatment especially in overweight/obese patients.

9 - Options for revascularisation
- Acute coronary syndromes
  Early angiography and culprit lesion revascularization should be offered.
- Stable coronary artery disease
  CABG is preferred if the myocardial area at risk is large (multi-vessel disease, complex coronary lesions).
  PCI with DES may be performed for symptom control in single- and two-vessel disease.
- Peripheral artery disease
  Critical limb ischaemia and symptomatic carotid artery disease should be revascularised.

10 - Heart failure
- T2DM is a major risk factor for the development of heart failure.
- The combination of DM and heart failure has a 12-fold higher mortality than DM alone.
- Pharmacological management include combinations of RAAS inhibitors, beta blockade and diuretic therapy.
- Non-pharmacological approaches should be considered as in patients without DM.

11 - Multidisciplinary strategies
- Comprehensive care of DM patients often requires collaboration between specialists in cardiology, diabetology and primary care and several other subspecialties such as surgery ophthalmology, nephrology and psychiatry.
- Nurses, dieticians, podiatrists and physiotherapists and care professionals are important collaborators.
Major gaps in evidence

1 - There is a need for biomarkers and diagnostic strategies useful for the early detection of CAD in asymptomatic patients.

2 - Long-term CVD outcomes for most glucose-lowering treatments are not known.

3 - Optimal blood pressure targets are unknown.

4 - Are the metabolic side effects of beta-blockers or diuretics clinically relevant?

5 - Efficiency and safety of drugs increasing/improving HDL-C particles is unclear.

6 - The optimal antithrombotic regimen for primary prevention of CVD needs to be established.

7 - Pleiotropic effects of glucose lowering therapies on CVD outcomes is not fully understood.

8 - The role and level of glycaemic control in the outcome in ACS patients remain to be established.

9 - The role and level of glycaemic control in the outcome during and after myocardial revascularization remain to be established.

10 - The impact of glucose-lowering drugs including metformin, GLP-1 analogues and DPP-IV inhibitors on the prevention of heart failure is unknown.

11 - What is the role of hypoglycaemia and other predictors in sudden cardiac death?