



Programme: MSc Public Health and Social Care in Practice

Module: Community Care and Management of Longer-term Conditions

Module code: LCHS7003

**Assignment Title: Component 1: Information Booklet of Long-term Condition
Management: Thyroid**

Name of the student:

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LIVING WITH HYPOTHYROIDISM

*Understanding the Condition, Improving
Wellbeing and Delivering Person-Centred Care
in the UK*

Your Guide to Better Thyroid Health

Definition: Hypothyroidism is a long-term endocrine condition in which the thyroid gland produces insufficient hormones to meet the body's physiological requirements (NHS, 2021). According to Chiovato *et al.* (2019), hypothyroidism affects about 5% of the general population, with an estimated 5% being undiagnosed. Even with effective treatments, the consequences of the condition are beyond laboratory abnormalities, affecting emotional well-being, physical functioning, family relationships, and employment.

It has been stated by the NHS (2021) that this condition can cause symptoms such as weight gain and tiredness, but can also be managed through proper treatment. The development of this booklet provides appropriate information for adults living with hypothyroidism, UK healthcare professionals, and the affected individuals' families. Effective management further requires restoring the thyroid-stimulating hormone or TSH to an acceptable range. As per NIH (2021), clinical trials help in preventing, detecting, or treating the disease while making improvements in the quality of life.

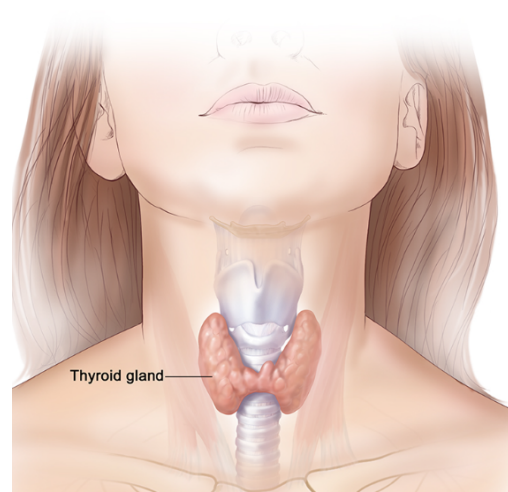


Figure 1: Thyroid Gland

(Source: NIH, 2021)

The thyroid is known as a butterfly-shaped gland located on the front side of the neck, with the primary function of producing T3 (Triiodothyronine) and T4 (Thyroxine) hormones (Salman *et al.*, 2024). The pituitary gland, hypothalamus, and thyroid primarily control overall production through feedback. Hypothyroidism develops when hormone production is inadequate. According to Zamwar and Muneshwar (2023), hypothyroidism affects people in each age group but is commonly found in older people and women. Primary hypothyroidism mainly results from the dysfunction of thyroid whereas central hypothyroidism develops from hypothalamic or pituitary abnormalities.

1. The Thyroid Connection: Causes, Diagnosis and Risk

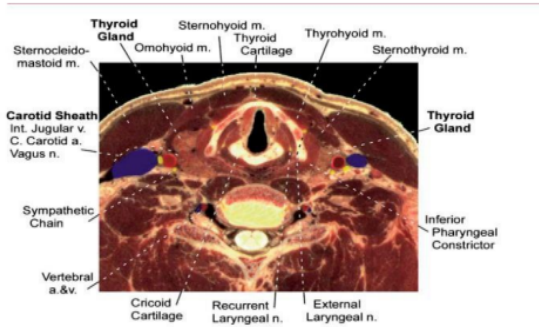


Figure 2: Thyroid gland and its relations at the level of the thyroid cartilage

(Source: Salman *et al.*, 2024)

The distinction is mainly important, as central hypothyroidism cannot often produce the elevated TSH associated with the primary disease (NICE, 2019). Within the UK, autoimmune thyroiditis, which is mainly known as Hashimoto's disease, is considered to be a leading cause. According to Medical News Today (2026), Hashimoto's thyroiditis is known as an autoimmune disorder in which the immune system mistakenly attacks the thyroid gland and leads to an underactive thyroid, commonly known as hypothyroidism.

Furthermore, family history, along with other autoimmune disorders, may often indicate an increased level of susceptibility. Nevertheless, according to Taylor *et al.* (2018), demographic associations should not further become a part of the rigid assumptions in diagnosis, as hypothyroidism can occur in people of any sex or age. Clinicians mainly distinguish hypothyroidism, which is characterised by low free T4 levels and high TSH levels. This specifically influences the decisions of treatment as well.

NICE (2019) further recommends the investigation of suspected thyroid dysfunction with the use of appropriate blood tests along with clinical assessments. According to Medical News Today (2024), the central medical treatments and the pre-existing conditions can often increase the risks of the condition hypothyroidism. Overall, the use of a person-centred diagnostic approach along with biomedical findings, the history of medical conditions, symptoms, and medication can help in achieving an effective result.

2. Hypothyroidism Across Populations: Global and UK Perspectives

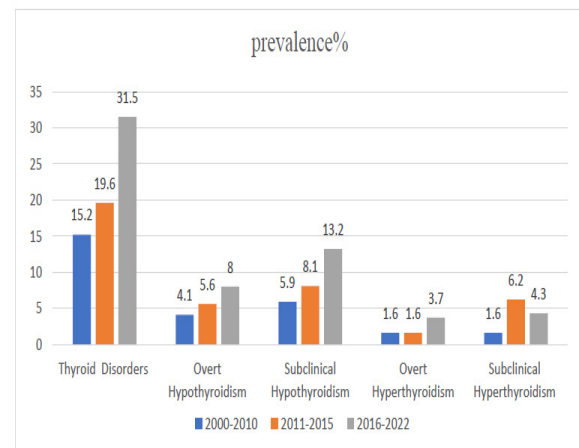


Figure 3: Prevalence of Hypothyroidism

(Source: Kargar *et al.*, 2024)

Hypothyroidism is specifically identified as a major public health issue, although prevalence differs according to the characteristics of the population, status of iodine, threshold of diagnosis, and the methodology of the study. According to Kargar *et al.* (2024), Historical European estimates suggest a prevalence of

approximately 0.65% for overt hypothyroidism and 4.11% for subclinical hypothyroidism.

On the other hand, in the UK, the presence of congenital hypothyroidism has been identified to be a common case within each 3500 newborn babies while also being more common in girls than boys (NHS, 2026). Moreover, there is a significant relationship between thyroid dysfunction, age, sex, and the development of subsequent diseases. However, the age of some of the foundational studies further limits their significant application to the recent population of the UK.

The economic implications involve repeated blood testing, prescriptions, consultations with general physicians, and referrals to specialists. Indirect costs may arise from fatigue-related work absences, reduced productivity and informal caring responsibilities. The consequences further require proper interpretation, as symptoms may often coexist with other disorders of health.

Greater diagnostic awareness is considered to be valuable, but the risks of indiscriminate screening often lead to overtreatment and unnecessary investigations. According to NICE (2019), the use of targeted assessments, appropriate follow-ups and equitable access helps in providing a more appropriate response than properly treating each mild result of abnormal biochemical aspects.

Moreover, according to Taylor *et al.* (2018), global incidence and prevalence of thyroid dysfunction is considered to be highly difficult to compare within countries due to the

differences in assay sensitivities, diagnostic thresholds, and population dynamics.

3. Beyond the Symptoms: Everyday Life, Emotional Health and Family Wellbeing

Hypothyroidism mainly affects individuals differently. The consequences are mainly understood through the psychological, physical, and social dimensions rather than only through laboratory test results.

Physical wellbeing and functional limitations

As per Leonard (2023), fatigue has been identified as one of the common symptoms in hypothyroidism, which occurs regardless of how much total sleep a person usually gets or how many naps at daytime they take. Moreover, the condition can also affect the joints and muscles of individuals in different ways, causing aches, stiffness, pains, and tenderness, along with weakness (Leonard, 2023). Physical limitations can further affect everyday activities involving exercise, employment, domestic responsibilities, and childcare. For someone who is working long shifts, persistent type of tiredness may often be disruptive as well. However, the severity of the symptoms does not completely align with the TSH abnormalities directly.

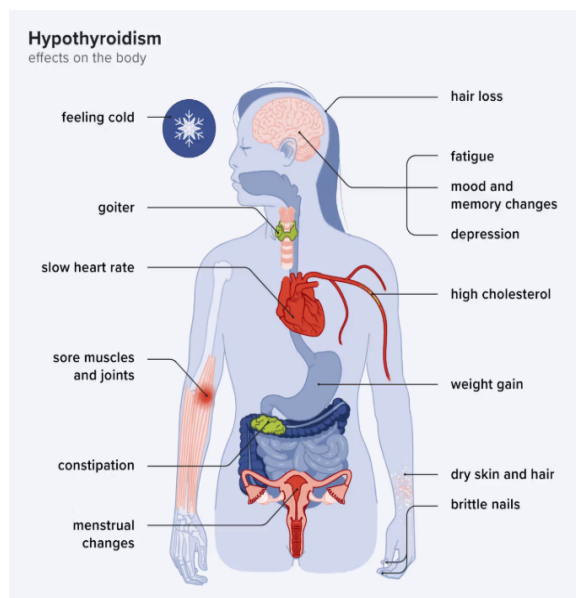


Figure 4: Symptoms of Hypothyroidism

(Source: Leonard, 2023)

According to Perros *et al.* (2023), a significant minority of all the patients suffering from hypothyroidism often report persistent symptoms even after achieving normal biochemistry of thyroid after the replacement of L-T4 (Levothyroxine). Therefore, clinicians need to examine all persistent complaints properly rather than only assuming that each symptom may require a higher dose of levothyroxine.

Emotional health and psychological adjustment

Hypothyroidism can further be associated with decreased mood, impaired concentration, depressive symptoms, and reduced motivation. These types of difficulties may further affect the level of confidence and participation in normal activities. According to Singh *et al.* (2024), in the majority of cases, about 54.5% of those

suffering from hypothyroidism have an increased level of stress. Individuals with normalised blood tests often remain unwell and can also feel that their main concerns have been dismissed. Therefore, the inclusion of a holistic assessment is important. Although thyroid dysfunction may contribute to mood disturbances, anxiety and depression can also develop independently and require separate clinical assessment. Assessing the overall psychological well-being along with thyroid functions can prevent misattribution and also identify individuals who could achieve benefit from additional support.

Social participation and employment

The condition may further influence relationships, participation in the workplace, and social engagement. Decreased level of concentration and fatigue can also make employment difficult, while the changes within appearance or weight may further affect self-confidence. It has been stated by Alshehri *et al.* (2021) that patients with hypothyroidism have feelings of loneliness at high to moderately high levels. The duration of hypothyroidism was identified as a predictor of increased loneliness scores (Alshehri *et al.*, 2021). However, it would be inaccurate to suggest that everyone with hypothyroidism experiences an increased level of social exclusion.

Consequences for families and informal carers

Family members mainly help to provide medicine reminders while assisting with

appointments, along with emotional support to manage poor health.

Table 1: Biopsychosocial consequences and potential supportive interventions

Dimension	Possible impact	Supportive response
Physical	Fatigue, constipation, cold intolerance	Treatment review and symptom assessment
Psychological	Low mood, uncertainty, reduced confidence	Emotional assessment and appropriate referral
Social	Work disruption and reduced participation	Flexible appointment and practical support
Family	Additional responsibilities and anxiety	Agreed carer involvement and accessible information

(Source: NICE, 2019)

4. From Diagnosis to Treatment: Making NHS Care Effective

Levothyroxine is a substitute for the hormone thyroxine and is recommended as the first-line treatment for primary hypothyroidism on the NHS. Levothyroxine works by replacing the missing hormone in the body and usually works effectively if used properly (NHS, 2021a).

Permanent primary hypothyroidism requires lifelong treatment, and doses of levothyroxine are individualised according to age, clinical situation, body weight, and cardiovascular risks.

Table 2: Important influences on dose requirements of LT4

Factor	Influence on levothyroxine (LT4)
Gender	Mainly influences requirements indirectly through lean body weight.
Age	Older adults often require lower doses and more cautious dose adjustments.
Body weight	Higher body weight generally increases dose requirements.
Timing	Morning and evening administration can be equally effective when consistent.
Food intake	Fasting administration improves absorption; take 30 minutes before food.
Thyroid remnant	Residual thyroid function influences hormone requirements and T3 availability.
Regulatory factors	Pituitary or hypothalamic disorders alter thyroid hormone regulation and monitoring.
Conversion efficiency	Deiodinase activity and genetic variations may affect T4-to-T3 conversion.
Hormone resistance	Inherited resistance or possible environmental influences may affect hormone response.
Disease aetiology	Thyroid removal, cancer and autoimmune disease can influence dose requirements.
Pregnancy	Increased physiological demand often requires a higher LT4 dose.

Comorbidities	Conditions such as coeliac disease can reduce LT4 absorption.
Other medicines	Some medicines interfere with LT4 absorption or effectiveness.
Adherence	Missed doses can affect treatment; consistent daily intake is important.

(Source: Adapted from Hoermann *et al.*, 2019)

5. Monitoring Effectiveness and Avoiding Overtreatment

Thyroid function tests done regularly can also be used to check whether the replacement therapy should be carried out. It is advised that in adult patients who are on levothyroxine for primary hypothyroidism, TSH tests should be done every three months then annually (NICE, 2019).

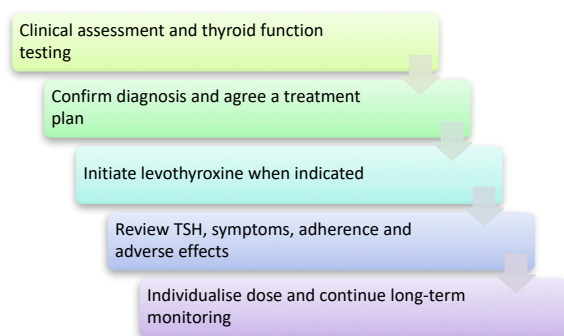


Figure 5. NHS treatment and monitoring pathway

(Source: NICE, 2019a)

According to the NHS Specialist Pharmacy Service (2021), personalised medication management and specialist referrals are crucial in circumstances such as pregnancy and suspected pituitary diseases.

6. The Controversy Surrounding Subclinical Hypothyroidism

The case of subclinical hypothyroidism is one such area where critical appraisal plays an important role.

According to Feller *et al.* (2018) who conducted a systematic review and meta-analysis of 21 randomised studies involving 2,192 patients, there is no evidence of any benefit in terms of improved quality of life and reduction in thyroid-specific symptoms due to the use of hormones in non-pregnant adults with subclinical disease.

Such studies pose a challenge to the current practice of treating mild biochemical abnormalities. However, it would not be fair to extrapolate the same for younger adults, symptomatic individuals and those with higher levels of TSH.

As per NICE (2019), levothyroxine can be considered if TSH levels are greater than 10 mIU/L at least twice with an interval of three months between two readings. Similarly, a trial of six months may be considered in symptomatic adults under 65 years with elevated levels of TSH lower than 10 mIU/L.

7. Long-Term Therapeutic Considerations

Liothyronine and natural thyroid extracts are not routinely recommended by NICE in treating primary hypothyroidism due to insufficient evidence of any extra benefits and the uncertainty of safety (Leese, 2020).

Many individuals still have symptoms even in cases where there is biochemical euthyroidism. This needs assessment of medication use and other underlying conditions, since adding more thyroid hormones will only increase risk with no guarantee of benefits (de Reuver-Schuurman *et al.*, 2025).

Pregnancy must be considered since hormonal demands will differ. Those who are pregnant or plan to be pregnant need clinical evaluation (Joshi *et al.*, 2024).

8. Building Better Care: British and Global Approaches

UK framework: NHS Comprehensive Model of Personalised Care

The NHS England Personalized Care Comprehensive Model is aimed at ensuring greater choice for patients, shared decision making, personalised care plans, social prescribing and supported self-care (Nottinghamshire Healthcare NHS Foundation Trust, 2026).



Figure 6. NHS Comprehensive Model of Personalised Care

(Source: Nottinghamshire Healthcare NHS Foundation Trust, 2026)

The use of this approach for hypothyroidism implies that the professional should take into account not only the patient's symptoms, lifestyle, preferences and other issues along with the laboratory findings.

It is strong because it acknowledges that treatment efficiency can have multiple aspects. A patient whose TSH levels remain normal can still need help with fatigue or problems at work (British Thyroid Foundation, 2024).

International framework: WHO Integrated People-Centred Health Services

The Framework for Integrated People-Centred Health Services by the World Health Organization calls for coordinated services that take into account the needs of the individuals and communities in question. The framework emphasizes involvement, service integration, governance, and equitable access to care (WHO, 2024).

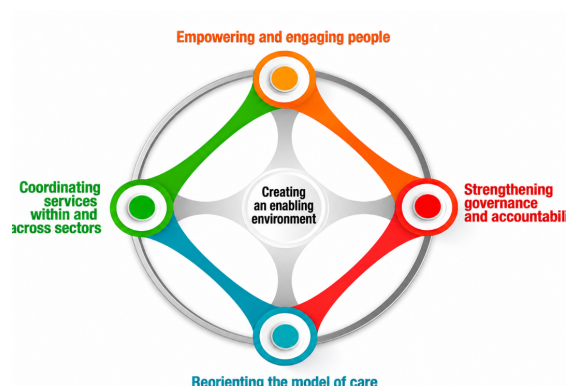


Figure 7: WHO Integrated People-Centred Health Services

(Source: Contreras, 2024)

This framework can be applied to the case of hypothyroidism in that it allows coordination among primary care, endocrinology, pharmacy, and necessary psychological or social services.

The strength of the framework lies in its broad approach from the health system point of view, especially for people with several chronic illnesses. On the other hand, the framework lacks disease-specific information on thyroid hormone prescription.

9. Policy into Practice: Strengthening Thyroid Care in the UK

Hypothyroidism care is affected by national clinical guidelines, local commissioning choices and other health policy matters. Recommendations in literature will be helpful only if implemented consistently by health institutions.

National Clinical Standards

NICE guideline NG145 offers a basis for evaluating, managing and monitoring patients with thyroid disorders. It suggests appropriate investigations, rational prescription practices and informed patients (NICE, 2019).

The benefit of this guideline lies in its ability to transfer clinical evidence into practical guidance for the NHS. However, even standardised guidance cannot help reduce clinical discretion, patient choice and availability of follow-ups.

Another important NICE guidance is the one on shared decision-making NG197 (NICE, 2021). Its use is especially significant for the treatment of subclinical hypothyroidism when the advantages of therapy are doubtful.

Integrated Care and Local Implementation

Integrated care systems offer potential ways to coordinate care between general practices, hospitals, pharmacies, and other community organizations. NHS England (2022) notes the importance of collaboration to achieve better population outcomes.

The case of hypothyroidism can be supported by the development of an integrated care board for monitoring, providing relevant information about the thyroid, and offering pathways to referral when complications arise.

Nevertheless, thyroid disease is only one of many conditions seeking NHS funding. Any initiative would need to demonstrate how it fills gaps and does not duplicate services already being provided.

Policy formulation at the local level could start by looking into problems such as missed monitoring appointments, access barriers, and disparities in patient experiences.

Reducing Inequalities in Access

NHS England's Core20PLUS5 strategy aims at tackling healthcare inequalities among vulnerable and locally defined underserved communities (NHS England, 2021).

Hypothyroidism, even though not among the five clinical priority areas of the programme, gives us a set of useful guiding principles when it comes to identifying barriers to achieving equal healthcare.

Barriers may include digital exclusion, linguistic barriers, disability and social disadvantage that may hinder individuals from obtaining information and receiving consultations. In a person-centred way, alternative ways of healthcare delivery and making reasonable adjustments should be considered.

The main problem of implementing the service will be balancing efficiency and accessibility. While some patients may find telephone consultations and digital reminders convenient, others might not.

10. Taking Control: Personalised Support and Living Well

Management by oneself is an important aspect of managing hypothyroidism successfully for an extended period. This entails learning about the disease, taking the medication properly, noticing alterations in one's health, and being involved in the management process (de Reuver-Schuurman *et al.*, 2025).

Supporting Safe Medicine Use

Consistency in taking levothyroxine is crucial according to professional guidelines. There are foodstuffs, dietary supplements, and drugs that might affect levothyroxine's absorption, hence the need for practical teaching.

Patients must know when to take the medication, how to deal with missed doses, when blood tests are necessary, and why changes in the treatment regimen shouldn't be made alone.

According to NICE (2019), there is need for offering information regarding levothyroxine administration and possible drug interaction issues. It will increase knowledge and avoid unnecessary problems with treatment.

It is also advisable to conduct an individualized medication review on patients' ability to obtain medications, remember doses, and manage medications together with other drugs.

Building Confidence Through Shared Decisions

Decision-making helps individuals communicate their symptoms, preferences, and concerns with clinicians. NICE (2021) suggests provision of information, discussion of treatment options and reaching an agreement regarding the follow up process.

Practical strategies include symptom diaries, care plans and clear explanations of the findings of thyroid function. However, patients should not use self-monitoring as a tool for understanding test results independently of clinicians.

It is important to pay attention to psychological well-being as well. People suffering from persistently low mood, anxiety or poor functioning may require further assessment

rather than changes in the dose of the medication.

Planning For Changing Health Needs

The need for care might be affected by pregnancy, age-related changes, heart problems, or any other chronic diseases. It is important to conduct regular evaluations so that the existing clinical needs are identified rather than assuming that the treatment strategy used before will always be suitable.

Routine end-of-life care is not required for patients with hypothyroidism being appropriately managed. However, in cases of people who have some other serious diseases, individual advance care planning can be considered.

11. The Way Forward: Priorities for Better Outcomes

Improving the management of hypothyroidism mainly requires proper coordination within social, psychological, and clinical support. All NHS services need to prioritise timely diagnosis, consistency in follow-ups, and individualised treatment with accessible education for patients. Healthcare professionals need to assess all the persistent symptoms properly rather than making only the treatment decision through the measurement of TSH. Shared decision-making further needs to guide prescribing decisions, especially in the subclinical areas of hypothyroidism. Local services need to further increase coordination within specialist teams and primary care while identifying inequalities within access. Moreover, assessment of all the

patient-reported well-being data along with clinical outcomes further helps in providing clear information about medication. Overall, the goal is not only doing biochemical corrections but also sustain well-being, informed participation, and dignity.

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