

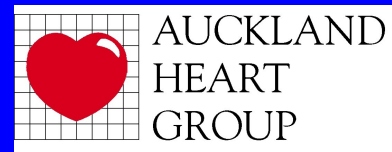
Cholesterol Strategies

Reducing Cardiovascular Risk

Practice Nurses
GP CME 2009

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Who is at risk of cardiovascular disease?

- Age
- Sex
- Family History
- Ethnicity
 - Fiji Indian, Maori, Pacific people (IHD)
 - Chinese (CVA)
- Lipids, hsCRP
- Diabetes Metabolic syndrome
- Hypertension
- Smoking
- Exercise



Lifestyle Management of Dyslipidaemia

- Diet
 - 3 meals/day
 - ↑fruit, vegetables, fish, whole grains
 - ↓dairy and meat fat, sugar and salt
 - Smaller helpings
 - Avoid high sugar drinks
 - Plant sterols
- Weight
 - BMI < 25 (wt/ht²)
 - Waist circumference < 100cm (men), <90cm (women)

Lifestyle Management of Dyslipidaemia

- Physical Activity
 - 30 mins most days
- Smoking cessation

Cholesterol Lowering Agents in NZ

- Statins
 - Simvastatin
 - Atorvastatin
 - Rosuvastatin (unfunded)
- Fibrates
 - Bezafibrate
- Ezetimibe
- Bile Acid Resins
- Acipimox (niacin)

Statins

Benefits

25 - 35% reduction in

- death
- myocardial infarction
- stroke

irrespective of baseline cholesterol level,
patient age or demography



Statins

Benefits

- Lipids
 - ↓total cholesterol, LDL, triglyceride levels
 - ↑HDL.
- Anti inflammatory ↓hsCRP

Statins - Who to Treat?

Secondary Prevention

All patients with

- Coronary Disease
- Cerebrovascular Disease
- Peripheral Vascular Disease

Statins - Who to Treat?

Primary Prevention

Patients with

- Diabetes
- Metabolic Syndrome
- Renal disease - nephrotic syndrome
- Hypertension
- Familial Dyslipidaemia (cholesterol > 8)

Statins - Who to Treat?

Primary Prevention

Risk stratify

- Family history of coronary disease
- Lipid level
- Smoker
- Hypertension
- Age

Statins - Side Effects

- Myalgia CK $> 10x$ N 0.7% 4S study
- Myopathy 0.08% (4S)
 - 1.2% 80mg atorvastatin
- Rhabdomyolysis (rare)
- \uparrow Liver transaminases 1 - 2%
- GI upset - constipation 2.5%
 - abdominal pain 2.5%
 - flatulence 2.0%
 - nausea 0.2%

Statins

Contraindication

- Pregnancy from 6/40
- Breast feeding (relative contraindication)

Statins

Practical Prescribing Hints

- Start with simvastatin 20mg nocte
- Blood test for lipids, LFTs and CK at 1/12
- Titrate dose to target LDL
- Dose > 40mg try bd
- If suboptimal level change to atorvastatin, consider adding ezetimibe

Statins

Treatment Goals

- General community
LDL < 2.5 mmol/l
- High Risk – cardiovascular disease, family history
 - Without diabetes
LDL \leq 1.8 mmol/l
- With diabetes
LDL \leq 1.5 mmol/l
- HDL \geq 1.2 mmol/l



Intolerance to Statins

- Fibrate
- Ezetimibe
- Bile acid resin
- Niacin / fish oil/ linseed and flax oil
- Combination therapy

Dyslipidaemia Follow up

- Weight and healthy eating
 - Consider
 - Nurse clinics
 - Telephone follow up
 - Dietician support
- Exercise

Dyslipidaemia Patient Follow up

With medication - Initial

- 1 month – Lipids, CK, LFTs
- Titrate dose until goal level reached

Long term

- Annual – lipids, glucose

“In the management of atherosclerotic vascular disease, statin drugs have already surpassed all other classes of medicines in reducing the incidence of the major outcomes of death, heart attack and stroke.”

Eric J Topol. NEJM