ESSENTIAL MESSAGES FROM ESC GUIDELINES

Committee for Practice Guidelines
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EUROPEAN SOCIETY OF CARDIOLOGY®

DYSLIPIDAEMIAS

ESC/EAS GUIDELINES FOR THE MANAGEMENT OF DYSLIPIDAEMIAS

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ESC ESSENTIAL MESSAGES

ESC/EAS GUIDELINES FOR THE MANAGEMENT OF DYSLIPIDAEMIAS*

The Task Force for the management of dyslipidaemias of the European Societyof Cardiology (ESC) and the European Atherosclerosis Society (EAS)
Developed with the special contribution of the European Association for Cardiovascular Prevention & Rehabilitation

ESC Chairperson:
Željko Reiner
University Hospital Centre Zagreb, School of Medicine, University of Zagreb, Šalata 2, 10000 Zagreb, Croatia
Tel: +385 1 2368 729
Fax: +385 1 2379 922
Email: zreiner@kbc-zagreb.hr

EAS Chairperson:
Alberico L. Catapano
Department of Pharmacological Science
University of Milan, Via Balzaretti, 9,
20133 Milano, Italy
Tel: +39 02 5031 8302
Fax: +39 02 5031 8386
Email: Alberico.Catapano@unimi.it

Task Force Members

Guy De Backer, *Ghent, Belgium;* Ian Graham, *Dublin, Ireland;* Marja-Riitta Taskinen, Helsinki, *Finland;* Olov Wiklund, *Gothenburg, Sweden;* Stefan Agewall, *Oslo, Norway;* Eduardo Alegria, *Donostia, Spain;* M. John Chapman, *Paris, France;* Paul Durrington, Manchester, *UK;* Serap Erdine, *Istanbul, Turkey;* Julian Halcox, *Cardiff, UK;* Richard Hobbs, *Birmingham, UK;* John Kjekshus, *Oslo, Norway;* Pasquale Perrone Filardi, *Naples, Italy;* Gabriele Riccardi, *Naples, Italy;* Robert F. Storey, *Sheffield, UK;* David Wood, *London, UK*

Other ESC entities having participated in the development of this document:
Association: *Heart Failure Association (HFA).*
Working Groups: *Cardiovascular Pharmacology and Drug Therapy, Hypertension and the Heart, Thrombosis, Peripheral Circulation, Pathogenesis of Atherosclerosis.*
Councils: *Cardiology Practice, Primary Cardiovascular Care, Cardiovascular Imaging.*

ESC Staff:
Veronica Dean, Catherine Despres, Nathalie Cameron - Sophia Antipolis, France.

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Take home messages

1. TOTAL CVD RISK ESTIMATION

Prevention and treatment of dyslipidaemias should always be considered within the broader framework of CVD prevention and therefore the assessment of total CVD risk is recommended. Risk can be calculated based upon new SCORE charts in which, in addition to total cholesterol, systolic blood pressure, age, sex and smoking, HDL-C is now also taken into account (www.heartscore.org).

Risk will be higher than calculated in patients with additional conditions such as:

- Diabetes
- Evidence of subclinical atherosclerosis (CalciumScore, Carotid Screening)
- Familial premature atherosclerotic disease
- Chronic Kidney Disease
- Increased Lp (a), AboB/ApoB1 ratio, low HDL-C, high TC,

2. SECONDARY HYPERLIPIDEMIA SHOULD ALWAYS BE RULED OUT

- Exclude secondary caused such as nephrotic syndrome, hypothyreosis, excessive alcohol consumption, pregnancy, corticosteroid excess, anorexia, immunosuppressive agents

3. LIPID ANALYSIS AS TREATMENT TARGET

- LDL-C is recommended as the primary target for treatment. TC should be considered as the treatment target if other analyses are not available.
- TG should be analyzed during the treatment of dyslipidaemias with high TG levels.
- Non-HDL-C or Apo B should be considered as a secondary target in combined hyperlipidaemias, diabetes,the metabolic syndrome or CKD.
- HDL-C is not recommended as a target for treatment.

4. TREATMENT TARGETS FOR LDL-CHOLESTEROL

- In patients at **very high** CV risk (established CVD, type 2 diabetes or type 1 diabetes with target organ damage, moderate to severe CKD or a SCORE level ≥10 %), the LDL-C goal is <1.8 mmol/L (<~70 mg/ dL) and/or a ≥ 50 % LDL-C reduction when target level cannot be reached.
- In patients at **high** CV risk (markedly elevated single risk factors, a SCORE level ≥5 - <10%) a LDL-C goal <2.5 mmol/L (<~100 mg/dL) should be considered.
- In subjects at **moderate** risk (SCORE level >1 to ≤5%) LDL-C goal <3.0 mmol/L (<~115 mg/dL) should be considered.

5. THE IMPACT OF LIFESTYLE ON LIPID LEVELS

- All subjects should be advised on lifestyles associated with a lower CVD risk.
- High risk subjects, particularly those with dyslipidaemia, should receive specialist dietary advice, if feasible.
- Consumption of fruit, vegetables, legumes, nuts, wholegrain cereals and bread, fish (especially oily) should be encouraged.
- A fat content of <35% of energy intake is recommended. In particular the energy from saturated fat should be below 7% and from trans fats to <1% of total energy intake
- The intake of beverages and foods with added sugars should be limited, particularly for patients with high TG.
- Physical activity should be encouraged aiming at regular physical exercise for at least 30 minutes every day.

Take home messages

6. DRUGS FOR TREATMENT OF HYPERCHOLESTEROLAEMIA

- If drug treatment is indicated to decrease LDL-C, a statin is recommended, up to the highest tolerable dose, to reach the target level.
- If the target level is not reached, statin combination with a cholesterol absorption inhibitor or bile acid sequestrant or nicotinic acid may be considered.
- A cholesterol absorption inhibitor, alone or in combination with bile acid sequestrants or nicotinic acid may also be considered in case of statin intolerance.

7. DRUGS FOR TREATMENT OF HYPERTRIGLICERIDAEMIA

In particular **high-risk** patients lowering of high TG by using fibrates is recommended. Nicotinic acid, nicotinic acid+laropiprant, n-3 fatty acids, should be considered as well as statin + fibrate or nicotinic acid . The combination of the above considered drugs with n-3 fatty acids may be considered .

8. DRUG TREATMENT OF COMBINED DYSLIPIDAEMIA

In combined dyslipidaemia an intervention to increase HDL-C and reduce TG in addition to the LDL-C reduction that can be achieved with a statin may be considered. Therefore a combination of statin with niacin can be considered although the adverse effect of flushing may affect compliance. A combination of statins with fibrates can also be considered while monitoring for myopathy but the combination with gemfibrozil should be avoided.

9. MANAGEMENT OF FAMILIAL HYPERCHOLESTOLAEMIA

In FH patients the treatment is aiming at reaching the LDL-C goals for high risk subjects <2.5 mmol/L (<~100mg/dL) or in the presence of CVD for very high risk subjects <1.8 mmol/L (<~70 mg/dL). If targets cannot be reached, maximal reduction of LDL-C should be considered using appropriate drug combinations in tolerated doses.

10. TREATMENT OF DYSLIPIDAEMIA IN THE ELDERLY

Treatment with statins is recommended for elderly patients with established CVD in the same way as for younger patients. However, the starting dose should be lower than the maximal possible dose.

11. TREATMENT OF DYSLIPIDAEMIA IN DIABETES

- In people with type 1 diabetes with microalbuminuria or other target organ damage, LDL-C lowering therapy with statins is recommended irrespective of their basal LDL-C.
- In patients with type 2 diabetes and CVD or CKD and in those without CVD who are over age of 40 years with one or more other CVD risk factor the recommended goal for LDL-C is <1.8 mmol/L (<~70mg/dL) and the secondary goal for non-HDL-C is, <2.6 mmol/L (<100 mg/dL) or for apo B <80 mg/dL .
- LDL-C <2.5 mmol/L (<~100 mg/dL) is the primary target for all other people with type 2 diabetes and the secondary targets for non-HDL-C are <3.3 mmol/L (<100 mg/dL) or for apo B <100 mg/dL.

Take home messages

12. TREATMENT OF DYSLIPIDAEMIA IN CHRONIC KIDNEY DISEASE

- CKD is acknowledged as a CAD risk equivalent.
- In these patients LDL-C reduction is recommended as primary target of the therapy.
- Statins should be considered to slow modestly the rate of kidney function loss and thus protect against the development of ESRD requiring dialysis.
- Statins with minimal renal excretion should be preferred.
- In moderate to severe CKD statins as monotherapy or in combination with other drugs should be considered to achieve LDL-C <1.8 mmol/L (<~70mg/dL).

13. TREATMENT OF DYSLIPIDAEMIA IN TRANSPLANT PATIENTS

Statins should be considered as the first line treatment of dyslipidaemia in transplant patients.

14. TREATMENT OF DYSLIPIDAEMIA IN PERIPHERAL ARTERY DISEASE

- PAD is a high-risk condition and lipid lowering therapy is recommended in these patients.
- Statin therapy is recommended also to prevent progression of aortic aneurysm.

15. TREATMENT OF DYSLIPIDAEMIA FOR STROKE PREVENTION

- The relationship between dyslipidaemia and atherothrombotic events including ischaemic stroke and transient ischaemic attack (TIA) is well recognized.
- Statin therapy to reach established treatment goals should be considered for reducing the risk of ischaemic stroke in patients at high global risk.
- Statin therapy for reducing the risk of ischaemic stroke is recommended in patients with other manifestations of CVD.
- Statin therapy is recommended in patients with a history of non-cardioembolic ischaemic stroke or TIA.

16. TREATMENT OF DYSLIPIDAEMIA IN HIV PATIENTS

Statins should be considered in HIV patients with dyslipidaemia to achieve the LDL-C goal as defined for high risk patients.

Major gaps in evidence

- There is still insufficient evidence to define a therapeutic target level for TG or HDL-C.
- The use of non-HDL-C and apo B is not supported by sufficient evidence.
- There is not sufficient evidence to prove whether Lp(a) lowering against background statin therapy can reduce the risk for CVD events and mortality.
- The relative contribution of ezetimibe in reducing clinical end-points remains to be addressed.
- Evidence is lacking that some functional foods with lipid-lowering effect can reduce the risk for CVD events and mortality.
- More evidence is needed for the role of combination treatments in reducing CVD events and mortality.
- Clinical studies are lacking to show the effect of statin therapy on cardiovascular endpoints in patients with asymptomatic carotid plaques.

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EUROPEAN SOCIETY OF CARDIOLOGY
2035, ROUTE DES COLLES
LES TEMPLIERS - BP 179
06903 SOPHIA ANTIPOLIS CEDEX - FRANCE
PHONE: +33 (0)4 92 94 76 00
FAX: +33 (0)4 92 94 76 01
E-mail: guidelines@escardio.org

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To read the full report as published by the European Society of Cardiology, visit our Web Site at:
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Disclaimer:
The ESC Guidelines represent the views of the ESC which were arrived at after careful consideration of the available evidence at the time they were written. Health professionals are encouraged to take them fully into account when exercising their clinical judgment. The guidelines do not, however, override the individual responsibility of health professionals to make appropriate decisions in the circumstances of the individual patients, in consultation with that patient, and where appropriate and necessary the patient's guardian or carer. It is also the health professional's responsibility to verify the rules and regulations applicable to drugs and devices at the time of prescription.

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EUROPEAN SOCIETY OF CARDIOLOGY
2035, ROUTE DES COLLES
LES TEMPLIERS - BP 179
06903 SOPHIA ANTIPOLIS CEDEX - FRANCE
PHONE: +33 (0)4 92 94 76 00
FAX: +33 (0)4 92 94 76 01
E-mail: guidelines@escardio.org

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