Think Total Vascular Risk

Assess the risk
Set the targets
Act to get to goal

Multiple risk factors usually contribute to the atherosclerosis that causes cardiovascular disease. These risk factors interact, sometimes multiplicatively. Management of the individual components of risk such as smoking, diet, exercise, blood pressure and lipids impacts on total cardiovascular risk.

Thus the aim should be to reduce total risk; if a target cannot be reached with one risk factor, total risk can still be reduced by reducing other risk factors.

Recommended by Canadian Vascular Coalition 2004
1. Find the cell nearest to the person’s gender, age, total/HDL-chol. ratio and systolic blood pressure values, bearing in mind that the risk will be higher as the person approaches the next age, cholesterol or blood pressure category.

2. This will give you a **percentage representing the risk** of dying from vascular disease in next 10 years.

3. Risk may be higher than indicated in the chart if:
   - preclinical atherosclerosis already established;
   - family history of premature cardiovascular disease: X 1.7 (men), X 2.0 (women);
   - obesity, BMI > 30 Kg/m², waist circumference 102 cm or higher in men or 88 cm or higher in women;
   - sedentarity;
   - diabetes: multiply by 3 in men and by 5 in women;
   - very high triglycerides;
   - high levels of hsC-reactive protein, fibrinogen, homocystein, apolipoprotein B or Lp(a).

**Relative Risk Chart**

- Use this chart to show younger people, less than 40, at low total risk that, relative to their age group, their risk may be many times higher than necessary.
- This may help to motivate decisions about avoidance of smoking, healthy nutrition and exercise, as well as flagging those who may become candidates for medication.
**Determining vascular age**

Vascular age, or the age of a person’s arteries, is determined by comparing a person's risk with that of an older person having the same risk level but risk factor values situated in an optimal interval.

More information can be found on the following website: [www.score-canada.ca](http://www.score-canada.ca)

**Vascular Age evaluation table**

After having used the SCORE chart to calculate the % of risk, use this table to estimate the vascular age.

<table>
<thead>
<tr>
<th>Score</th>
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<th>VA men</th>
</tr>
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<tbody>
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</tbody>
</table>
What are the objectives of vascular prevention?

1. To assist those at low risk of vascular disease to maintain this state lifelong, and to help those at higher increased total vascular risk to reduce it.

2. To obtain the characteristics of people who tend to stay healthy:
   - No smoking
   - Five portions of fruit and vegetable or more a day and healthy food choices
   - Thirty minutes of physical exercise (moderate intensity) a day
   - Blood pressure under 140/90 mmHg
   - Total-cholesterol under 5 mmol/L
   - LDL-cholesterol under 3 mmol/L
   - Zero diabetes; fasting plasma glucose under 7 mmol/L
   - Zero obesity; BMI under 25 Kg/m² and no abdominal obesity

3. To achieve more rigorous risk factor control in high risk subjects, especially those with established vascular disease, diabetes or kidney disease.

4. To prescribe ASA, statin, ACE-I or ARB in these high risk subjects, especially those with established atherosclerotic disease.

5. To consider pharmacological treatment to control hypertension and/or diabetes.
Recommendations

0 No smoking

5 portions of fruit and vegetable or more a day and varied healthy foods, cereals or whole wheat bread, fish, limit salt (sodium) intake

30 minutes of moderately vigorous exercise on most days

Reduce weight if BMI > 25 kg/m² or waist circumference equal or higher than 88 cm (women), 102 cm (men)

If SCORE risk is equal or exceeds 5 % or if there is established vascular disease or diabetes with end organ damage: Consider ASA, Statin, ACE-I or ARB

Consider a pharmacological treatment to control hypertension and/or diabetes.