

Module Title: Community Care and Management of Longer-term Conditions

Module Code: LCHS7003

Lecturer Name: Muhammed Khan

Assessment Title: Individual Presentation of Hypothyroidism

Target Group: Community Healthcare Assistants

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Introduction

- A long term condition (LTC) considered as chronic disease that lasts one year or longer (Hole and Salem, 2016).
- In this presentation, Hypothyroidism disease is chosen for the discussion.
- This presentation will cover the introduction, overview of Hypothyroidism, Prevalence rate of LTC is the long term condition in the UK and worldwide.
- In addition, Economic and Social burden of LTC, Diagnosis and initial assessment of the chosen long term condition, Management of the LTC based on the UK guidelines.
- It also covers available treatment options in the UK to address Hypothyroidism , accompanied with the LTC, How LTC can be prevented Skills, Values, and Behaviors for Co-Productive Care Recommendations Using the Comprehensive Model of Personalised Care
- This presentation lastly focuses on Recommendations Using the Comprehensive Model of Personalised Care and Conclusion.

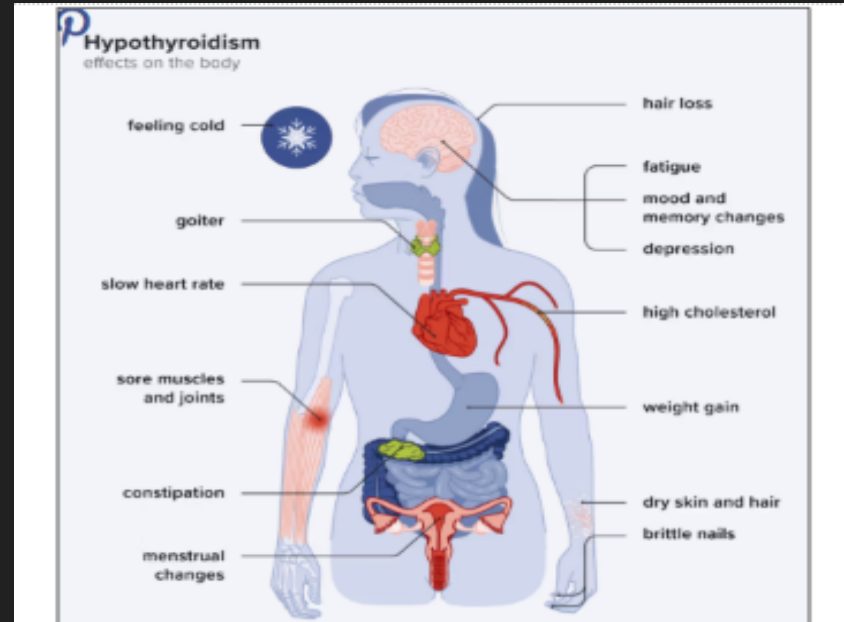


Figure 1: Hypothyroidism
(Source: Medical News Today, 2026)

The overview of Hypothyroidism

- Hypothyroidism is a long term condition when the production of T3 (triiodothyronine) and T4 (thyroxine) hormones in the thyroid gland reduces (Bereda, 2023).
- This can also be defined as an endocrine disorder affecting the regulation of metabolism and energy production in patients.
- In the UK, hypothyroidism is most common in women, and usually starts between the ages of 30 and 50 (NHS, 2026).
- Diagnosis of hypothyroidism is difficult based on symptoms that are non-specific and are frequently diagnosed as causes of aging (Bereda, 2023).
- Hypothyroidism is a chronic disease that requires long-term hormone replacement therapy.
- Severe untreated hypothyroidism cases can lead to Myxedema coma, which is a rare and life-threatening condition with a mortality rate of 25-60% (Wood, 2022).

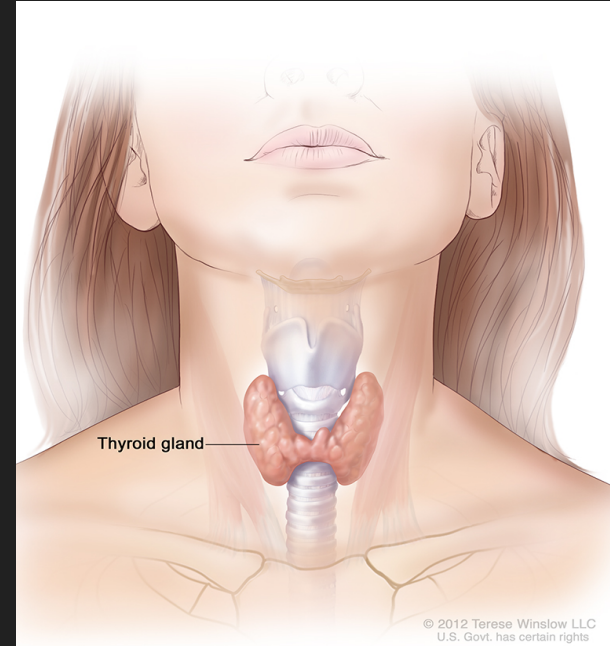


Figure: Location of thyroid gland
(Source: NIH, 2026)

Symptoms

- This condition slows down the body's metabolism, affecting energy, heart rate, and body temperature.
- Some other symptoms of hypothyroidism are weight gain, trouble tolerating cold, joint and muscle pain, dry skin, and depression (NHS, 2026).
- In addition, specific symptoms of pituitary dysfunction include erectile dysfunction in men, amenorrhoea (absence of menstruation), crushing syndrome causing diabetes, hypertension, and tissue overgrowth (Holden, 2025).
- Patients with central hypothyroidism experience additional symptoms such as headache, double vision, and visual disturbance.

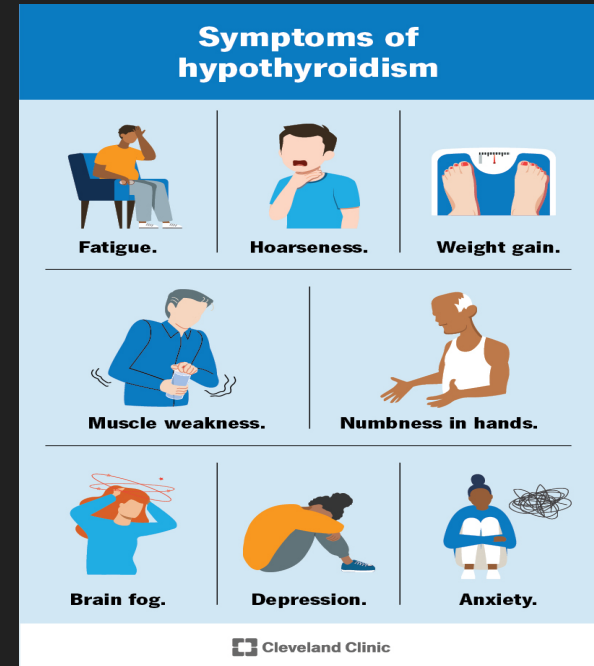


Figure: Symptoms of Hypothyroidism
(Source: Cleveland Clinic, 2024)

Aetiology (Causes)

- Patients with hypothyroidism have elevated thyroid-stimulating hormone (TSH) and low free thyroxine (T4) and triiodothyronine (T3) levels, indicating thyroid gland failure (Orlander, 2025).
- Moreover, a common cause of hypothyroidism in the UK is Hashimoto thyroiditis, which is a chronic autoimmune thyroiditis (NHS, 2026).
- Other causes of this long-term condition include dietary iodine deficiency or adverse drug reaction (Holden, 2023).
- In some cases, congenital hypothyroidism occurs when babies are born with a malfunctioning thyroid gland.
- In the UK, about 1 in 2000 babies are born with this long-term congenital hypothyroidism condition (GOV.UK, 2026).

How Prevalence is the long term condition in the UK and worldwide

Hypothyroidism is a prevalent long-term condition in the UK, affecting millions of individuals.

The prevalence of treated hypothyroidism increased from 1.4 million (2.3%) to 2.2 million (3.5%) in the UK (Razvi et al., 2019).

This disease is majorly common in women, with a prevalence of 7.5% compared to men with a prevalence of 2.8% in the UK (Chiovato et al., 2019).

The disease is highly prevalent as it affects nearly 5 % of the general population in a global context (Chiovato et al., 2019).

It is also found that 5% of global individuals are undiagnosed with hypothyroidism (Chiovato et al., 2019). Resulting in an excess mortality of nearly 50% (Thvilum et al., 2013).

Globally, 99% of the impacted individuals undergo primary hypothyroidism, highlighting long-term environmental iodine deficiency as a major cause of Hypothyroidism (Chiovato et al., 2019).

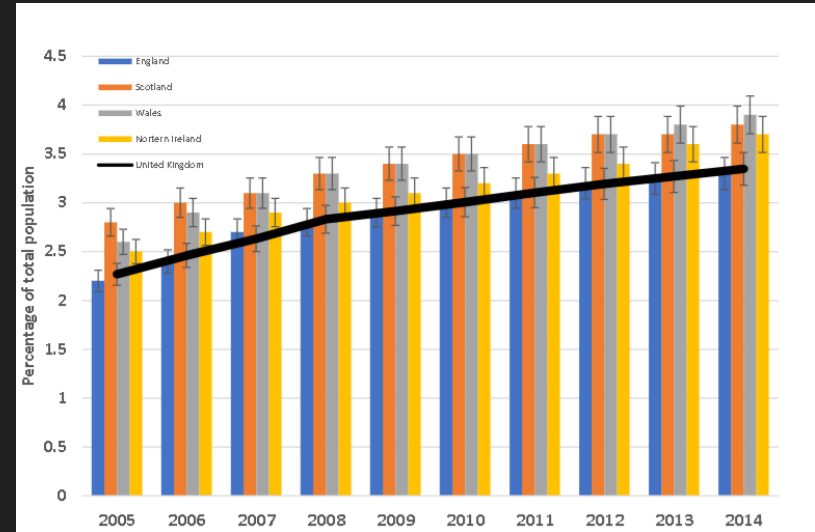


Figure 2: The fluctuation in prevalence of treated Hypothyroidism across the UK in 2014

(Source: Razvi et al., 2019)

Economic and Social burden of LTC

Economic Burden

- The overall expense of the medication costs in England and Wales for Hypothyroidism exceeded £60.8 million to £129.8 million between 2015–16 and has decreased to £88.4 million (Stedman et al., 2021).
- In Birmingham, the per-person treatment cost of hypothyroidism is around \$10,821 (Livhospital, 2026).
- Each prescription of Liothyronine (LT3) is £146 in 2022, indicating the huge economic pressure on the patients of the UK (McCall, 2023).

Social Burden

- The negative daily life impact of hypothyroidism, like weight gain, constipation and dry skin, can lead to social isolation and lack of motivation in individuals (Grixti et al., 2025).
- The prevalence of depression and anxiety were 42.6% and 50.4% among Hypothyroid individuals (Gorkhali et al., 2020).
- Hypothyroidism negatively affects patients' self-confidence by making them dependent upon caretakers and family, reducing their quality of life.

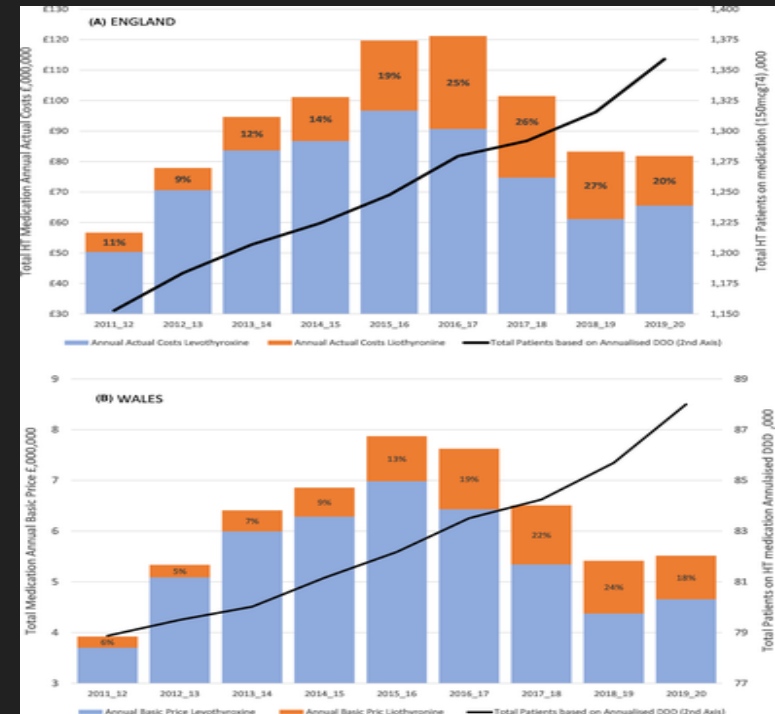


Figure 3: Annual trends in thyroid hormone replacement prescribing 2011–12 to 2019–20 in England and Wales.

(Source: Stedman et al., 2021)

Diagnosis and initial assessment of the Hypothyroidism

- Hypothyroidism diagnosis is biochemical in nature that involves measuring the TSH level in the body (Gottwald-Hostalek and Schulte, 2022).
- The diagnosis of Hypothyroidism is initiated based on laboratory tests that measure the T3, T4 hormone levels in the blood (Zamwar and Muneshwar, 2023).
- NHS in the UK offers thyroid function tests, including thyroid stimulating hormone, triiodothyronine and thyroxine.
- The measurement of the release level of these hormones from the hypothalamic pituitary gland ensures the diagnosis of possible imbalance in hormone levels (NHS, 2026).
- Gene mutation causes Hypothyroidism, which can be diagnosed by genetic diagnosis in Patients (Stoupa et al., 2021)
- The NHS has initiated action to diagnose Hypothyroid through sequence analysis of thyroid hormone receptor β -gene (NHS, 2026b).



Figure 4: Thyroid blood test
(Source: ARC Medical, 2026)

Initial Assessment

- Initial assessment of Hypothyroidism includes thyroid function testing of the patient to measure low or high levels.
- Reviewing the medical history of thyroid and initiate primary dosing of levothyroxine (Wilson et al., 2021)
- In the UK, the NHS offers testing first-line thyroid function as primary assessment and care (NHS, 2026a).
- Hypothyroidism imposes sudden weight gain, thus, monitoring a patient's weight is initially needed (Mirghani et al., 2023).
- Initially, conducting blood tests of the patients' to assess the working condition of the thyroid gland (British Thyroid Foundation, 2021).

Management of the Hypothyroidism based on the UK guidelines

- The Biopsychosocial model provides a framework that integrates biological, psychological and social factors to understand the patient's health (Hatala, 2012).
- This model is essential for managing hypothyroidism by treating patients holistically, combining hormone replacement with management of psychological distress (Brown et al., 2015).
- The model focuses on mitigating the mental stress by chronic thyroid dysfunction and personalised care.
- Alternatively, this model requires comprehensive assessment and management that makes challenges to incorporate into concrete treatment plans (Roberts, 2023).
- This model relies heavily on self-reported symptoms that might create complicated treatment planning (Roberts, 2025).
- Therefore, by focusing on the biopsychosocial model, Healthcare Organization can easily manage hypothyroidism by offering proper treatment adherence.

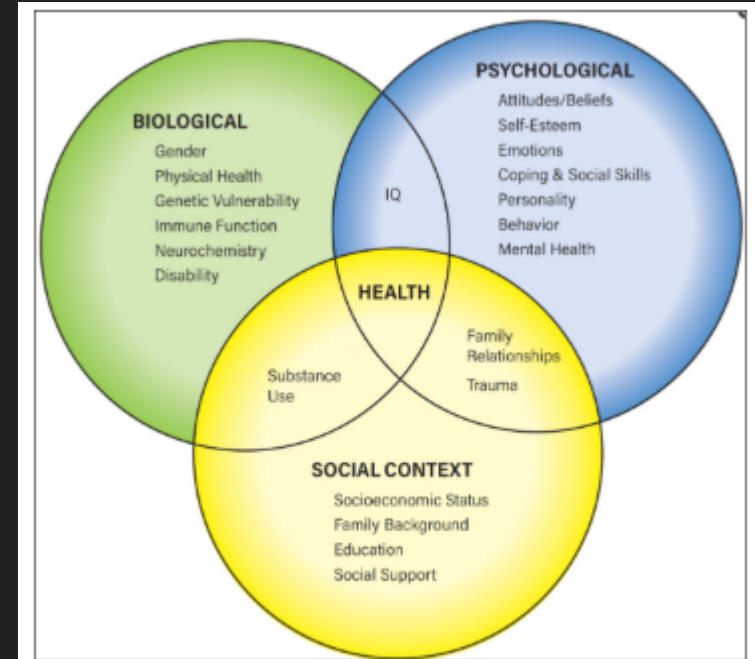


Figure 9: The Model of Biopsychosocial Model

(Source:NCBI, 2026)

Management of Hypothyroidism based on the UK guidelines (Cont.)

- The Public health model is essential for managing hypothyroidism as it helps staff to identify congenital hypothyroidism early, preventing irreversible intellectual disability (Sutanti and Suryawan, 2025).
- This model recognises the root cause of the disease and provides widespread screening to prevent hypothyroidism (Saranraj and Santosh, 2019).
- This model works to limit community exposure on reducing goitrogenic food intake that can interfere with thyroid function and manage the disease (El-Akad et al., 2025).
- Alternatively, this model often fails to recognise the complexities of individual patients' experience that negatively affects their health (Saranraj and Santosh, 2019).
- The model often lacks patient-centred care and fails to incorporate patient-reported outcomes into treatment adjustment (Saranraj and Santosh, 2019).
- Therefore, it can be considered that, by following this model patients can easily manage their disease by analysing the root cause of the diseases.

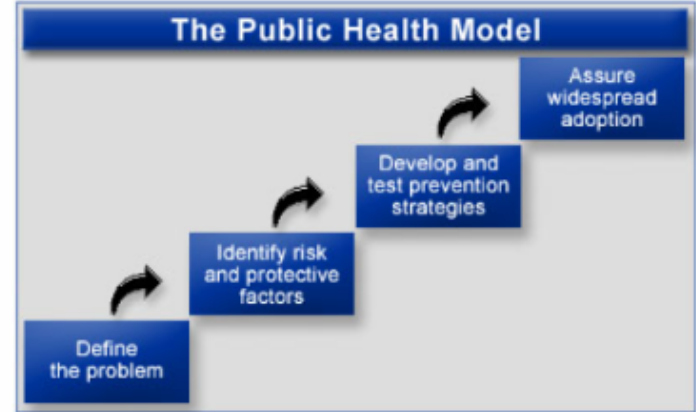


Figure 9: Public health model

(Source: Wcasa, 2026)

Available treatment option in the UK to address Hypothyroidism

- Levothyroxine
- Liothyronine
- Natural Desiccated Thyroid (NDT)
- Levothyroxine and Liothyronine (T3+ T3) Combination (Thyroid UK, 2026)
- Lifelong synthetic hormone therapy
- Desiccated Thyroid Extract (Mayo Clinic, 2026)

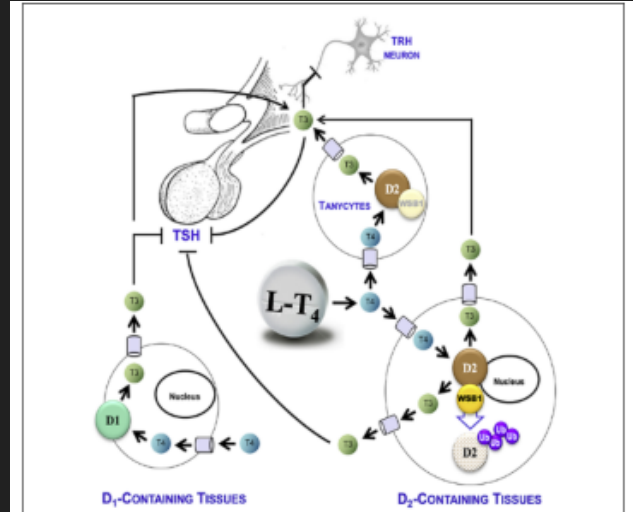


Figure 10: Levothyroxine and Liothyronine treatment

(Source:Jonklaas et al., 2021)

Comorbidity accompanied with the Hypothyroidism

- Hypothyroidism increases 70% of Heart problems (ESMED, 2026).
- Myxedema Coma
- Goiter
- Peripheral Neuropathy
- Mental health Disorder
- Infertility and Reproductive issues (Mayo Clinic, 2026b).

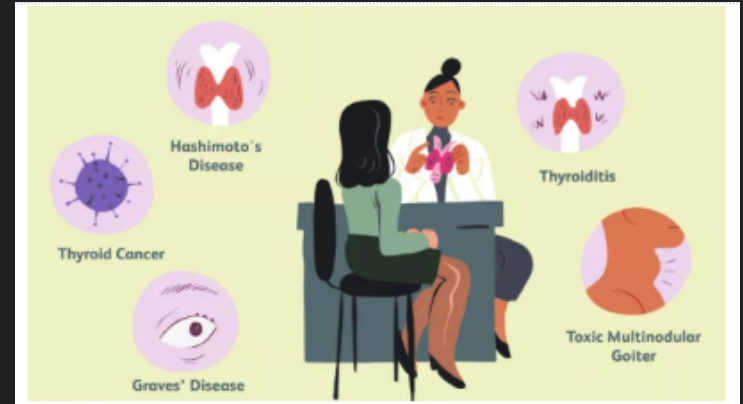


Figure 11: Problem arise for Hypothyroidism
(Source: Travers, 2025)

Prevention of Hypothyroidism

- Prevention of hypothyroidism is difficult due to autoimmune responses, genetics, and necessary medical treatment, but some preventive measures can help to reduce the risk or manage the condition (Cleveland Clinic, 2024).
- Iodine and selenium consumption are the building blocks for T3 and T4 hormones, and zinc acts as a regulator for hormone production and TSH level helps to activate thyroid hormones.
- Certain foods, such as soy, gluten, and packaged processed foods, may hinder thyroid functioning; avoiding such foods could help to prevent the condition (Kubala, 2025).
- In addition, regular moderate to high aerobic exercise can lower the body weight, boost metabolism, increase T3 and T4 hormone production, reduce inflammation and chances of hypothyroidism (Minnis, 2023).
- Moreover, regular thyroid screening and check ups are important to manage and prevent thyroid (Pano, 2025).
- Managing stress can help prevent hypothyroidism by lowering the level of cortisol, which manages the production of the TSH hormone and minimises autoimmune attacks on the thyroid gland (Weatherspoon, 2019).

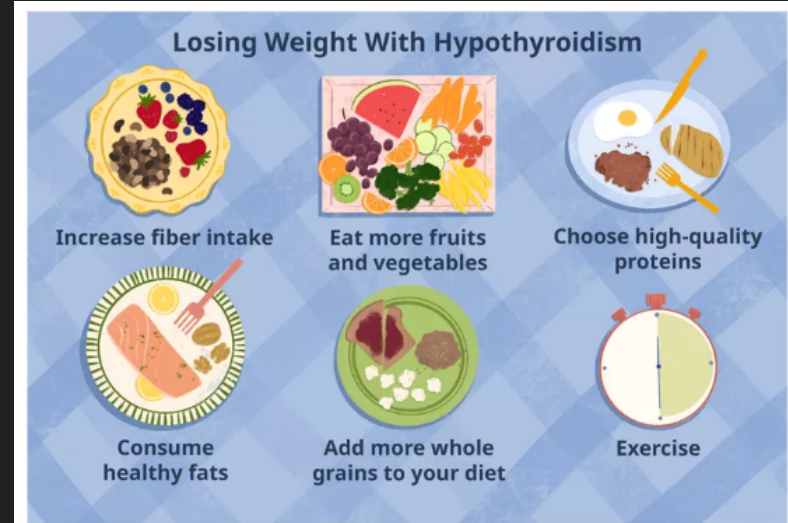


Figure: diet for hypothyroidism

(Source: Verywell Health, 2026)

Slide Skills, Values, and Behaviors for Co-Productive Care

Skills

- Hypothyroidism causes intellectual disability, thus to assess congenital hypothyroidism, having a technical skill related to the heel prick test is essential for caregivers (Brito et al., 2021).
- Dietary support is critical in Hypothyroidism, hence, having knowledge of nutritional support is needed for the caregivers (Kubiak et al., 2023).

Values

- Patients who are suffering from Hypothyroidism, needs constant psychological support as their mood fluctuates, thus caregivers must maintain reciprocal communication, prioritise patient's feeling (Bargiel-Matusiewicz et al., 2025)
- The care providers always focus on dealing with the situation with an empathetic approach and consistency (Hegedüs et al., 2024).

Behaviour

- Parental care is important in hypothyroidism that includes mental health support, avoiding harmful attitudes towards patients (Sutanti and Suryawan, 2025).
- To provide a cognitive clinical environment and support, the caregivers must have full awareness and presence of mind to deal with patients' need and emergency situations (Lindo et al., 2023).



Figure 10: Caregiver and the patients
(Source: Harvard Health Publishing, 2025)

Recommendations Using the Comprehensive Model of Personalised Care

Shared decision-making:

- By maintaining a collaborative culture, health professionals easily enhance the management of preventing hypothyroidism through making shared and patient-centric decisions (Shaji et al., 2025).
- For example, by collaborating with the NHS, healthcare organizations can easily deliver health related information to the patients and their family members easily (NHS England, 2026).

Personalised care and support planning:

- Developing the personal care plan such as function abilities, psychosocial & cognitive status for the patient to meet their healthcare requirements (Bevilacqua et al., 2021).

Enabling choice including legal rights to choice:

- Offering the rights to every patient for selecting their healthcare providers and health treatment option(Bevilacqua et al., 2021).

Social prescribing and community-based support:

- By aligning the legal compliances, the healthcare organisation might provide local support such as superior advice, emotional support to the patients (Shaji et al., 2025).

Supported self-management:

- Empowered every patient to manage their own well-being and manage their hypothyroidism (Bevilacqua et al., 2021).

Personal health budgets:

- Offering a low cost treatment to the patients who are suffering from hypothyroidism.
- In the UK, Nuffield health organization offers high quality treatment at low cost to the patients (Nuffield Health, 2026).

Recommendations Using self-management support

- Patients should maintain a proper diet and nutritious food habits to manage weight balance (Gacek et al., 2025).
- Taking proper self care through daily exercise will help the patients with lifestyle balance (Aqeeli and Hassan, 2022).
- Continuous measurement and monitoring of blood pressure in home (Profili et al., 2025).
- Taking regular and consistent medication followed by health check ups.
- Associating with self-care training programs to learn primary clinical support.
- Focusing on mental health precautions to reduce anxiety in emergency situations (Zangouei et al., 2025).

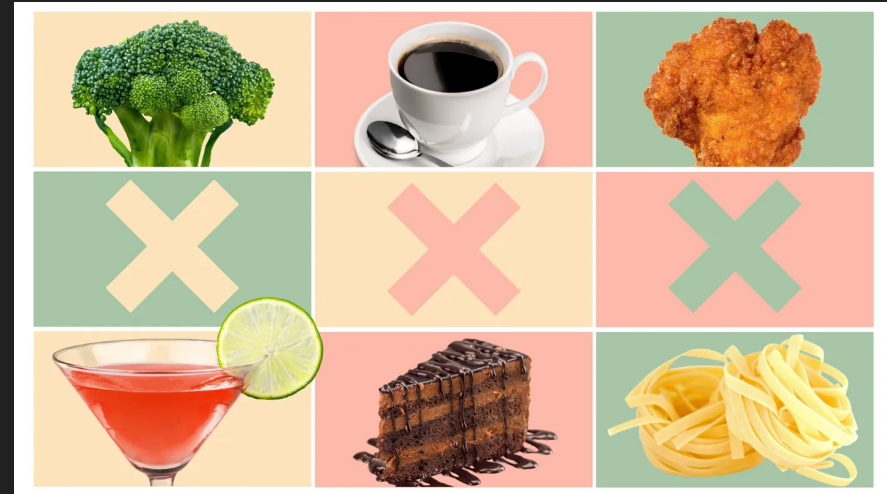


Figure 10: Nutricious food choice

(Source: Thompson Jr, 2026)

Conclusion

- The discussion is focused on the long-term effect of hypothyroidism disease, characterised by insufficient thyroid hormone production, which leads to physical and psychological symptoms in patients.
- It affects a significant number of women in the UK.
- A negative daily life impact of hypothyroidism triggers weight gain, dry skin, social isolation, and lack of motivation.
- Diagnosis of hypothyroidism involves measuring TSH, T3, and T4 hormone levels in the blood of the patients.
- Based on UK guidelines, the Public Health model is essential for managing hypothyroidism as it helps staff to identify congenital hypothyroidism early, preventing irreversible intellectual disability.
- There are many available treatment options in the UK to address hypothyroidism, such as Levothyroxine, Liothyronine, Natural Desiccated Thyroid, Levothyroxine and Liothyronine (T3+ T3) Combination, Lifelong synthetic hormone therapy, and Desiccated Thyroid Extract.
- To prevent and manage hypothyroidism, patients should maintain a proper diet, manage body weight balance through exercise, and maintain regular health checkups.

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