Iodine status of pregnant women in Iceland from 11-14 weeks of gestation

Sólveig Aðalsteinsdóttir

Supervisor: Ingibjörg Gunnarsdóttir

UNIVERSITY OF ICELAND
FACULTY OF FOOD SCIENCE AND NUTRITION

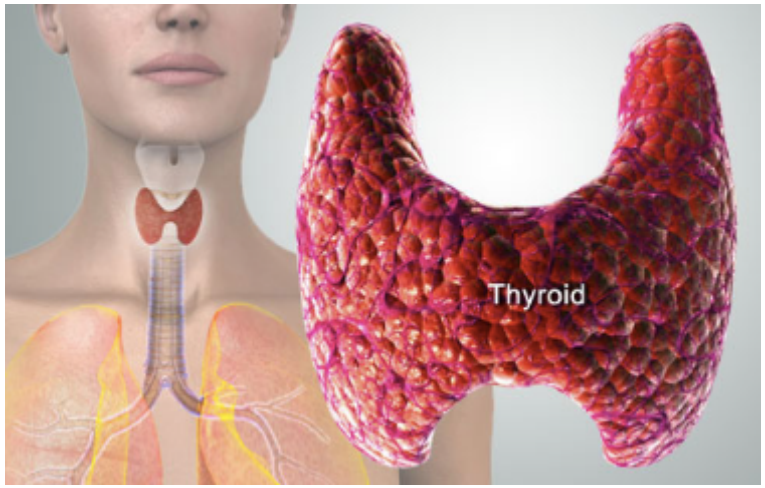
Næring móður og barns
Pregnant Women in ICEland (PREWICE)

Larger project supervised by Ingibjörg Gunnarsdóttir, which assesses whether dietary habits in early pregnancy are related to weight gain during pregnacy, nutrient deficiencies, other complications, and birth outcomes

- All women attending their first sonar screening (11 – 14 weeks gestation) between October – March 2018 were asked to participate in the study
- Using urine analysis to determine the populations **iodine** status

Why is iodine important during pregnancy?

- Iodine is mostly found in fish, milk, egg.
  - Iceland is the only Nordic country without Universal salt iodization
- Iodine is an essential part of thyroid hormone (TH)
  - TH regulates metabolism, as well as neurological, muscle, and bone development
  - Iodine deficiency is the leading cause of preventable brain damage



https://www.webmd.com/women/ss/slideshow-thyroid-symptoms-and-solutions
https://apps.who.int/iris/bitstream/handle/10665/43010/9241592001.pdf?sequence=1

Characteristics of Mothers

Age	
18_24	15.7%
25_29	36.4%
30_34	30.1%
35_39	15.0%
40_45	2.8%
Parity	
Primaparous	44.2%
Multiparous	55.8%
Education level	
Primary school	11.4%
High school or vocational school	29.5%
Bachelors degree (BS)	34.0%
Masters or doctorate degree (MS or PhD)	25.1%
Marital status	
Married	23.7%
Cohabitating	71.4%
Living alone	5.0%
Avoid fish	1.8%
Avoid dairy products	4.2%

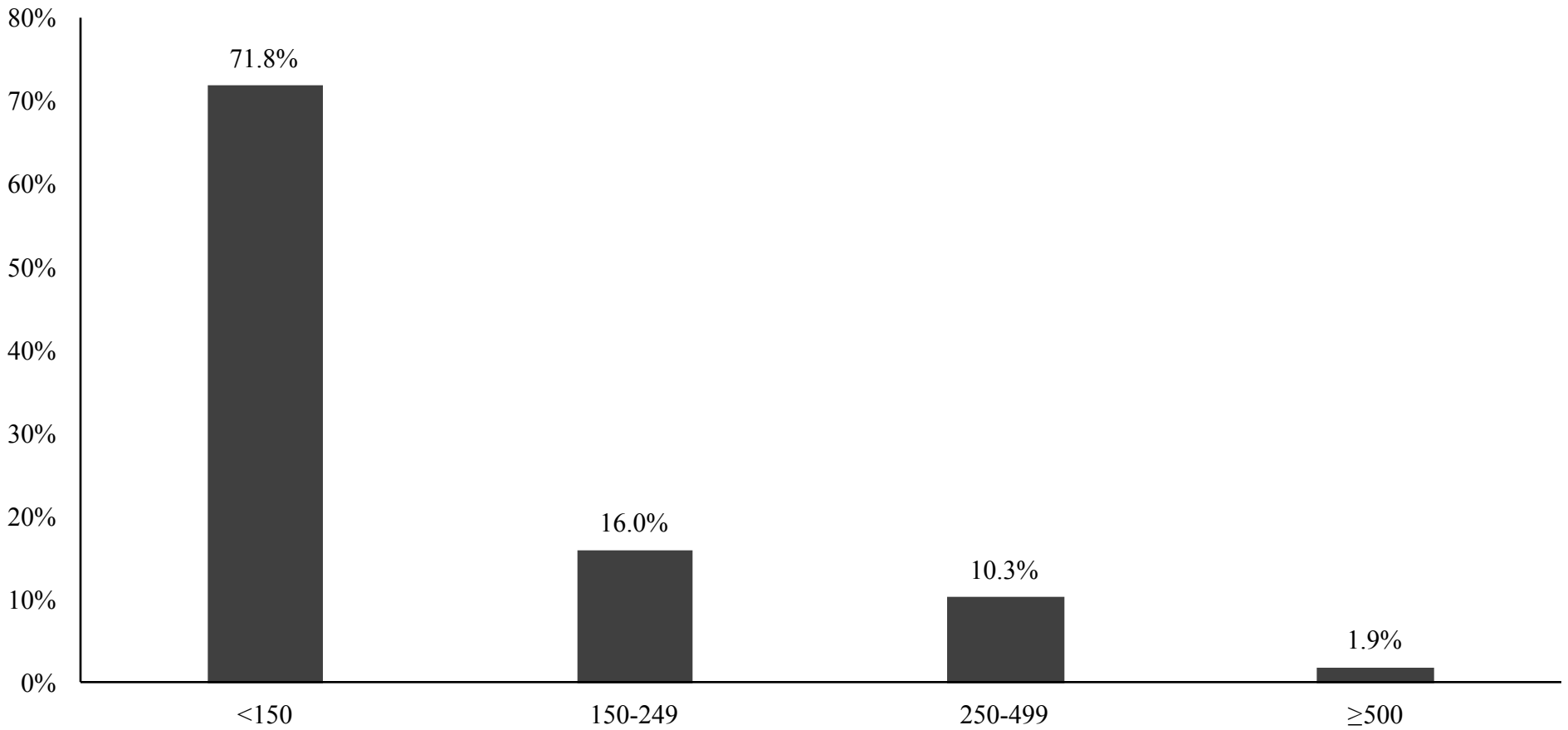
During this 6 month period, 1.684 women came to Landspitali for their first screening.

- 1.015 women participated in the study – 75% participation rate

Participants completed a short 5 – 10 minute questionnaire about dietary patterns

- Urine sample and blood sample also collected

Percentage distribution of UIC based on WHO cutoff guidelines for pregnancy



What do these results mean?

Median urinary iodine (µg/L)	Iodine intake
Pregnant women	
<150	Insufficient
150–249	Adequate
250–499	Above requirements
≥500	Excessive[c]

These results highlight that due to a decline in fish and milk consumption iodine status of the Icelandic population needs to be looked at further, especially during pregnancy because this is a vulnerable time for deficiency.

- Is the screening tool a reliable marker for iodine deficiency?
- How can a dietary intervention be created to protect those at risk?