Prevention and Management of Hypertension Disease in the UK: A Public Health Concern



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Introduction

- A diagnosis of hypertension reflects that the body has undergone a prolonged epoch of elevated blood pressure (hypertension) which has a significant contribution to the development of heart disease, stroke and, kidney / renal disease (Hezam et al., 2024).
- In the UK, hypertension has emerged as an important public health issue as it has become a prevalent disease and as it also leads to significant amounts of complication (Goorani et al., 2024).

- The importance of having well established prevention and management strategies are of criteria to help decrease the level of morbidity and mortality related to hypertension (Lauder et al., 2023).



Definition, Symptoms & Causes

High blood pressure (hypertension) is considered to be present when the systolic/diastolic bp ≥ 140/90 mmHg (UK guidelines) (Agarwal et al., 2024).

It is usually referred to as a "silent killer" since the majority of individuals do not experience any symptoms (WHO, 2023).



Blood Pressure

≥140/90 mm Hg.

Typical Symptoms of High Blood Pressure include

Headaches, dizziness, and/or blurred vision.

Some of the reasons for having high blood pressure (Causes/Risk Factors) can be summarized as follows:

- Excessive consumption of salt.
- Being overweight and not participating in enough physical activity.
- Smoking and/or drinking excessive amounts of alcohol.
- Genetic predisposition.
- Having high-stress levels and/or being older than average.

Prevalence (UK & Worldwide)

- In the UK, about one in three adults have high blood pressure.
- The majority of people with high blood pressure do not know they have it.
- More than 1.2 billion people around the world have high blood pressure (Mishra et al., 2025)
- The increasing number of people with high blood pressure results from more people moving into cities and eating poorly or not getting enough exercise.





Economic & Social Burden

- The NHS incurs a substantial economic cost from long-term treatments and complications associated with hypertension (Mancia et al., 2023).
- Hypertension causes both a loss of productivity and higher levels of expenditure for health care (MacLeod et al., 2022).
- Families bear some of this burden because they often provide care and experience reduced quality of life (Wunlandari et al., 2025).
- Hypertension also raises the risk of disability, especially as a result of stroke or heart disease.

Diagnosis & Initial Assessment

- A Sphygmomanometer is used to measure blood pressure (Sharman et al., 2023).
- You need to have several blood pressure readings over time in order to obtain an accurate diagnosis.
- In the UK, ambulatory blood pressure monitoring (ABPM) is recommended (Shah et al., 2023).
- Assessing risk includes reviewing your lifestyle, family history, and any other medical conditions you have.





Management of Hypertension

Managing conditions can involve two different types of treatments, lifestyle changes or medications.

Lifestyle Modifications

- Less salt in your diet
- Eating a healthy diet (for example, following the DASH diet)
- Getting regular exercise
- Maintaining a healthy weight
- Quitting smoking (Filippou et al., 2022)

Medication

- ACE inhibitors
- Calcium channel blockers
- Diuretics
- Beta Blockers (Strauss et al., 2023)

Treatment Options in the UK

- Treatment guidelines are stepwise based on ethnicity and age. (Wang et al., 2022)
- For instance, first-line therapies can be calcium channel blockers and/or ACE inhibitors.
- Blood pressure control will sometimes require using multiple medications.
- It is important to monitor progress on an ongoing basis in order to know how to change the treatment plan.

In some cases, additional tests such as blood tests, urine tests, and electrocardiograms may be used to check for underlying conditions contributing to hypertension.





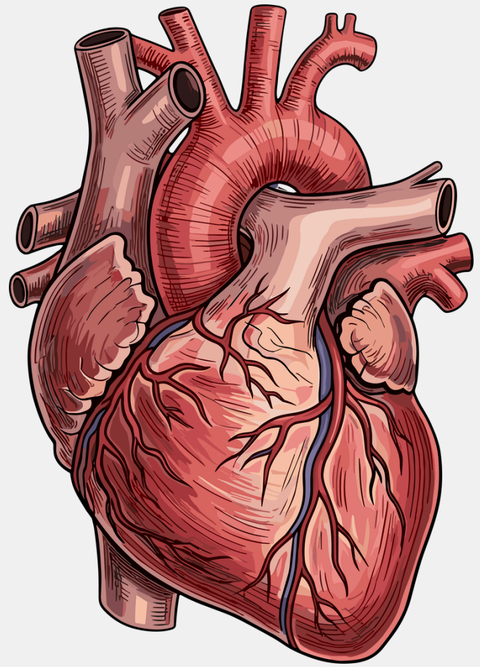
At-home blood pressure monitors can help track readings.

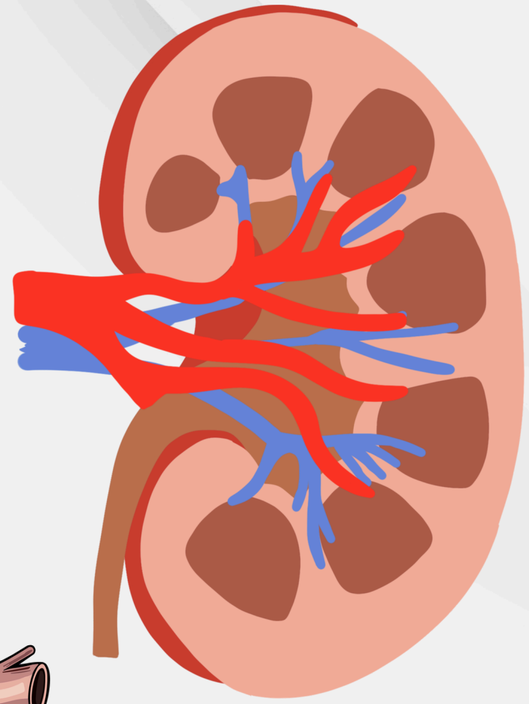
Comorbidities

There are multiple medical problems that occur alongside hypertension:

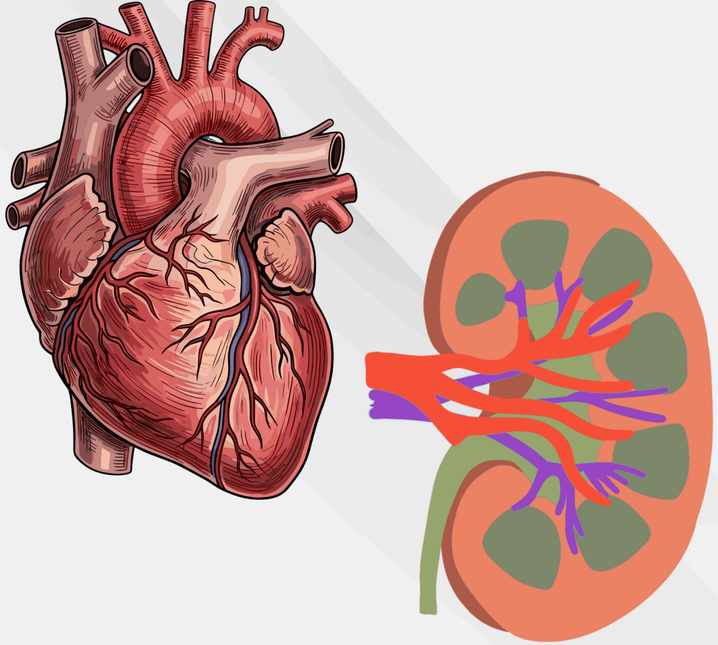
- Coronary artery disease
- Stroke
- Choronic renal disease
- Type II diabetes

These comorbidities increase patient morbidity, and make controlling blood pressure more difficult.(Yen et al., 2022)





Prevention



Hypertension prevention looks to limit both the incidence of hypertension and accompanying complications.

Lifestyle Interventions

Decreased salt consumption (<5g/d)

Maintaining a healthy weight

Regular aerobic activity

Well balanced diet (low fat, high fruits/vegetables)

Do not smoke, consume moderate alcohol

Public Health Initiatives (UK)

National Screening And Early Detection Programmes

Public Awareness Campaigns

NHS Health Promotion Activity

Legislation To Reduce Salt In Processed Foods

Preventing Hypertension Is Cost-Effective And Necessary To Reduce The Long-Term Burden Of Hypertension On The Healthcare System.Early identification of hypertension can help avoid some serious health complications associated with high blood pressure (ALrashed et al., 2024).

Skills, Values & Behaviours

- Efficiently communicate with your patients
- Utilised patient-centred approach
- Show empathy and respect to your patients
- Possess cultural sensitivity
- Encourage patient self-management and compliance



House of Care Model in Hypertension Management

The UK House of Care, which provides a collaborative health care model for delivering long-term care to individuals with complex, chronic medical conditions, is constructed around 4 key components:

- Engagement through educating and informing patients about their condition, treatments, and available services so they can actively participate in shared decision-making with their providers.
- Commitment from a providers to work in partnership.
- Organizational systems (e.g., NHS, care coordination, consistent policies).
- Resource support from local communities.
- The House of Care model was designed so that patients are involved in the co-producing of their care by actively contributing to their decision-making. As a result, the House of Care model has improved long-term outcomes related to the management of high blood pressure.



Figure 1: House Of Care Model (Health and Social Care Alliance Scotland, n.d.)

Personalised Care & Self-Management

The personalized care model is about tailoring care to an individual person's needs. This model is a major focus in NHS Long-Term Plan.

There are six Key Components to the personalized care model which lay the foundation for patient empowerment to manage their hypertension:

1. Shared Decision-Making
2. Personalised Care And Support Planning
3. Enablement of Choice
4. Social Prescribing And Community Support
5. Supported Self-Management
6. Personal Health Budgets

Using this model gives patients the ability to be proactive in managing their hypertension. The result will be improved adherence, satisfaction, and health outcomes.

It Includes:

- Includes shared decision making between parents and healthcare providers
- Patients require education about their condition and treatment, including how to manage their condition effectively
- Patients receive personalised care plans based on their medical history, which includes information on how to comply with their treatment regimen, modify their lifestyle and integrate with other community healthcare providers. (Bajinka et al., 2025)



Figure 2: Personalized Care Model (Personalised Care Institute, 2023)

Recommendations

- Raise awareness around the dangers associated with high blood pressure.
- Encourage early detection and diagnosis.
- Promote healthy lifestyles.
- Support healthcare policies and programs in the community.
- Encourage education for patients so they can manage their own health.

Conclusion

- Hypertension is a very serious public health challenge in the UK.
- If diagnosed early and managed well, patients will have a better outcome.
- By using a healthy lifestyle and appropriate treatment, the risk of complications can be minimized.
- For successful outcomes, a holistic (patient-centered) approach needs to be brought into play.



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Thank You

For Your Time and Concentration



