






# Hypertension

Hypertension is the major risk factor for IHD and stroke. Hypertension accounts for ~5% of all problems managed in Australian general practice (BEACH 2014). Management of hypertension is the second most common problem managed by registrars (ReCEnt data).

|                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                                                                                                                     |               |                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>TEACHING AND LEARNING AREAS</b></p>        | <ul style="list-style-type: none"> <li>• Measuring blood pressure correctly</li> <li>• Monitoring BP and the role of ABPM</li> <li>• Investigation– secondary causes, co-morbidities, end-organ effects</li> <li>• Calculating absolute CV risk</li> <li>• Non-pharmacological treatment</li> <li>• Medications, including indication, choice of agent, side effects</li> <li>• Indications for referral</li> <li>• Challenges in the elderly and younger patients, and difficult to control BP</li> </ul>                                                                                                                                                                                                                                                                                                                             |             |                                                                                                                                                                                                                                                                                                                                                                                     |               |                                                                                                                                                                                     |
| <p><b>PRE- SESSION ACTIVITIES</b></p>          | <ul style="list-style-type: none"> <li>• Read the NPS MedicineWise News resource <a href="#">Blood Pressure: measure, manage, monitor</a></li> <li>• Registrar to select three patients with hypertension to discuss, including at least one patient on multiple medications</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                                                                                                                                                                                                                                                                                                                                                                                     |               |                                                                                                                                                                                     |
| <p><b>TEACHING TIPS AND TRAPS</b></p>          | <ul style="list-style-type: none"> <li>• Have a low threshold for monitoring BP outside the clinic (ABPM, home monitoring)</li> <li>• Add a new medication before increasing to the maximum dose of the existing medication</li> <li>• Beware combination agents unless the patient is stable</li> <li>• Consider common causes for difficult to manage BP – adherence, alcohol</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |                                                                                                                                                                                                                                                                                                                                                                                     |               |                                                                                                                                                                                     |
| <p><b>RESOURCES</b></p>                        | <table border="1"> <tbody> <tr> <td><b>Read</b></td> <td> <ul style="list-style-type: none"> <li>• Australian Hypertension Guidelines <a href="#">Hypertension Guidelines and Tools</a></li> <li>• Absolute CV risk calculator <a href="http://www.cvdcheck.org.au">http://www.cvdcheck.org.au</a></li> <li>• <a href="#">The RACGP Red Book - hypertension</a></li> <li>• <a href="#">AFP Difficult Decisions in Hypertension</a></li> </ul> </td> </tr> <tr> <td><b>Listen</b></td> <td> <ul style="list-style-type: none"> <li>• <a href="http://www2c.cdc.gov/podcasts/media/mp3/mmwr5_040209.mp3">http://www2c.cdc.gov/podcasts/media/mp3/mmwr5_040209.mp3</a></li> </ul> </td> </tr> </tbody> </table> | <b>Read</b> | <ul style="list-style-type: none"> <li>• Australian Hypertension Guidelines <a href="#">Hypertension Guidelines and Tools</a></li> <li>• Absolute CV risk calculator <a href="http://www.cvdcheck.org.au">http://www.cvdcheck.org.au</a></li> <li>• <a href="#">The RACGP Red Book - hypertension</a></li> <li>• <a href="#">AFP Difficult Decisions in Hypertension</a></li> </ul> | <b>Listen</b> | <ul style="list-style-type: none"> <li>• <a href="http://www2c.cdc.gov/podcasts/media/mp3/mmwr5_040209.mp3">http://www2c.cdc.gov/podcasts/media/mp3/mmwr5_040209.mp3</a></li> </ul> |
| <b>Read</b>                                                                                                                       | <ul style="list-style-type: none"> <li>• Australian Hypertension Guidelines <a href="#">Hypertension Guidelines and Tools</a></li> <li>• Absolute CV risk calculator <a href="http://www.cvdcheck.org.au">http://www.cvdcheck.org.au</a></li> <li>• <a href="#">The RACGP Red Book - hypertension</a></li> <li>• <a href="#">AFP Difficult Decisions in Hypertension</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |                                                                                                                                                                                                                                                                                                                                                                                     |               |                                                                                                                                                                                     |
| <b>Listen</b>                                                                                                                     | <ul style="list-style-type: none"> <li>• <a href="http://www2c.cdc.gov/podcasts/media/mp3/mmwr5_040209.mp3">http://www2c.cdc.gov/podcasts/media/mp3/mmwr5_040209.mp3</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |                                                                                                                                                                                                                                                                                                                                                                                     |               |                                                                                                                                                                                     |
| <p><b>FOLLOW UP/ EXTENSION ACTIVITIES</b></p>  | <ul style="list-style-type: none"> <li>• Registrar to undertake the Clinical Reasoning Challenge under exam conditions and discuss</li> <li>• Registrar to undertake the NPS MedicineWise case study <a href="#">Blood Pressure: measure, manage, monitor</a></li> <li>• Audit the BP management of 10 patients using the <a href="#">NPS Clinical e-Audit on Hypertension</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                                                                                                                                                                                                                                                                                                                     |               |                                                                                                                                                                                     |

# Hypertension

## Clinical Reasoning Challenge

Graham is a 49 year old electrician who attends your practice occasionally for minor medical problems. He has no significant past medical history, takes no medicines, has no known allergies, but is a regular smoker of about 20 cigarettes per day. He drinks a couple of beers most nights and more on the weekend.

Graham recently saw another GP for a URTI and BP was recorded as 162/93 at that visit. He was asked to follow it up with you. BP today is 154/91, and readings from the past 12 months are similar.

QUESTION 1. Graham denies any current symptoms on system review. What other key features should you seek on history? List, in note form only, five (5) other features you should ask about.

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_

QUESTION 2. On the basis of Graham's blood pressure readings, you make a diagnosis of hypertension. Physical examination is essentially normal, apart from a weight of 105kg and WC of 102cm. Urine dipstick is normal. He has had no recent blood tests or other investigations.

What are the most appropriate investigations to perform at this point? List, in note form only, seven (7) investigations you would request.

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_
- 6 \_\_\_\_\_
- 7 \_\_\_\_\_

QUESTION 3. Graham returns for review of investigation results and his absolute CV risk is calculated at 12%. What are the main management areas you would address with Graham this point? List, in note form only, four (4) main management areas..

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

# Hypertension

## ANSWERS

### QUESTION 1

- Stress
- salt intake
- exercise
- weight gain
- FHx

### QUESTION 2

- FBC
- EUC
- LFT (heavy alcohol use)
- fBS,
- lipids
- urine ACR
- ECG

### QUESTION 3

- Monitoring BP (home or clinic)
- weight loss/exercise/diet
- smoking cessation
- alcohol reduction
- trial of conservative management for 3 months