

# **Prediabetes** **online programme**



# **Waterside PCN**

Created by the Waterside Primary Care Network  
Health and Wellbeing Team

# Part 6 – Understanding Hypertension

## Part 6 content:

- **What is Hypertension**
- **Understanding your blood pressure reading**
- **Health complications due to Hypertension**
- **Risk factors of Hypertension**
- **Risk factors that we can change**
- **Understanding medications for Hypertension**
- **Focus of the week**

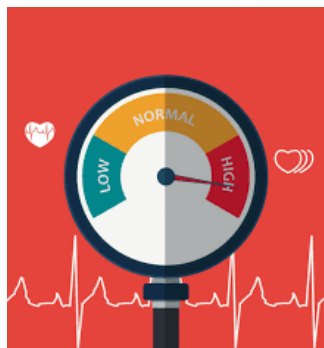


Waterside PCN

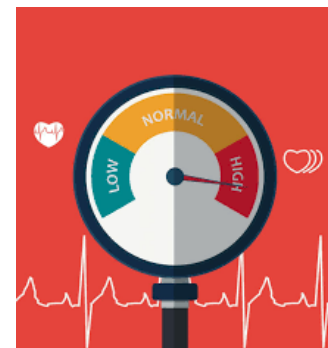
# Understanding Hypertension



# What is Hypertension?



## High Blood Pressure



Watch this short animation video to understand hypertension in greater detail

[https://www.youtube.com/watch?v=mjTMZ\\_sm0LQ](https://www.youtube.com/watch?v=mjTMZ_sm0LQ)

# What is the difference between the Systolic and Diastolic numbers?

**Systolic**



**120**

The systolic is the pressure when the heart contracts.



**80**

**Diastolic**



The diastolic is the pressure when the heart is relaxed.

# Understanding your blood pressure reading

As a general guide:

**Normal blood pressure** is considered to be between 90/60mmHg and 120/80mmHg

**High blood pressure** is considered to be 140/90mmHg or higher

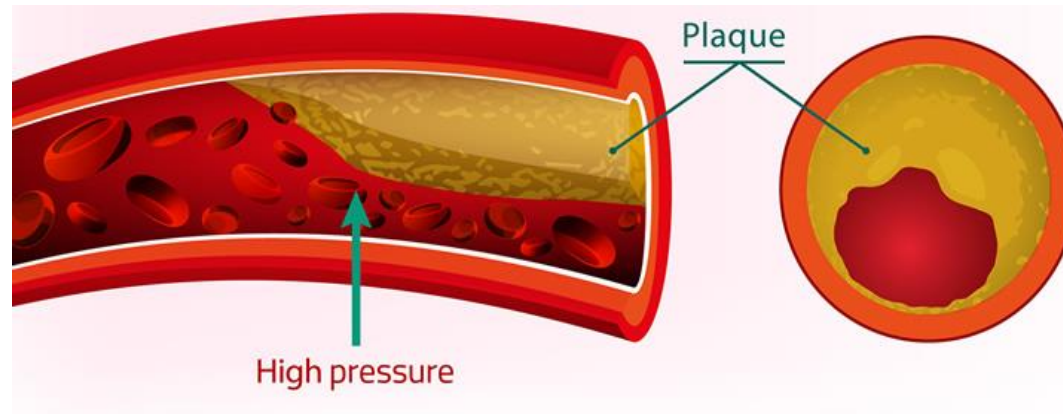
**Low blood pressure** is considered to be 90/60mmHg or lower

A blood pressure reading between 120/80mmHg and 140/90mmHg could mean you're at risk of developing high blood pressure if you don't take steps to keep your blood pressure under control.

**What does your blood pressure results mean?**

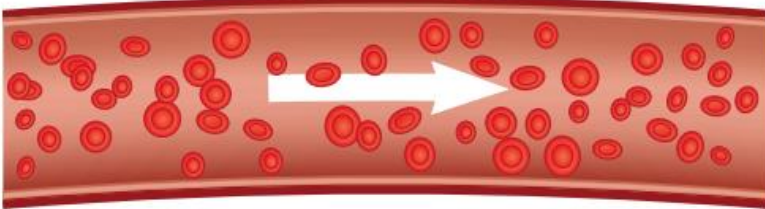
<https://www.nhs.uk/conditions/blood-pressure-test/>

# The causes of Hypertension



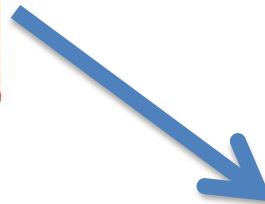
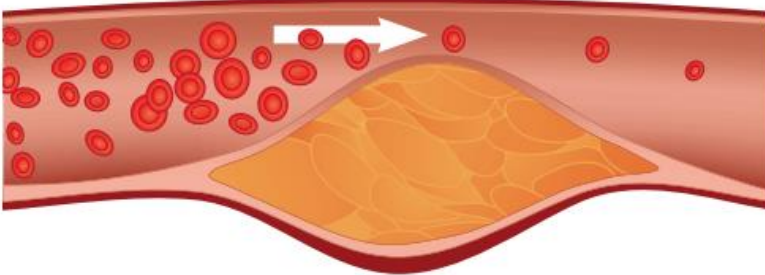
- High blood pressure happens when the pressure against the artery walls increase.
- This can be from a stiffening of the artery walls or a narrowing of the actual vessels/arteries themselves.
- Damage to the artery walls causes a build-up of substances in the arteries.
- What is building up here? Fatty deposits, also known as plaque, which is made up of cholesterol, fatty substances, cell waste products and fibrin (a clotting material in the blood).

*Normal Artery*

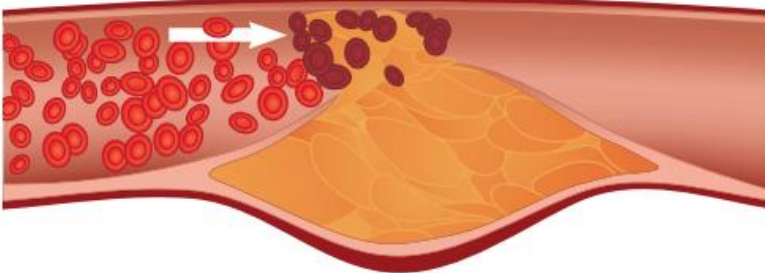


Arteries distribute oxygen-rich blood to your body. Arteries, part of your circulatory (cardiovascular) system, are the blood vessels that bring oxygen-rich blood from your heart to all of your body's cells. They play a crucial role in distributing oxygen, nutrients and hormones throughout your body

*Atherosclerosis/ Plaque Buildup*



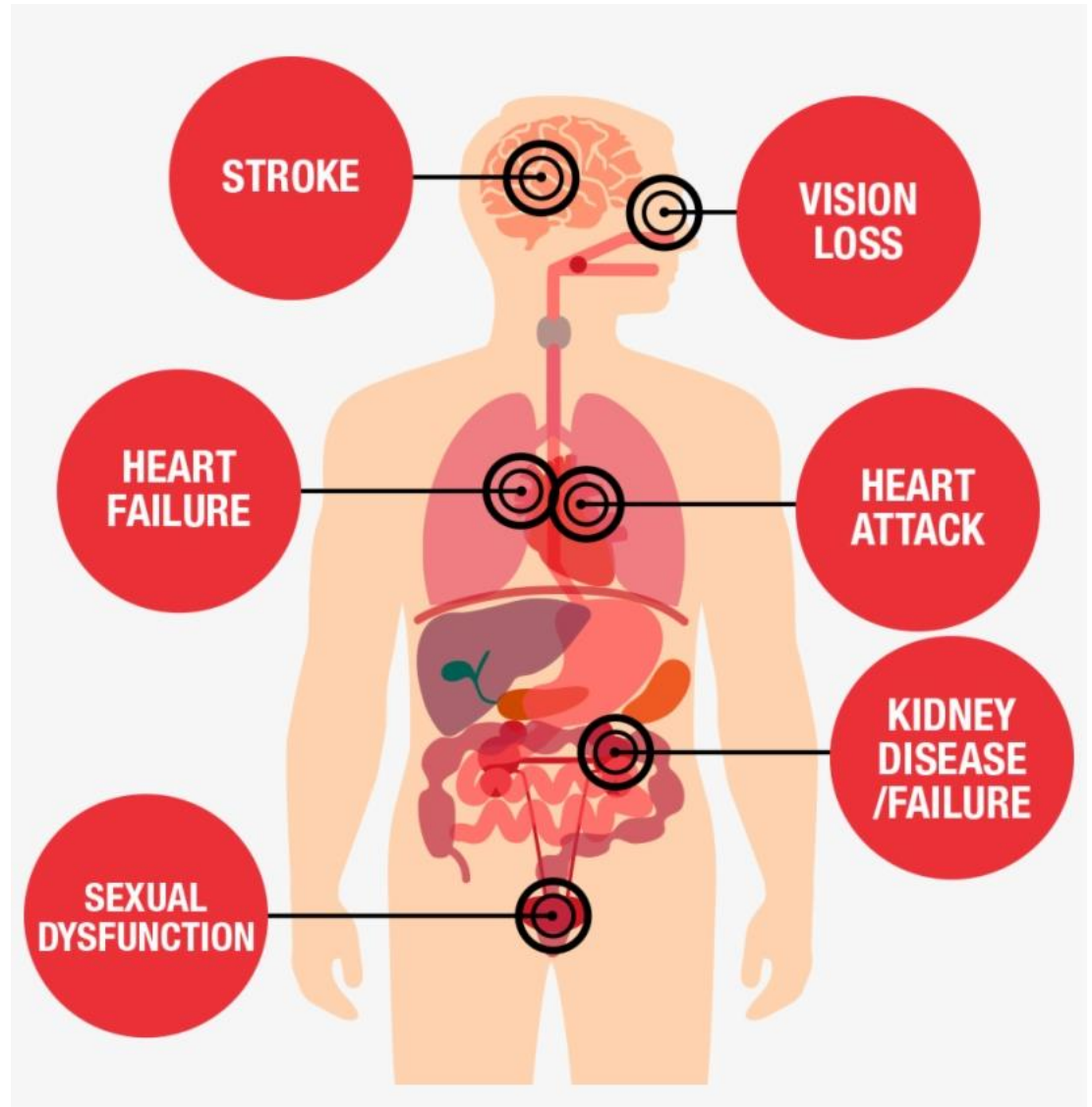
*Atherosclerosis/ Plaque Buildup with Blood Clots*



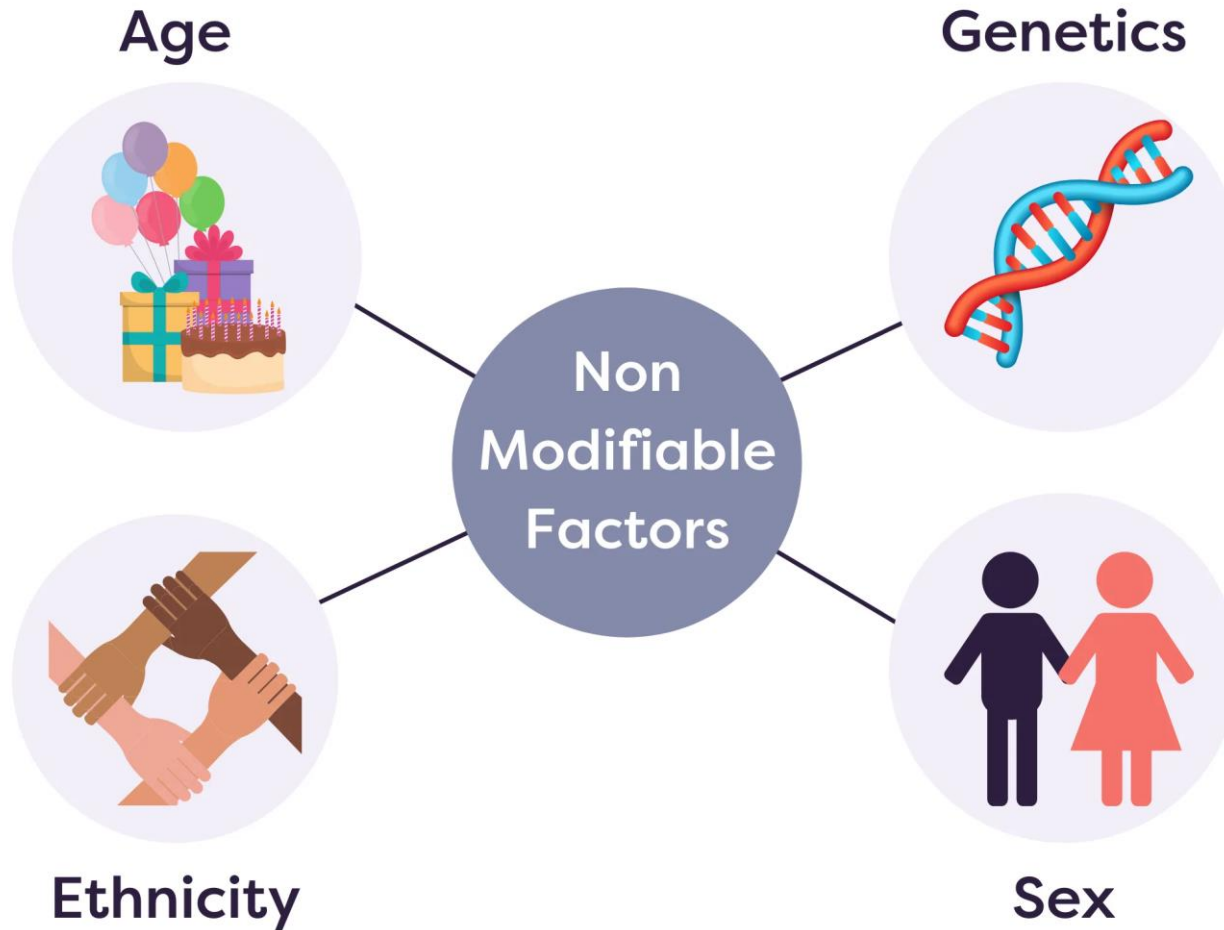
- Poor blood circulation
- Increase blood pressure
- Heart attack/ stroke
- Blood clots
- Narrow arteries
- Harden arteries



# Health complications due to hypertension



# Risk factors for Hypertension



# Risk factors that we can change

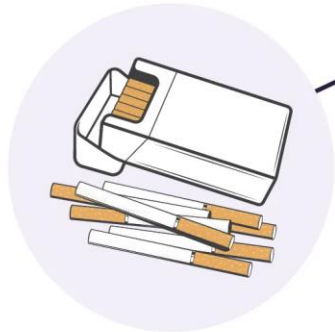
Body weight



Salt intake



Modifiable  
Factors



Smoking



Exercise

# NATURAL REMEDIES FOR HYPERTENSION



Exercise regularly



Manage weight



Quit smoking



Follow proper diet



Meditate



Manage stress



Find a work-life  
balance

# How stress may affect your blood pressure

Your body produces a surge of hormones when you're in a stressful situation. These hormones temporarily increase your blood pressure by causing your heart to beat faster and your blood vessels to narrow.

There's no proof that stress by itself causes long-term high blood pressure. But reacting to stress in unhealthy ways can increase your risk of high blood pressure, heart attacks and strokes.

The hormones your body makes when you're emotionally stressed may damage your arteries, leading to heart disease. Also, some symptoms, like those caused by depression, may cause you to forget to take medications to control high blood pressure or other heart conditions.



Increases in blood pressure related to stress can be dramatic. But when your stress goes away, your blood pressure returns to normal. However, even frequent, temporary spikes in blood pressure can damage your blood vessels, heart and kidneys in a way similar to long-term high blood pressure.

# **Stress-reducing activities can lower your blood pressure**

Reducing your stress level might not directly lower your blood pressure over the long term.

But using strategies to manage your stress can help improve your health in other ways.

Mastering stress management techniques can lead to healthy behaviour changes, including those that reduce your blood pressure.



# Options for managing stress

**Simplify your schedule.** If you always feel rushed, take a few minutes to review your calendar and to-do lists. Look for activities that take up your time but aren't very important to you. Schedule less time for these activities or eliminate them completely.

**Breathe to relax.** Taking deep and slow breaths can help you relax.

**Exercise.** Physical activity is a natural stressbuster. Just be sure to get your doctor's OK before starting a new exercise program, especially if you've been diagnosed with high blood pressure.

**Try yoga and meditation.** Yoga and meditation strengthen your body and help you relax. These techniques also may lower your systolic blood pressure by 5 millimetres of mercury (mm Hg) or more.

**Get plenty of sleep.** Too little sleep can make your problems seem worse than they really are.

**Shift your perspective.** When dealing with problems, resist the tendency to complain. Acknowledge your feelings about the situation, and then focus on finding solutions.

The goal is to discover what works for you. Be open-minded and willing to experiment. Choose your strategies, take action and start enjoying the benefits.



# Medications

Medication	How it Works	Considerations
Vasodilators ACE Inhibitors & ARB's Typically end in '-pril' e.g. Ramipril)	Relax blood vessels	<ul style="list-style-type: none"><li>• Postural hypotension</li></ul>
Calcium-Channel Blockers Typically end in '-pine' e.g. Amlodopine	Slow heart rate	<ul style="list-style-type: none"><li>• Leg swelling</li><li>• Impair thermoregulation</li><li>• Blunts heart rate response</li></ul>
Beta-Blockers Typically end in '-lol' e.g. Bisprolol	Slow heart rate	<ul style="list-style-type: none"><li>• Impair thermoregulation</li><li>• Blunts heart rate response</li></ul>
Diuretics Typically end in '-ide' e.g. Bumetanide	Promotes urination which reduces sodium & fluid volume	<ul style="list-style-type: none"><li>• Dehydration</li><li>• Low potassium</li><li>• Impair thermoregulation</li></ul>

# Focus of the week

**What have you learnt about Hypertension?**

**What are your risk factors for Hypertension?**

**What risk factors can you change?**

**Do you need to make some lifestyle changes to reduce your risk?**

**Ask yourself ... what changes do I need to start now?**