

## Recommendations for Vascular Protection

### For All Patients With Diabetes: The ABCDEs

- A** A1C – optimal glycemic control (usually  $\leq 7\%$ )
- B** BP – optimal blood pressure control ( $< 130/80$  mmHg)
- C** Cholesterol – LDL-C  $\leq 2.0$  mmol/L if decision made to treat
- D** Drugs to protect the heart (see algorithm) – **A** ACEi or ARB • **S** Statin • **A** ASA if indicated
- E** Exercise – Regular physical activity, healthy diet, achievement and maintenance of healthy body weight
- S** Smoking cessation

### Does This Patient Require Vascular Protective Medications?

#### STEP 1: Does the patient have end organ damage?

- Macrovascular disease
  - Cardiac ischemia (silent or overt)
  - Peripheral arterial disease
  - Cerebrovascular/Carotid disease

YES

**OR**

- Microvascular disease
  - Retinopathy
  - Nephropathy (ACR  $\geq 2.0$ )
  - Neuropathy

YES

**NO**

#### STEP 2: What is the patient's age?

- $\geq 55$  years

YES

**OR**

- 40-54 years

YES

**NO**

#### STEP 3: Does the patient...

- Have diabetes  $> 15$  years AND age  $> 30$  years
- Warrant statin therapy based on the 2012 Canadian Cardiovascular Society Lipid Guidelines

YES

**STATIN\***  
 +  
**ACEi or ARB#**  
 +  
**ASA**  
Clopidogrel if ASA-intolerant

**STATIN\***  
 +  
**ACEi or ARB#**

**STATIN\***

The above vascular protective medications have the potential to cause **embryopathy**: ACEi/ARBs in the 2<sup>nd</sup> trimester and beyond (controversial effects in the 1<sup>st</sup> trimester), Statins throughout pregnancy. Therefore, these medications should **only be used in the presence of proper preconception counseling and reliable contraception** in women of childbearing age. A woman's pregnancy plans should be discussed at every visit.

- **Statins** should be stopped **prior to conception**
- **ACEi or ARBs** should be stopped **either prior to conception or immediately upon detection of pregnancy**

\* Dose adjustments or additional lipid therapy warranted if lipid target (LDL-C  $\leq 2.0$  mmol/L) not being met.

# ACE-inhibitor or ARB (angiotensin receptor blocker) should be given at doses that have demonstrated vascular protection (ie. perindopril 8 mg once daily (EUROPA trial), ramipril 10 mg once daily (HOPE trial), telmisartan 80 mg once daily (ONTARGET trial))

ASA should not be used for the primary prevention of cardiovascular disease in people with diabetes. ASA may be used for secondary prevention.

ACR = albumin-creatinine ratio ASA = acetylsalicylic acid ACEi = angiotensin converting enzyme inhibitor

ARB = angiotensin receptor blocker LDL = low density lipoprotein