

# AUCKLAND HEART GROUP

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Dr Colin Edwards is a cardiologist at AHG as well as North Shore and Waitakere Hospitals. Colin's expertise is CT, MRI, hypertension and acute coronary syndromes.



Dr Colin Edwards

## Hypertension

By Dr. Colin Edwards

Hypertension is an important and common condition thought to affect approximately 30% of Western Societies. It is estimated to be responsible for 1 in 6 deaths in the world. If hypertension is adequately treated, it can potentially lead to a 35% reduction in stroke, 25% reduction in myocardial infarction and a 50% reduction in heart failure.

### Hypertension Classification

Category	SBP mmHg	DBP mmHg
Normal	<120 and	<80
Pre-hypertension	120-139 or	80-89
Hypertension - stage 1	140-159 or	90-99
Hypertension - stage 2	≥160 or	≥100

The diagnosis of hypertension is based on the average of 2 measurements taken at 2 separate clinic visits.

### Patient Assessment

#### History

#### Assess risk factors

Hypertension, hyperlipidaemia, diabetes, cigarette smoking, eGRF, microalbuminuria, physical inactivity, family history premature CAD

#### Identifiable causes of hypertension

Stress, OSA, Chronic renal disease, drug related, primary aldosteronism, renovascular disease, pheochromocytoma, coarctation of aorta.

### Examination

#### Identify target organ damage

#### Laboratory Tests

Blood glucose, lipids, K<sup>+</sup>, creatinine, Ca<sup>2+</sup>, Na<sup>+</sup>, HbA1c

### ECG

#### BP Measurements Techniques

Method	Comment
Office	2 readings, 5 min apart, sitting in chair
Ambulatory BP	For suspected 'white coat hypertension'. Absence of 10-20% nocturnal BP drop may increase CVD risk
Home monitoring	Help engage the patient Useful for suspected 'white coat hypertension'

### Treatment of Hypertension

#### Principles of treatment

Target BP, <140/90mmHg and <130/80mmHg in diabetics or in patient with chronic renal disease. Majority of patients will require 2 medications to reach target. Limit stress, weight reduction, aerobic exercise, salt restriction.

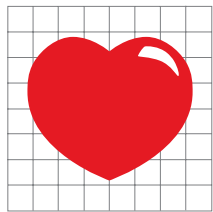
#### Indication for individual drug classes

Indication	Initial therapy
Heart Failure	Thiazide, BB, ACEI, ARB, ALDO ANT
Post MI	BB, ACEI, ALDO ANT
High CVD risk	Thiazide, BB, ACEI, CCB
Diabetic	Thiazide, BB, ACEI, ARB, CCB
CRF	ACEI, ARB
Stroke	Thiazide, ACEI

### Causes of Resistant Hypertension

(failure to achieve target BP despite 3 drugs including diuretic)

Poor compliance Inadequate diuretic therapy - chlorthalidone 12.5mg to 25mg/d is the preferred thiazide
Medication - NSAID's, oral contraceptive, sympathomimetics
Excess sodium
Excess alcohol
Consider secondary causes



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### A Simplified Approach to the Treatment of Uncomplicated Hypertension A Cluster Randomized, Controlled Trial

