

CardioVascular Residual Risk Reduction (CVR³) – Pillars of Care Guideline & Pathway

Known Atherosclerotic Disease

MI, ACS, CABG, PAD, CAD, TIA, Stroke, PCI, Angina, Revascularisation

Baseline Cardiovascular Therapy

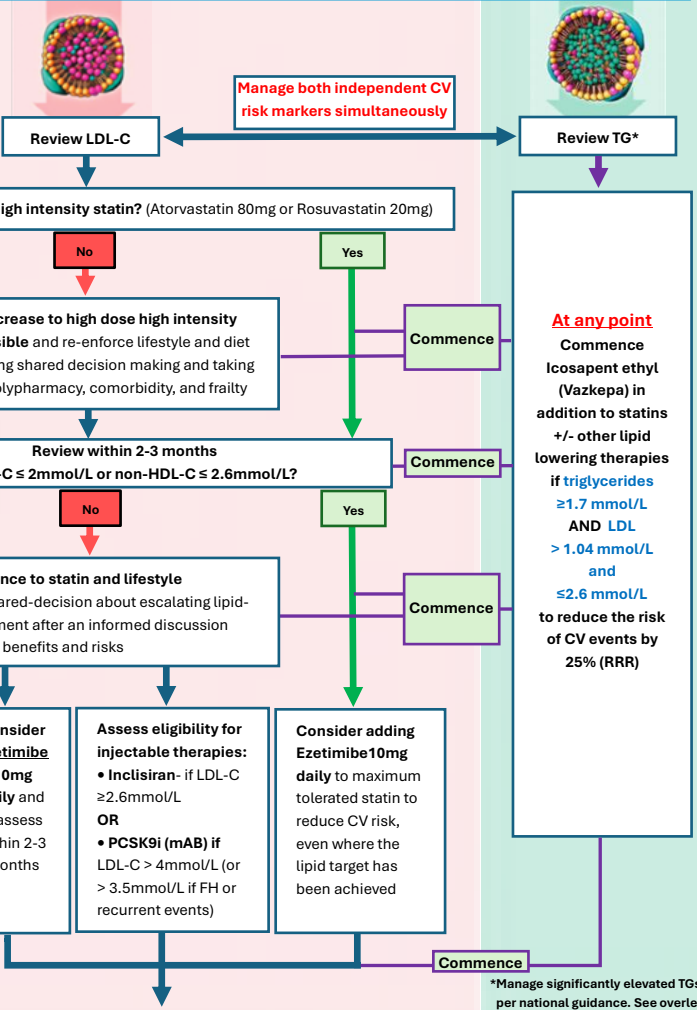
Statin (lipid lowering therapies should be offered to all patients with established CVD), Antiplatelet therapy/OAC where applicable, ACE-i/ARB therapy

Lifestyle Modification and optimisation

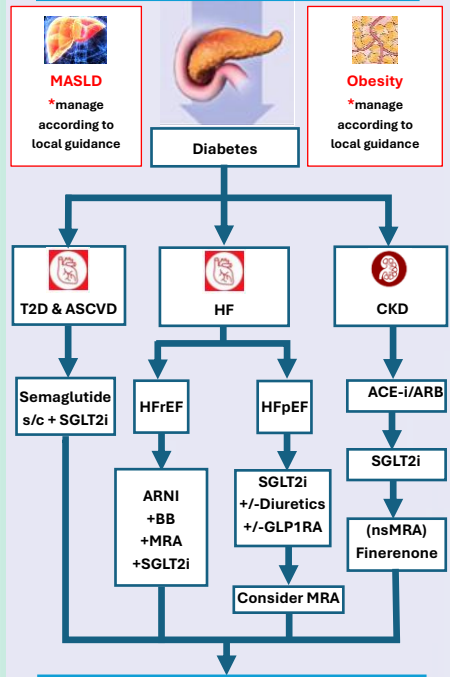
- Smoking Cessation
- Alcohol Intake
- **Weight / Obesity**
- Diet
- Physical Activity
- Cardiac Rehabilitation

Check full lipid profile (including triglycerides), liver transaminase, HbA1c, NT-proBNP, TFTs, eGFR and uACR

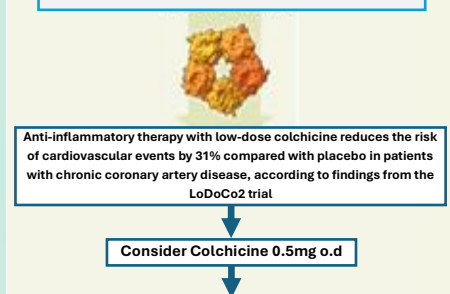
Residual Lipids Risk



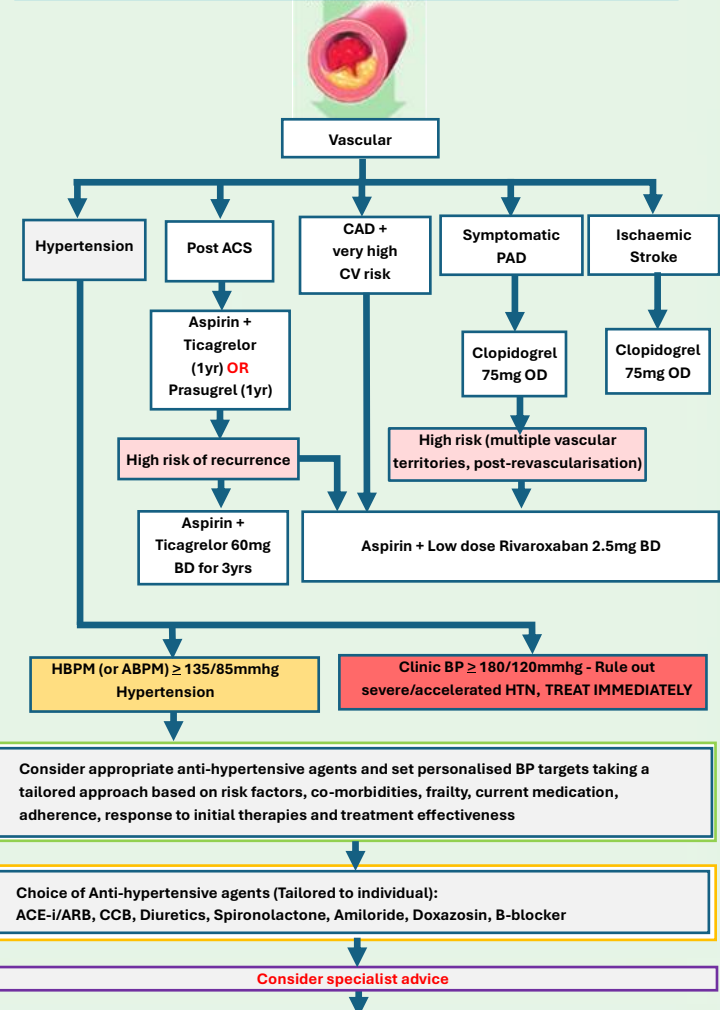
Residual Metabolic Risk



Residual Inflammatory Risk



Residual Thrombotic Risk



Optimise all 4 Pillars of Residual Risks

Review annually, including obtaining a full lipid profile, assessing treatment to target, assessing all residual risks, adherence to therapy and offering support for diet and other lifestyle measures



CardioVascular Residual Risk Reduction (CVR³) – Sources and footnotes



Obesity

- [NICE TA1026](#)
- [PRN01879-interim-commissioning-guidance-implementation-of-the-nice-technology-appraisal-ta1026-and-the-NICE-fu.pdf](#)



MASLD

- [EASL-EASD-EASO Clinical Practice Guidelines on the management of metabolic dysfunction-associated steatotic liver disease \(MASLD\)](#)

LDL-C [NICE NG238](#)

[NICE TA385](#) [NICE TA393](#) [NICE TA394](#) [NICE CG181](#) [NICE CG71](#) [NICE TA694](#) [NICE TA733](#)

NHS England » Lipid optimisation pathway: secondary prevention in primary care and the community

Icosapent ethyl (Vazkepa) [REDUCE-IT](#), [EVAPORATE trial](#), [REDUCE-IT PCI](#), [REDUCE-IT \(ACS\)](#), [NICE TA805](#)

GLP1RA: [NICE NG28](#); [NICE TA875](#); [NICE TA1026](#); [SUSTAIN-6](#); [LEADER](#); [REWIND](#); [FLOW](#); [SELECT](#); [STEP-HFpEF](#); [SUMMIT](#)

SGLT2i: [NICE NG28](#); [NICE TA775](#); [NICE TA679](#); [NICE TA902](#); [NICE TA775](#); [NICE TA773](#); [NICE TA929](#); [NICE TA942](#); [EMPA-REG OUTCOME](#); [DECLARE-TIMI 58](#); [CANVAS](#); [EMPEROR-Reduced](#); [EMPEROR-Preserved](#); [DAPA-HF](#); [DELIVER](#); [EMPA-KIDNEY](#); [DAPA-CKD](#)

ARNI: [NICE NG106](#); [NICE TA388](#); [PARADIGM-HF](#);

BB: [NICE NG106](#); [NICE NG185](#);

MRA: [NICE NG106](#); [RALES](#); [EPHESUS](#); [EMPHASIS-HF](#);

Diuretics: [NICE NG106](#)

Finerenone: [NICE TA877](#); [FIDEKIO-DKD](#); [FIGARO-DKD](#), [FIDELITY](#); [FINEARTS-HF](#)

Colchicine: [ESC 2023 ACS](#); [ESC 2024 CCS](#); [COLCOT](#); [LoDoCo2](#); [CLEAR](#)

Aspirin + Ticagrelor: [NICE TA236](#); [PLATO](#); [NICE TA420](#); [PEGASUS](#)

Prasugrel + aspirin: [NICE TA317](#); [TRITON TIMI 38](#); [ISAR-REACT 5](#)

Clopidogrel: [NICE CG147](#); [NICE TA120](#); [NICE DG59](#); [CAPRIE](#)

Aspirin +/- Low dose rivaroxaban: [NICE TA607](#); [COMPASS](#); [VOYAGER](#)

Amlodipine: [NICE NG136](#); [ALLHAT](#); [ASCOT](#); [ASCOT Legacy](#)

Losartan: [NICE NG136](#); [LIFE](#)

ACE-i or ARB: [NICE NG136](#); [NICE CKS\(ARB\)](#); [NICE CKS \(ACEi\)](#)

CCB: [NICE CKS\(CCBs\)](#)

Spironolactone: [NICE CKS \(Spironolactone\)](#)

Amiloride: [BIHS 2024](#)

Doxazosin: [NICE CKS \(alpha-blockers\)](#)

Bisoprolol: [NICE CKS \(beta blockers\)](#)

Hypertension management: [NICE NG136](#); [NICE CKS](#); [BIHS 2024](#); [ESC 2024 Hypertension](#)

[NICE CG147](#); [ESC PAD/aortic disease guideline](#); [ESVS PAD Guideline](#); [CAPRIE](#); [VOYAGER PAD](#); [FOURIER substudy](#)

[2019 ESC/EAS Guidelines for the management of dyslipidaemias: lipid modification to reduce cardiovascular risk](#)

*Manage significantly elevated TGs as per national guidance ([NICE NG238](#)) :

Refer for urgent specialist review if a person has a triglyceride level of more than 20 mmol per litre (**associated risk of pancreatitis**) that is not a result of excess alcohol intake or poor glycaemic control.

In people with a triglyceride level between 10 mmol and 20 mmol per litre:

- repeat the triglyceride measurement with a fasting test (after an interval of 5 days, but within 2 weeks) **and**
- review for potential secondary causes of hyperlipidaemia **and**
- seek specialist advice if the triglyceride level remains at more than 10 mmol per litre.

In people with a triglyceride level between 4.5 mmol and 9.9 mmol per litre:

- be aware that the CVD risk may be underestimated by risk assessment tools **and**
- optimise the management of other CVD risk factors present **and**
- seek specialist advice if non-HDL cholesterol level is more than 7.5 mmol per litre.

ABBREVIATIONS

- TFTs: Thyroid function tests
- ALT: alanine aminotransferase
- non-HDL-C: non-high density lipoprotein cholesterol
- PCSK9i: proprotein convertase subtilisin kexin 9 monoclonal antibody inhibitor
- TC: total cholesterol
- LDL-C: low density lipoprotein cholesterol
- TG: Triglyceride
- SGLT2i: Sodium Glucose Cotransporter-2 inhibitor
- GLP1RA: Glucagon-like peptide-1 receptor agonist
- MRA: Mineralocorticoid receptor antagonist
- BB: beta-blocker
- ACEi: Angiotensin-converting enzyme inhibitor
- ARB: Angiotensin-II receptor blocker
- HF: Heart failure
- ASCVD: Atherosclerotic cardiovascular disease
- OAC: oral anticoagulant
- CKD: chronic kidney disease
- CAD: Coronary artery disease
- PAD: Peripheral arterial disease
- MASLD: Metabolic dysfunction-associated steatotic disease