

## Thyroid disorders in Brazil: the contribution of the Brazilian Longitudinal Study of Adult Health (ELSA-Brasil).

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### Abstract:

**S**tate of the problem: Thyroid disorders are common diseases, both in Brazil and worldwide. The Brazilian Longitudinal Study of Adult Health (ELSA-Brasil) is a prospective cohort study that investigates cardiovascular diseases, diabetes, and associated factors, including non-classical cardiovascular risk factors such as thyroid function. Thyroid function was classified according to thyrotropin stimulating hormone (TSH), free thyroxine (FT4), and use of medication to treat thyroid disorders, after excluding participants who reported use of any medication that could alter the results of the TSH and FT4 tests. All analyses included in this review are cross-sectional using baseline data (2008 to 2010). Clinical practice: The results showed an association of subclinical thyroid disorders with biomarkers of subclinical atherosclerosis, measured by carotid intima-media thickness and coronary artery calcium, insulin resistance, metabolic syndrome, and some psychiatric disorders. No association was found with the biomarker of inflammation high-sensitivity C-reactive protein, or changes in pulse wave velocity or heart rate variability. More than that, low TSH is associated with poorer performance on an executive function test in middle-aged adults without overt thyroid dysfunction. The study also brings information about the distribution of positive antithyroid peroxidase antibodies (TPOAb) across sex, race, age, and thyroid function. Our results are aligned with the worldwide prevalence of positive TPOAb reported in iodine-sufficient areas. In women, the presence of TPOAb was related to the entire spectrum of thyroid dysfunction, while in men, it was only related to the occurrence of overt thyroid disease. Conclusion & Significance: Our results suggest that subclinical thyroid disorders and TSH quintiles were associated to subclinical atherosclerosis. Our levels of TPOAb confirm the status of Brazil regarding iodine intake as sufficient.

**Keywords:** thyroid disorders, antithyroid peroxidase antibodies, risk factors, subclinical atherosclerosis.



### Biography:

Isabela M. Benseñor has completed his PhD at the age of 37 years in the School of Medicine, University of São Paulo and postdoctoral studies from Brigham and Women's Hospital at Harvard Medical School. She is one of the Principal Investigator of the Brazilian Longitudinal Study of Adult Health (ELSA-Brasil), a prospective, multicentre cohort study in Brazil. She has published more than 400 studies in reputed journals and has been serving as an editorial board member of several Brazilian journals.

### Speaker Publications:

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