**Understanding your blood pressure**

Blood pressure is the pressure of the blood in your arteries. You need a certain amount of pressure to keep the blood flowing around your body. Your heart pumps blood through the arteries, by contracting and relaxing.

Your blood pressure reading consists of two numbers usually shown as one on top of the other and measured in mmHg (millimetres of mercury).

The first (or top) number represents the highest level that your blood pressure reaches when your heart contracts and pumps blood through your arteries – known as your systolic pressure.

The second (or bottom) number represents the lowest level your blood pressure reaches as your heart relaxes between beats – your diastolic pressure.

High blood pressure – or hypertension – means that your blood pressure is constantly higher than the recommended level.

For the general population, blood pressure should be below 140/90mmHg.

However, for those who have heart and circulatory disease (such as coronary heart disease or **stroke**) or diabetes or kidney disease, **blood pressure should be below 130/80mmHg –** except in some circumstances (such as if the patient has significant carotid stenosis).

This guidance is set by the Royal College of Physicians (2016) stroke guidelines.

***Why does it matter?***

High blood pressure damages arteries throughout the body, creating conditions where they can clog (causing an ischaemic stroke) or burst (causing a haemorrhagic stroke) more easily. Weakened arteries in the brain, resulting from high blood pressure, put you at a much higher risk of a stroke.

**Why is BP control important after stroke?**

Lowering blood pressure reduces risk of recurrent stroke by **18%**

A 10mmHg reduction in systolic BP = 33% reduced risk of recurrent stroke

**25%** of strokes are recurrent... and mortality after a recurrent stroke is **41%**

**A 2mmHg rise in Systolic BP can increase mortality rate of stroke by 10%**

***What can cause high blood pressure?***

|  |  |
| --- | --- |
| * + High salt intake or salt sensitivity | Significant amounts of stress |
| * + Smoking | Age above 40 |
| * + Overweight or obesity | Black African/Black Caribbean descent |
| * + Lack of physical activity | Lack of sleep/disturbed sleep |
| * + High alcohol or caffeine consumption | Certain health conditions such as kidney disease, diabetes, obstructive sleep apnea, some hormone conditions, lupus |
| Family history/genetics |
| Some medications such as contraceptive pill, steroids, NSAID’s (ibuprofen), some herbal remedies and some types of anti-depressants, some pharmacy cold/cough remedies | |

***What to do if you get..***

1. A very high blood pressure

If you get a BP of over 180/120mmHg, reassure the patient, check your red flash card to ensure the readings are as accurate as possible, wait 10 mins, and repeat. If still the same after 3 repeated readings please ring the GP to review and ensure the patient has taken any prescribed antihypertensive medications.

1. A very low blood pressure

You may occasionally come across a patient who has low BP. This can be some patient’s norm – but an acute drop in blood pressure can indicate a medical problem such as Sepsis. Please consult the patients GP or 111 for advice if you get a BP <85/50mmHg or if you have a concern that the patient is unwell. Also be aware that on very HOT days, blood pressure can be lower, so also consider this.

**6 top tips to reduce BP:**

1. **Regular physical activity if able**
2. **Maintain a healthy, balanced diet and healthy weight**
3. **Stop smoking – www.nhs.co.uk/smokefree**
4. **Reduce salt intake. A high level of sodium in the blood can increase blood pressure. You are recommended to have no more than 6g salt a day.**
5. **Don’t drink too much. The government guidelines recommend <14 units/week, spread out over the week. `The daily recommended limit for men is 3-4 units, and 2-3 units for women.**
6. **Take prescribed medications**

***Notes:***

* Home blood pressure targets are lower than clinic targets – you don’t need to worry about this but it is worth being aware of. Blood pressure can be a bit higher when it is taken in a clinic setting (white coat hypertension) and therefore may be a less accurate predictor of cardiovascular risk. Some people also get higher readings at home than in a clinic – this is called ‘masked’ hypertension.
* If the cuff is too big/small, the readings may be inaccurate. Please record if you are unable to take the measurement due to incorrect cuff fit – we have been supplied for 4 large cuffs to give to patients as part of the BP @ Home project.
* Blood pressure naturally rises and falls throughout the day, so it is completely normal for the readings to vary slightly.

***Further information:***

If you would like to gain a more in depth knowledge about blood pressure measurement and management, please access the following webinars which were run by Dr Lewis (Consultant Cardiologist) in February 2021:

Webinar 1: Blood Pressure Measurement <https://www.youtube.com/watch?v=m6N0FTciKrk>

Webinar 2: Blood Pressure Management <https://www.youtube.com/watch?v=S5MNwTV1WPU>

**The following websites are also useful:**

[**www.england.nhs.uk/nhs-at-home**](http://www.england.nhs.uk/nhs-at-home)

[**www.bihsoc.org**](http://www.bihsoc.org)[**www.bhf.org.uk**](http://www.bhf.org.uk)

**How do I reduce my BP?**

**salt**

**Stop smoking**

**exercise**

**alcohol**

**Eat healthily/lose weight if BMI**

**At Initial Screen:**

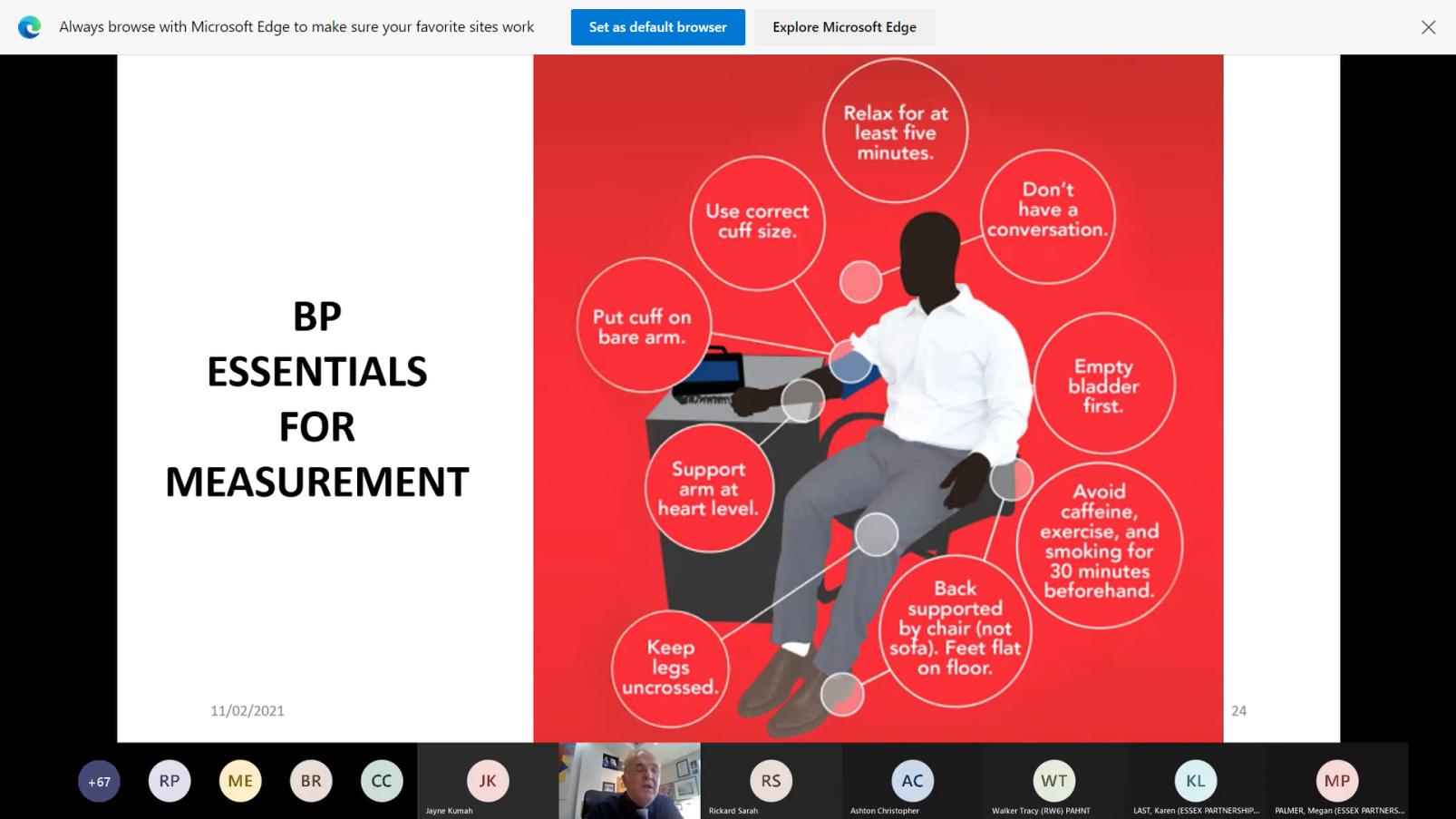
**Check BP x3 in both arms**

***Record* all readings as on moniter - don’t round up/down**

***Record* whether it detects an arrhythmia**

**Email readings to Beki**

**\*Sustained BP of >180/120mmHg or <85/50mmHg (after waiting for 10 mins and repeating), contact GP/111 for same day review\***



**Cuff too big/small? Don’t record – risk of inaccuracy**

**Tight enough? 2 fingers should be able to fit under the cuff**

**2cm above elbow crease**

**Bare arms only**

**Cuff placement:**

**Useful websites:**

**www.nhs.uk/change4life**

**BRITISH HEART FOUNDATION**

**ALCOHOL SUPPORT**

**HEALTHY EATING & INCREASING ACTIVITY**

**www.bhf.org.uk**

**BRITISH/IRISH HYPERTENSION SOCIETY**

**www.bihsoc.org**

**www.drinkaware.co.uk**