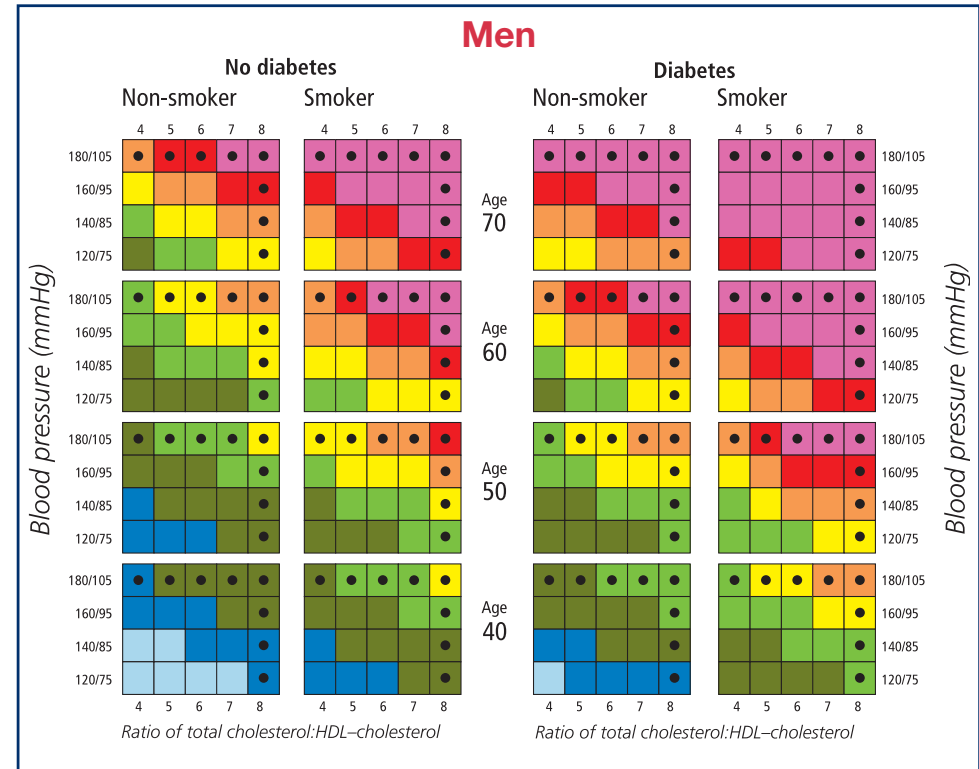
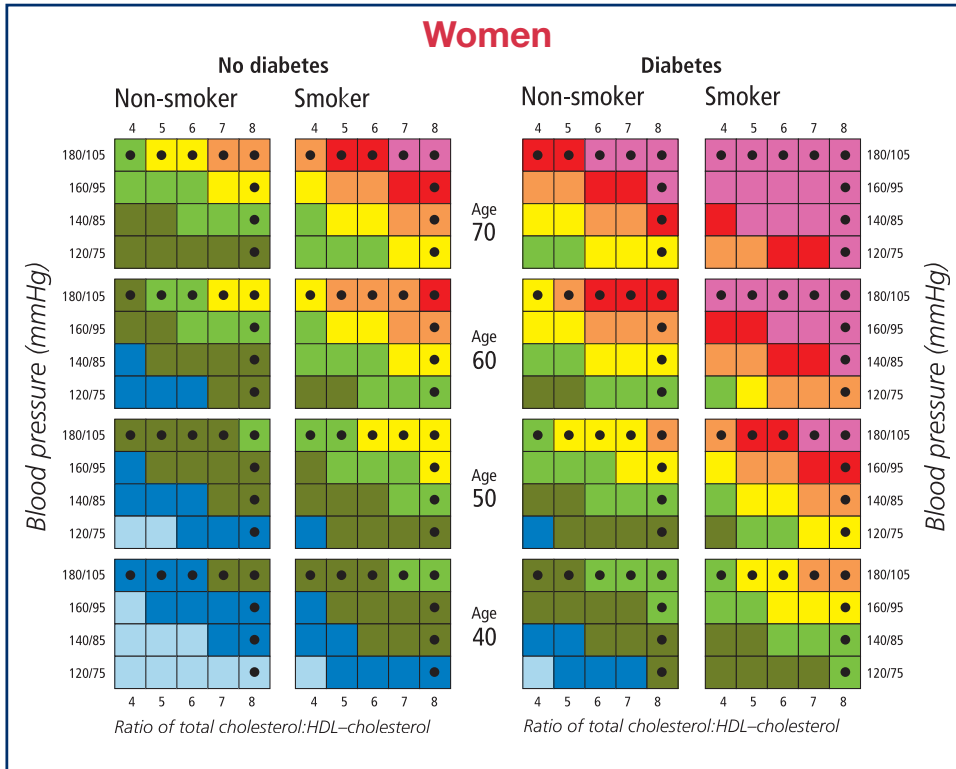


New Zealand Cardiovascular Risk Calculator

Assessing cardiovascular risk and treatment benefit



National Prescribing Service Limited



Cells with this marker (•) indicate patients with either a very high total cholesterol or very high blood pressure. In these patients the tables may underestimate true risk.

Absolute 5-year CV risk (fatal and non-fatal)	
Very high	 > 30%
	 25–30%
	 20–25%
High	 15–20%
	 10–15%
Moderate	 5–10%
	 2.5–5%
	 < 2.5%

Risk level 5-year CV risk (fatal and non-fatal)	Benefits: NNT ^a for 5 years to prevent one event ^b (CVD events prevented per 100 people treated for 5 years)		
	1 intervention (25% risk reduction)	2 interventions (45% risk reduction)	3 interventions (55% risk reduction)
30%	13 (7.5 per 100)	7 (14 per 100)	6 (16 per 100)
20%	20 (5 per 100)	11 (9 per 100)	9 (11 per 100)
15%	27 (4 per 100)	15 (7 per 100)	12 (8 per 100)
10%	40 (2.5 per 100)	22 (4.5 per 100)	18 (5.5 per 100)
5%	80 (1.25 per 100)	44 (2.25 per 100)	36 (3 per 100)

^a Number needed to treat

^b Based on the conservative estimate that each intervention: aspirin, blood pressure treatment (↓ SBP by 10 mmHg) or lipid modification (↓ LDL-cholesterol by 20%) reduces CV risk by approximately 25% over 5 years.

New Zealand Cardiovascular Risk Calculator

adapted with permission from New Zealand Guidelines Group^a

How to use the risk calculator

Find the colour block which best describes your patient's:

- gender
- age (age shown is mean for that category e.g. 60 represents those 55–64 years old)
- smoking status (regular daily smoking or having stopped in the previous 12 months)
- diabetes status (on insulin, oral hypoglycaemics, or fasting blood glucose > 8.0 mmol/L)
- BP (mean of two readings on at least two occasions)
- total cholesterol/HDL-cholesterol ratio.

Cell colour estimates a person's absolute 5-year risk of a cardiovascular event i.e. newly diagnosed angina, myocardial infarction (MI), coronary heart disease death, stroke or transient ischaemic attack (TIA).

Who does not need their risk calculated?

Very high-risk patients as determined clinically do not need to have their risk calculated. These patients are assumed to have a cardiovascular disease (CVD) risk > 20% over 5 years.

- All patients with symptomatic CVD^b
- Those with diagnosed left ventricular hypertrophy^c
- Those with genetic lipid disorders^d
- Those with diabetes and evidence of renal disease.^e

For age > 75 years, the absolute risk of a cardiovascular event is > 15% at 5 years in nearly all individuals.

Where risk may be underestimated

The following patient groups are likely to be at greater risk than the tables indicate. For these patients, consider increasing estimated risk by one colour level or treating at a lower CVD risk level:

- Those with a strong family history of CVD (first degree relative i.e. a male with CVD before 55 years, or female before 65 years)
- Those of Aboriginal^c, Torres Strait Islander^c, Maori or Pacific Islander origin and people from the Indian sub-continent
- Those who are obese (BMI ≥ 30 kg/m²)
- Those with very high levels of total cholesterol (> 8.5–9 mmol/L)
- Those with very high blood pressure (> 170/100 mmHg).

^a See the New Zealand Guidelines Group at: http://www.nzgg.org.nz/guidelines/0035/CVD_Risk_Full.pdf

^b Angina, MI, previous coronary revascularisation procedure, heart failure, stroke, TIA, peripheral vascular disease.

^c See: Hypertension Management Guide for Doctors 2004. National Heart Foundation of Australia; 2004. <http://www.heartfoundation.com.au>

^d Familial hypercholesterolaemia, familial defective ApoB and familial combined dyslipidaemia.

^e Microalbuminuria ≥ 30 microg/min and/or proteinuria ≥ 200 mg/day and/or glomerular filtration rate (GFR) < 60 mL/min^c