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Introduction Booklet of long term
conditions Management Hypertension.

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• Introduction

Proactive management is necessary for long-term health issues. For service users, families, and carers in the United Kingdom, this booklet provides an evidence-based review of hypertension (high blood pressure). The care of hypertension must be ongoing, and in many cases, it must be lifelong. Although it is usually incurable, it can be effectively managed with medication and behavioural modifications (Whelton et al., 2018). To create a collaborative relationship with your healthcare team for active health management, this book seeks to equip you with a thorough grasp of hypertension's definition, prevalence, and risk factors.

Explanation of Hypertension

• Definition

The systolic (heart-beating) pressure plus the diastolic (resting) pressure is the measurement of the force of blood pushing against the walls of the arteries (Oparil et al., 2018). Chronically high blood pressure is known as hypertension. Diagnosis is often made in the UK if home monitoring confirms persistent clinic readings above 140/90 mmHg (or 150/90 mmHg if over 80 mmHg) (NICE, 2022). According to Mills et al. (2020), the cardiovascular system and other essential organs are put to strain by this persistent pressure. Regular screening is crucial for the prompt detection of hypertension since it is often asymptomatic ("silent killer").

Blood pressure chart

	Systolic	Diastolic
Healthy	Under 129	Under 84
Slightly raised	130 to 139	85 to 89
High (Stage 1)	140 to 159	90 to 99
High (Stage 2)	160 to 180	100 to 120
High (Stage 3)	Over 180	Over 120

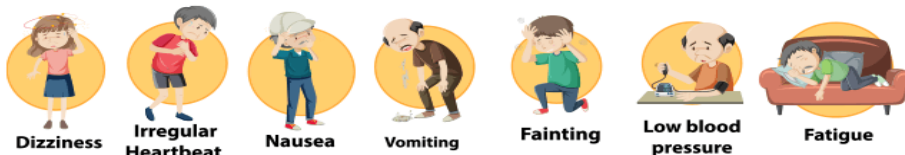
➤ Prevalence and Burden

Global Statistics: The prevalence of hypertension increases with age and affects an estimated 1.28 billion people worldwide. It increases preventable cardiovascular disease and early death, according to the WHO (2023) and Forouzanfar et al. (2017).

UK Statistics: Over 25% of individuals in the UK have hypertension, according to statistics. It worsens heart attacks and strokes. Undiagnosed hypertension puts public health at risk by causing preventable complications. Public Health England (2021)

Hypertension and Multimorbidity: Hypertension often coexists with other chronic illnesses, including diabetes, obesity, and chronic kidney disease, making it challenging to manage. The relative prevalence of multimorbidity improves with age, although the proportion of people under 65 with several illnesses is greatest.

Signs & Symptoms of Hypertension



Causes and Risks

Non-Modifiable Risk Factors

Age: Hardening of arteries considerably increases risk (Mills et al., 2020).

Heredity and family history: First-degree relatives increase risk (Padmanabhan and Joe, 2017).

Ethnicity: UK Black African, Black Caribbean, and South Asian individuals are at higher risk and start sooner (NICE, 2022; Agyeman et al., 2024).

Modifiable Risk Factors

High Salt Intake: According to Mills et al. (2020), the main factor affecting blood pressure is consuming a high amount of salt. The National Health Service (2022) recommends aiming for less than 6 grammes annually.

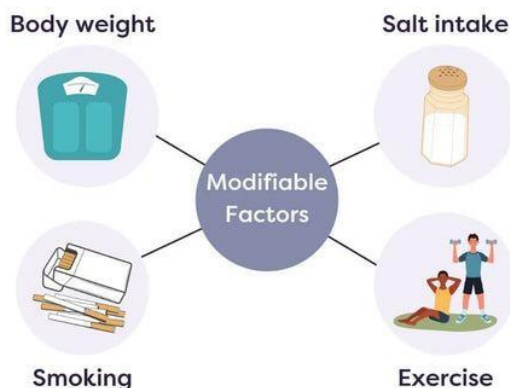
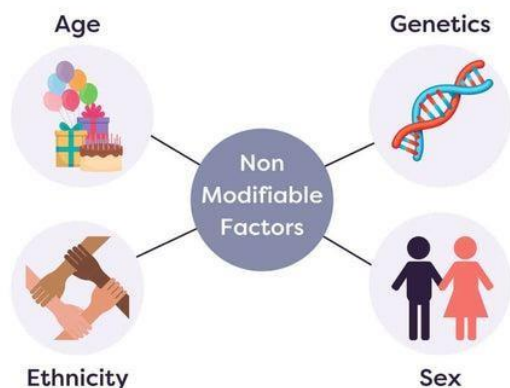
Physical Inactivity: Public Health England (2021) and Whelton et al. (2018) found that regular aerobic exercise decreases blood pressure, but sedentary behaviour increases risk.

Weight: A higher risk of cardiovascular disease is associated with being overweight (Opriel et al., 2018).

Drinking to excess increases BP (NHS, 2022).

Nutrition: A diet rich in saturated fat and deficient in fruits and vegetables increases the risk (Whelton et al., 2018).

Socioeconomic Factors: Lifestyle, environmental, and stress factors are associated with a higher prevalence of multimorbidity and an earlier beginning of deprivation (by 10-15 years) (Barnett et al., 2012; Marmot et al., 2020).



The Impact of NHS Management Strategies on Hypertension

1. Physical Implications:

Damage to blood vessels and important organs over time is the main risk of chronic hypertension. It is not uncommon for this end-organ damage to grow covertly before causing major clinical symptoms (Oparil et al., 2018). Critically, the risk varies; results are greatly influenced by factors such as the length and intensity of hypertension, the presence of other diseases (multimorbidity), and treatment adherence (NICE, 2022).

CVD: Hypertension ranks as the top risk factor for cardiovascular disease (CVD) on a worldwide scale (Millset al., 2020). By raising the burden on the heart and speeding up atherosclerosis (the hardening and constriction of the arteries), it greatly raises the risk of heart attacks (myocardial infarction). Additionally, it is the single most important modifiable risk factor for hemorrhagic and ischaemic strokes (Whelton et al., 2018). In addition, it exacerbates heart failure, a condition in which the heart muscle atrophies and fails to efficiently pump blood throughout the body.

CKD: Hypertension causes chronic kidney disease (CKD), which hinders the kidneys' capacity to filter blood of waste by damaging their tiny blood capillaries. Conditional kidney disease (CKD) and eventual renal failure that calls for dialysis or a transplant may result from this over time (Mills et al., 2020). Because renal illness can induce or exacerbate hypertension, the link is frequently reciprocal.

hypertensive retinopathy: Damage to the blood vessels in the retina, which is located at the back of the eye, can cause vision issues and, in extreme cases, blindness (Oparil et al., 2018).

Cognitive Decline and Dementia: Hypertension, especially hypertension in middle age, is becoming more and more recognised as a significant risk factor for cognitive impairment and the onset of vascular dementia in old age. This is probably because hypertension damages the brain's tiny blood vessels.

2. Psychological Implications:

Psychological Well-being: Anxiety and depression are among the mental health issues that have been linked to hypertension, according to Li et al. (2015), but the link is complicated. It is already challenging enough to live with a chronic illness that requires constant attention and medication. Furthermore, it is possible that some physiological systems associated with hypertension impact the control of mood as well. People who suffer from both depression and hypertension are more likely to have negative health effects and a lower quality of life. According to Barnett et al. (2012), the risk of mental health issues is greatly increased when there is more than one medical condition.

Cognitive Function: In addition to the risk of dementia, those who have not been officially diagnosed with dementia might nevertheless have minor impacts on cognitive processes such as memory and attention speed (Iadecola and Gottesman, 2019).

The Treatment Burden: A high treatment burden can result from having to follow strict drug regimens, go to appointments, monitor blood pressure, and make major lifestyle changes. This can cause stress, dissatisfaction, and a decrease in quality of life. Psychological well-being may be negatively impacted by the adverse effects of several antihypertensive drugs, such as weariness or mood disturbances.

3. Social Implications:

A person's ability to manage their hypertension and the presence or absence of complications determine the extent to which the condition affects their social life.

Dietary improvements (less salt, fat, and alcohol) and greater physical activity are examples of suggested lifestyle changes that may have an effect on social involvement (e.g., going out to restaurants, drinking with friends). The positive connotation of these alterations as aids to health is prevalent, nevertheless.

Work and Functioning: The ability to work is usually unaffected by simple, well-controlled hypertension. Stroke and severe heart failure are two problems that can cause substantial impairment, which in turn impacts social roles, independence, and the capacity to work (British Heart Foundation, 2023). Fatigue is one pharmaceutical side effect that may make it difficult for some people to go about their everyday lives.

Socioeconomic factors: Poverty increases prevalence and onset (Marmot et al., 2020). Critically, socioeconomic status can also affect management; disadvantaged people may find it harder to access healthy food, safe places to exercise, and consistent healthcare, which may worsen health inequalities (Barnett et al., 2012).

4. Broader Family Implications:

Hypertension impacts others, especially when significant health issues or addictions occur.

Caregiving Burden: In the event of stroke, heart failure, or dementia, family members often provide significant care. Carers' emotional, physical, and financial wellbeing might suffer (Feinberg et al., 2022). Successful self-management involves family support, which can be difficult.

Emotional Impact: Family members may go through a lot of pain, worry, and loss when they see a loved one go through a big health crisis, like a stroke, or when they deal with the gradual deterioration that comes with vascular dementia.

Problems with funding: If the patient or caretaker has to cut back on their hours worked or quit their job entirely due to serious issues, they may lose money. Costs related to care or house improvements could be higher as well.

Strategies for NHS Treatment

NHS administration adheres to NICE evidence-based recommendations, which advocate a step-by-step strategy based on risk and blood pressure levels that begins with lifestyle modifications and progresses to the use of medication (NICE, 2022). (Health Foundation, 2016) Collaborative decision-making is essential.

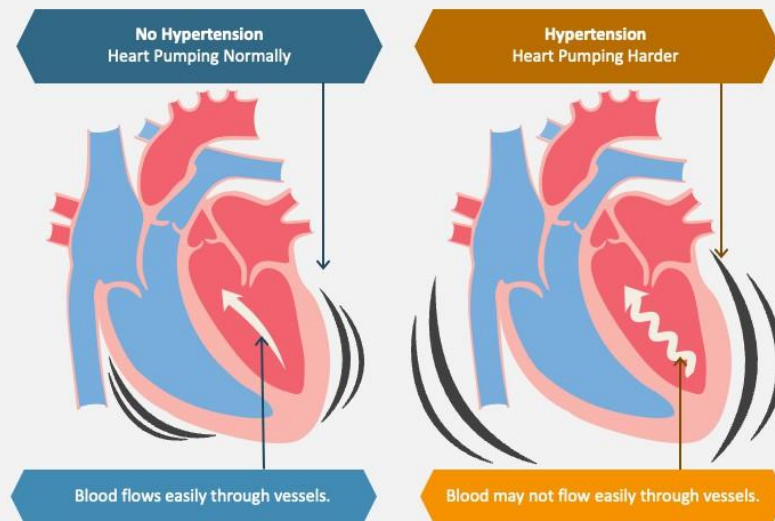
1. Lifestyle Modifications:

Lifestyle modifications are essential for anyone dealing with hypertension, whether or not medication is necessary. Notable suggestions are from the following sources: Public Health England (2021), NHS (2022), and NICE (2022):

- Modifying one's diet by cutting down on salt (to less than 6 grammes per day), incorporating more fruits, vegetables, and whole grains into one's meals (like the DASH diet), cutting back on saturated fat, and limiting caffeine use.
- Weight Management: Reaching and maintaining a healthy body weight (BMI 18.5-24.9 kg/m²).
- Maintaining a regular exercise routine entails doing aerobic activity of a moderate level (such as brisk walking or cycling) for at least 150 minutes per week.
- Alcohol Moderation: Keeping consumption within the current suggested levels, which is 14 units per week spaced out across many days.
- Although the exact relationship between smoking and blood pressure is debatable, quitting is essential for cardiovascular health in general.



HYPERTENSION



2. Pharmacological Treatment (Medication)

If behavioural modifications alone are not enough to reduce risk, or if the risk is very high, pharmacological treatment (medication) may be necessary (NICE, 2022). The following medication classes are often added or combined in a stepwise fashion according to an algorithm depending on ethnicity and age:

Calcium channel blockers ('C') and angiotensin-converting enzyme inhibitors ('A') are common first options.

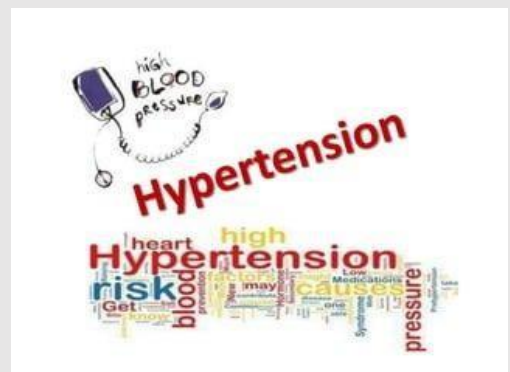
Combinations such as 'A'+'C' are utilised as necessary. Then, diuretics that are similar to thiazides ('D') are added.

It may be necessary to use extra diuretics or other medications under the supervision of a professional to treat resistant hypertension (NICE, 2022).

According to NICE (2022) and Whelton et al. (2018), the objective is to lower long-term risks by reaching the target blood pressure, which is typically less than 140/90 mmHg. To ensure adherence and monitoring, primary care evaluations should be conducted regularly.

3. Self-Management Support

Education, lifestyle support, medication adherence measures, and the promotion of home blood pressure monitoring are all important components of self-management assistance (McManus et al., 2018; NICE, 2022). Treatment goals are better met through collaborative care planning.



Management Frameworks for Chronic Conditions

Structured techniques that shift from reactive, episodic treatment to proactive, coordinated, and person-centred tactics are necessary for the effective management of long-term illnesses such as hypertension. Redesigning services to enhance patient outcomes is guided by several theoretical models and frameworks in health care systems. The booklet assesses the 'House of Care' in the United Kingdom and the Chronic Care Model, which is well-known across the world, as two noteworthy frameworks.

• *UK MODEL: The NHS "House of Care" Framework*

The "House of Care" is an English National Health Service (NHS) conceptual framework that was developed to direct the execution of individualised care plans for people with chronic diseases (Coulter et al., 2013). At its heart, this concept has what is essentially a house with "person-centred coordinated care" in the middle. Critically, it contends that four interconnected factors must be present and strong at the same time for this to be possible:

- Giving patients the information they need to be an active participant in their care and to make educated decisions is a key component of creating engaged, knowledgeable individuals and carers. The promotion of self-management is strongly supported by this.
- Health and care providers dedicated to partnership working: changing the focus from individual care to teamwork in which patients are actively involved and whose knowledge and experiences are valued.
- Facilitating person-centred care through organisational and supporting processes, such as proactive care planning and efficient information exchange.
- The local health and care economy's strategic planning and purchase of services actively supports and incentivises this tailored, coordinated approach, which is known as commissioning.

The House of Care is built on the principle of collaborative care and support planning, which is based on the idea that each person's needs and preferences should be taken into account when making decisions and setting goals (Coulter et al., 2013). A key feature of the framework is how well it fits in with existing NHS institutions, especially concerning the centrality of commissioners' roles in facilitating systemic change. One persistent obstacle in putting this model into broad use is the need for organisational and cultural changes away from disease-centric approaches and towards more holistic, person-centred ones (National Voices, 2020).

- *The Chronic Care Model: International Model.*

Among international frameworks for enhancing health system treatment for chronic disease, the Chronic Treatment Model (CCM)—developed in the US—is likely the most prominent (Gee et al., 2015). The plan's end objective is to shift healthcare away from an emphasis on crisis management and towards a more proactive, population-based model. The CCM states that the best results come from "Productive Interactions" between a "Prepared, Proactive Practice Team" and an "Informed, Activated Patient". Enhancements to six essential parts make these interactions possible:

- 1. Fostering a leadership and culture that prioritises chronic care is an important part of the health system, which is the organisation of healthcare.
- 2. Integrating patient records, information exchange, and proactive reminders into clinical information systems to bolster care planning.
- 3. Incorporating expert knowledge and evidence-based standards into standard treatment is an example of decision support.
- 4. Designing a system for delivery of care: reshaping practice teams (e.g., through the use of interdisciplinary roles) and processes to provide preventative medicine.
- 5. Giving patients the tools they need to take charge of their health and feel good about themselves is what we mean by "Self-Management Support" (Grady and Gough, 2014).
- 6. Policies and Community Resources: Connecting patients with community resources and encouraging policies that promote health.

A large body of evidence backs the CCM, showing that treatments that include several CCM components lead to better care processes and patient outcomes for a range of chronic diseases (Coleman et al., 2009; Stellefson et al., 2020). According to Stellefson et al. (2020), partial adoption of the CCM usually leads to limited results; therefore, complete implementation is necessary to achieve the full advantages. This is similar to what happens with the House of Care. To effectively manage illnesses like hypertension, both frameworks essentially call for a system-wide shift towards proactive, integrated treatment that centres on the patient.

- *Difficulties with Local Implementation and Integrated Care*

In England, Integrated Care Systems (ICSs) play a significant role in translating national policy into frontline services. Similar organisations exist in other parts of the UK. To better meet the requirements of the local community, these systems integrate several partners, including local governments and NHS entities, to plan and commission services (NHS England, 2021).

- **Tailored Support:** ICSs enable localised intervention targeting, which may mean more funding for regions with a greater hypertension prevalence or for people with particular demographic requirements. Existing budgetary constraints and historical service designs frequently limit their capacity to legitimately redirect attention and resources towards hypertension prevention and community-based care, rather than acute hospital services (Charlesworth et al., 2022).

- **Integrated Care Agenda:** One of the main goals of ICSs is to improve the integration of health and social care, which is essential for properly controlling hypertension, particularly in the context of multimorbidity and complicated social circumstances. On the ground, creating seamless integration is still tough, despite this policy effort. Separate information technology systems, different professional cultures, and challenges in coordinating among several providers, especially across primary, secondary, and social care, can still lead to fragmented treatment for patients (Roland et al., 2012; Charlesworth et al., 2022).

While the health and social care agendas in the UK lay out a solid plan for hypertension prevention, early diagnosis, and integrated management, the difficulties in putting these plans into action frequently dampen their effect. The level of success in improving hypertension outcomes for people is heavily impacted by resource restrictions, chronic health inequities associated with poverty, and the challenges in attaining genuine operational integration across systems.

Natural Ways to Lower Blood Pressure



Improved Hypertension Care: Recommendations

- Patient-centered care, which encourages self-management and includes proper end-of-life planning, is essential for better hypertension outcomes.

- *Integrating authentic person-centred care requires:*

- **Shared decision-making (SDM):** Collaboratively determining treatment objectives and tactics while taking patient values and evidence into account is known as shared decision-making (SDM) (Coulter and Collins, 2011; NICE, 2021). Time and clinical expertise are necessary.

- **Collaborative Care Planning:** The process of creating personalised plans that centre on the needs and preferences of patients to improve their health and well-being (NHS England, 2015).

- **Cultural competence:** Adapting care to varied origins and resolving challenges in impoverished or minority ethnic groups are aspects of cultural competence (Agyemang et al., 2024).

Strengthening Assistance for Self-Management

- **Structured education:** Accessible information on the disease, its therapies, lifestyle choices, and monitoring is the goal of structured education.
- **Confidence-Building and Skill-Building:** Help people develop useful skills (like home monitoring) and boost their self-esteem to achieve better results (Chiauzzi, Rodarte, and DasMahapatra, 2015).
- **Technology:** Be cognisant of access limitations when using digital tools for monitoring and support (McManus et al., 2019).
- **Behaviour change techniques:** Goal-setting, problem-solving, and motivational interviewing are all part of behaviour change techniques; yet, sticking to them over the long term might be difficult (Kelly and Barker, 2016).

Incorporating Thought on Palliative Care

- **Advanced Care Pathway:** National Palliative and End-of-Life Care Partnership (2021) recommends that patients whose health is failing begin conversations about their future care choices as early as possible. Postponed often (Howard et al., 2015).
- **Palliative Care:** Provide comprehensive assistance to patients and their families as they approach the end of life owing to problems; prioritise symptom management and quality of life (NHS England, 2022).

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