

# Thyroid disorders in Chile

## ABOUT THYROID DISORDERS

**Thyroid hormones are produced by the thyroid gland in the neck, and are essential for normal bodily function.<sup>1</sup> Thyroid disorders occur when there is an imbalance in the production of these hormones. There are two categories:**

**Hypothyroidism: a deficiency of thyroid hormones** due to the thyroid gland producing too little thyroid hormone. Symptoms may include weight gain, fatigue, depression, memory problems, muscle weakness and impaired development in children.<sup>1</sup> Approximately 4–10% of the global population have hypothyroidism.<sup>2</sup>

**Hyperthyroidism: an excess of thyroid hormone** due to an overactive thyroid gland. Symptoms may include sudden weight loss, fatigue, mood swings, rapid heartbeat, increased appetite, muscle weakness, intolerance of heat and enlarged thyroid gland.<sup>1</sup>



**Awareness of these disorders is low, and symptoms are difficult to detect as they can be easily confused with symptoms of other conditions or natural signs of aging.<sup>3</sup> This can cause significant delays to an accurate diagnosis, sometimes up to two years.<sup>4</sup>**

**Thyroid disorders are a public health issue** impacting maternal and child health, non-communicable disease reduction and healthy aging. As a result, thyroid disorders are strongly connected to many of the health Sustainable Development Goals.<sup>5</sup>

**As people age and live with an increasing number of comorbidities, early detection and optimal treatment of thyroid disorders will become essential.** Treatment aims to return the thyroid hormone levels to a normal range, and for hypothyroidism it has also been shown to improve quality of life.<sup>6</sup>

## WHY WE NEED TO ACT NOW

### Thyroid disorders are particularly harmful in certain groups

- Older people with thyroid disorders are at increased risk of morbidity and mortality.<sup>7</sup>
- People with cardiovascular disease (CVD) and thyroid disorders are at higher risk of increased morbidity or mortality.<sup>8</sup>
- Pregnant women with hypothyroidism are more likely to suffer from obstetric and fetal complications such as impaired fetal cognitive development, preterm birth and pregnancy loss.<sup>9</sup>

### Current screening and identification of thyroid disorders are suboptimal

Late identification of thyroid disorders risks progression to more severe symptoms,<sup>4</sup> which may lead to decreased quality of life.<sup>10</sup> Despite this:

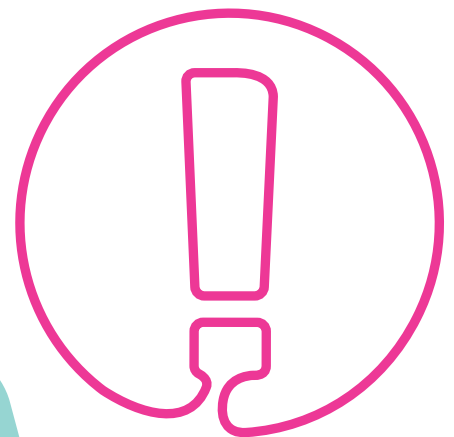
- The risk-based approach currently used may miss 30–55% of pregnant women with hypothyroidism.<sup>11</sup>
- Almost 20% of Latin American physicians do not perform any screening for hypothyroidism in pregnancy, and 10% do not have an overarching strategy for screening.<sup>12</sup>

### Adequate management of thyroid disorders is part of sustainable and integrated care systems

The detection and management of thyroid disorders will take on additional importance in the context of a growing burden of CVD and non-communicable diseases and an aging population.<sup>13</sup> These issues will contribute to higher spending on healthcare,<sup>14</sup> for which many countries are ill prepared.

### Data on thyroid disorders in Latin America are lacking

Information on the health and economic burden of thyroid disease in Latin America is very limited and there is an overreliance on international data. This means that we are likely to underestimate the burden of thyroid disorders.





## WHAT IS HAPPENING IN CHILE?

### Key facts about thyroid disorders in Chile

<b>Epidemiology</b>	Hypothyroidism	2.2% of adults have overt and 16.4% have subclinical hypothyroidism <sup>15</sup>  The prevalence of overt hypothyroidism increases to 5.2% in those over 65 years old <sup>15</sup>
	Hyperthyroidism	1% of pregnant women are estimated to have hyperthyroidism <sup>16</sup>
<b>Policy</b>	Clinical guidelines	National clinical guidelines exist for hypothyroidism <sup>17</sup>
	National patient or advocacy group	No national groups exist for thyroid disorders

### Variations in management of thyroid disorders are common

Typically hyperthyroidism is managed by an endocrinologist and hypothyroidism by a general practitioner (GP); however, poor GP understanding of hypothyroidism and limited awareness of the guidelines can lead to variable quality of care.<sup>18-20</sup>

People receiving care in the public system may also experience long waiting times or poorer-quality care in comparison to the private sector.<sup>18, 21</sup> Additional geographical and financial inequalities in access to healthcare exist.<sup>19</sup> For example, limited numbers of endocrinologists means that people often travel large distances for consultations,<sup>19</sup> and people with hyperthyroidism face significant costs as treatment is not covered through governmental programmes.<sup>20</sup>

### Salt and iodine consumption is high, requiring action

More than 98% of Chileans consume more salt than the World Health Organization recommends.<sup>15</sup> The risks to cardiovascular health are well known, but excess salt intake can lead to excess iodine intake, triggering both hypo- and hyperthyroidism.<sup>22</sup>

Overconsumption of iodine is considered an important issue,<sup>23</sup> but the exact levels of overconsumption are unclear. It has been noted that consumption in Araucania, Coquimbo and Tarapacá regions is notably high.<sup>24</sup> Therefore, experts are advocating for increased capacity in order to better monitor and evaluate salt iodization levels.<sup>23, 24</sup>

### National data in Chile have uncovered interesting differences from global populations

The prevalence of overt hypothyroidism is higher in Chile than other countries<sup>25</sup> and early thyroid hormone reference ranges derived from Chilean patients were found to be higher than the international reference values.<sup>25</sup> Experts are therefore calling for improved national data,<sup>18, 24</sup> and the development specific reference values for specific groups, including pregnant women.<sup>20</sup>

# POLICY RECOMMENDATIONS

Thyroid disorders require a comprehensive integrated policy response. We recommend that decision-makers across Latin America take the following actions:

## 1 Improve the implementation of screening for thyroid disorders:

- Implement aggressive risk-based case finding, with a focus on adults over 60 years old, those with existing CVD and pregnant women.
- Enable primary care physicians to carry out risk-based case finding with clinical protocols and continuing medical education.

## 2 Ensure regular thyroid hormone checks for pregnant women and those planning to become pregnant:

- Strengthen monitoring of thyroid disorders among women.
- Include thyroid hormone tests as part of routine tests for pregnant women.
- Establish country-specific diagnostic reference values for pregnant women.

## 3 Raise awareness of the links between thyroid disorders and CVD:

- Raise awareness of thyroid disorders among people with CVD, cardiologists and GPs.
- Support cardiologists to test for suboptimal thyroid function.

## 4 Regularly monitor population-wide iodine and sodium intake levels:

- Monitor the population-level iodine and sodium intake and optimize salt iodization levels accordingly.



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