

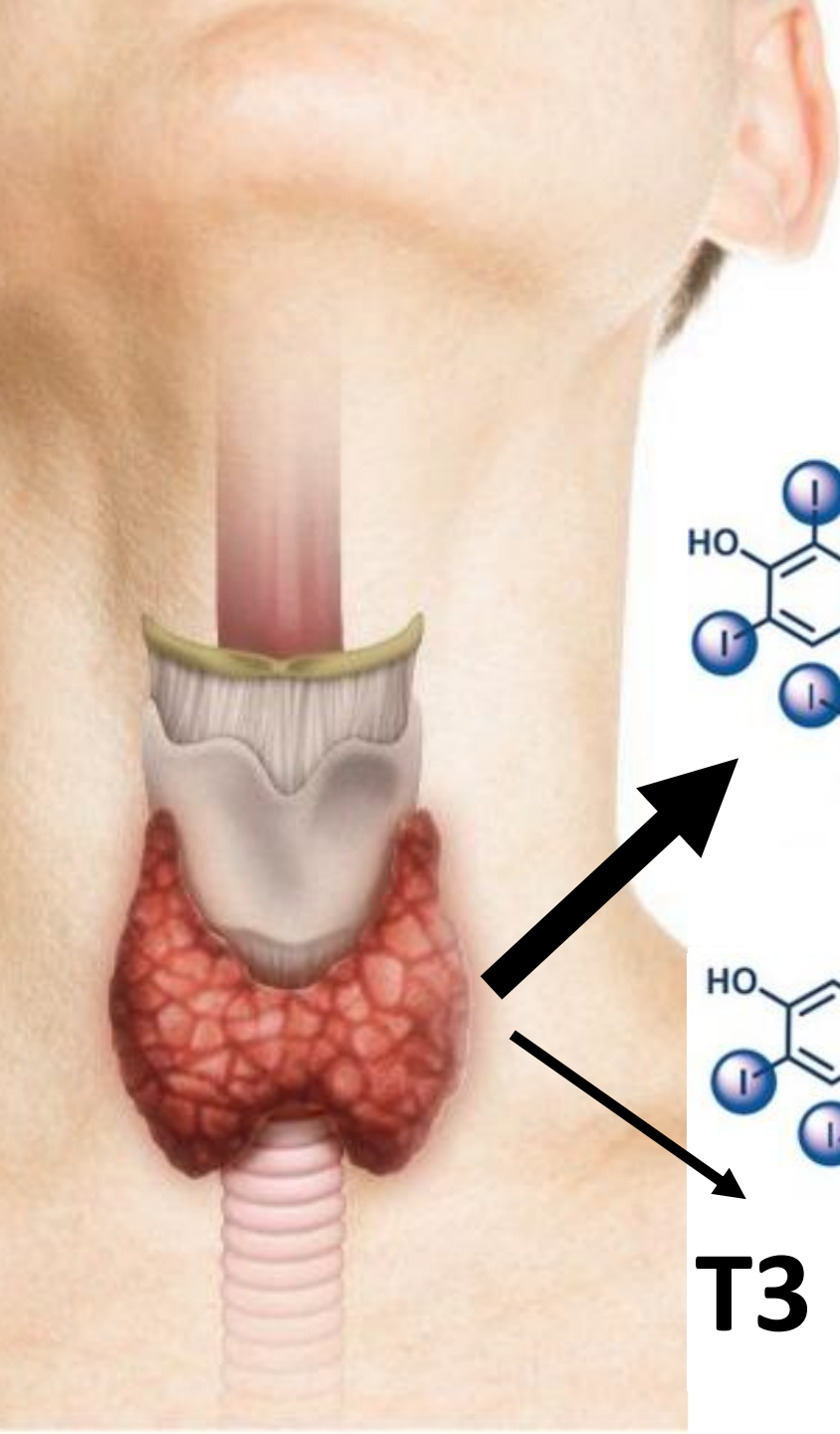
# Salt iodization:

## An effective global public health strategy to prevent iodine deficiency

Symposium 100 years salt iodization  
Bern, 6 Oct 2022

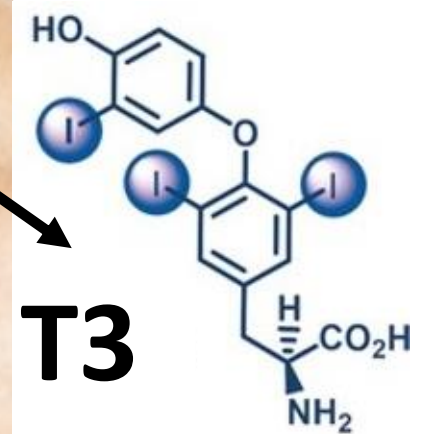
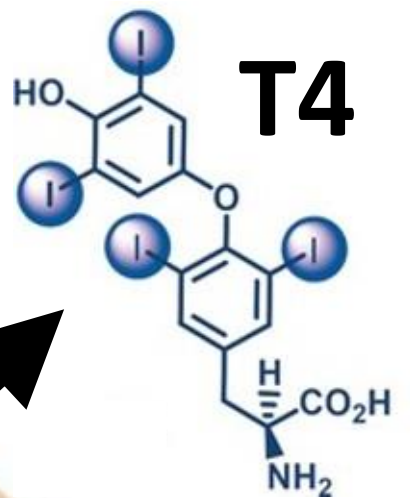
**Dr. Maria Andersson**





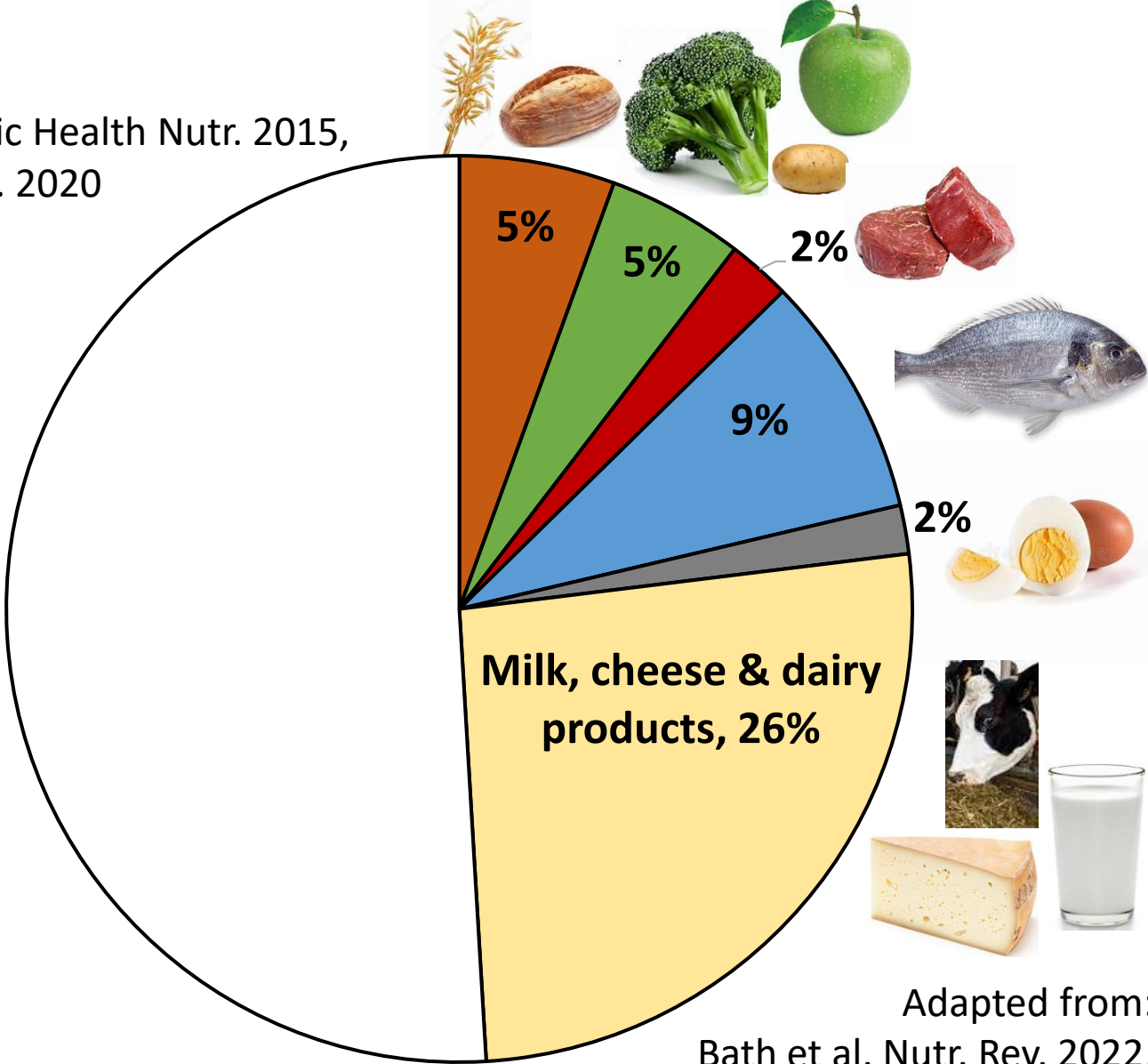
# Dietary iodine requirement

150  $\mu\text{g}/\text{day}$



>90% excreted

Adapted from:  
Haldimann et al. Public Health Nutr. 2015,  
Esche et al. Eur J Nutr. 2020



Adapted from:  
Bath et al. Nutr. Rev. 2022,  
Carlsen et al. Nutrients 2018

# Universal salt iodization

Per capita salt intake  
10 g/day → 5 g/day



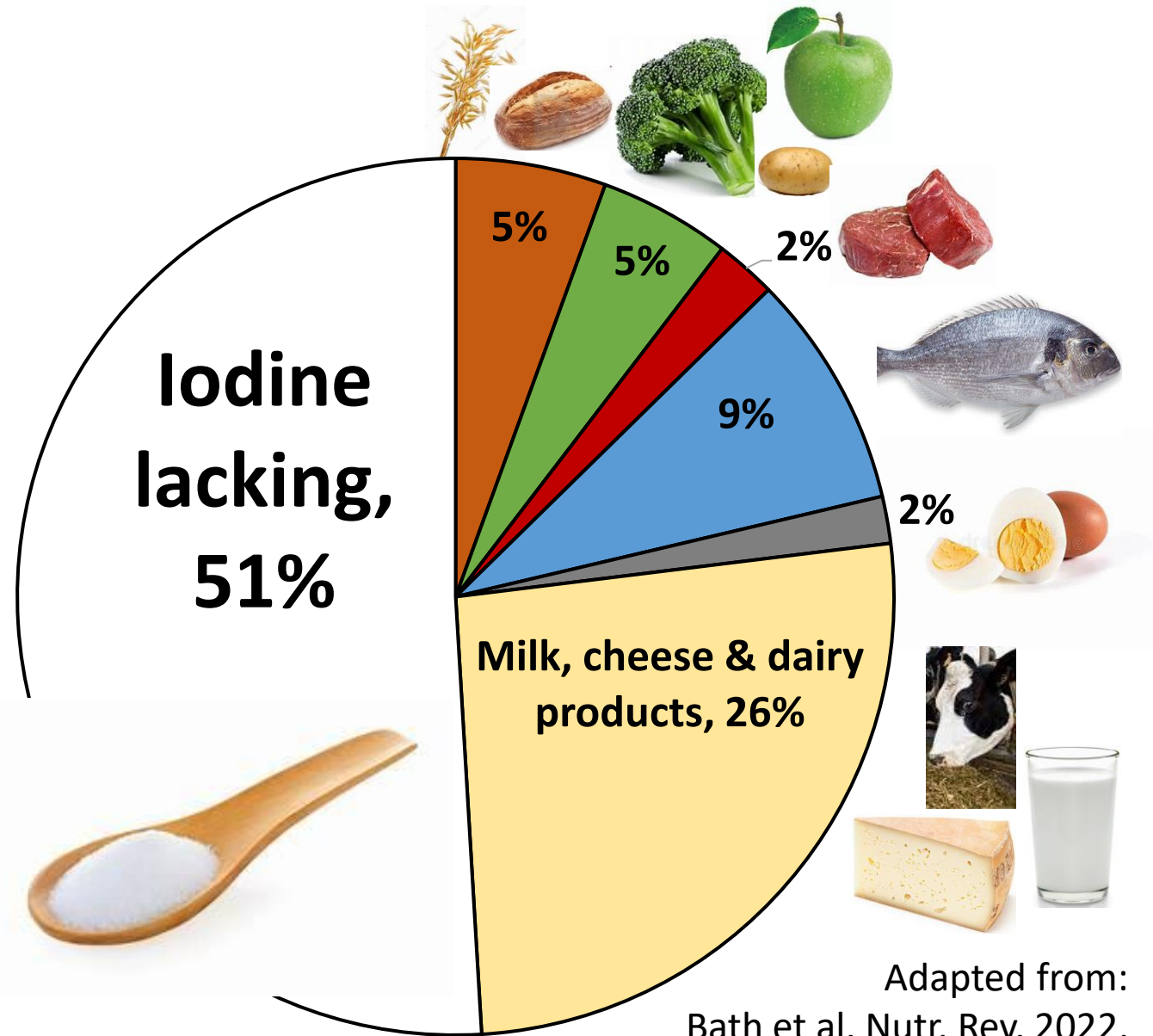
15-40 µg iodine/g salt



30% losses from  
production to  
consumption

Dietary iodine  
150 µg/day

WHO 2007, UNICEF 2018

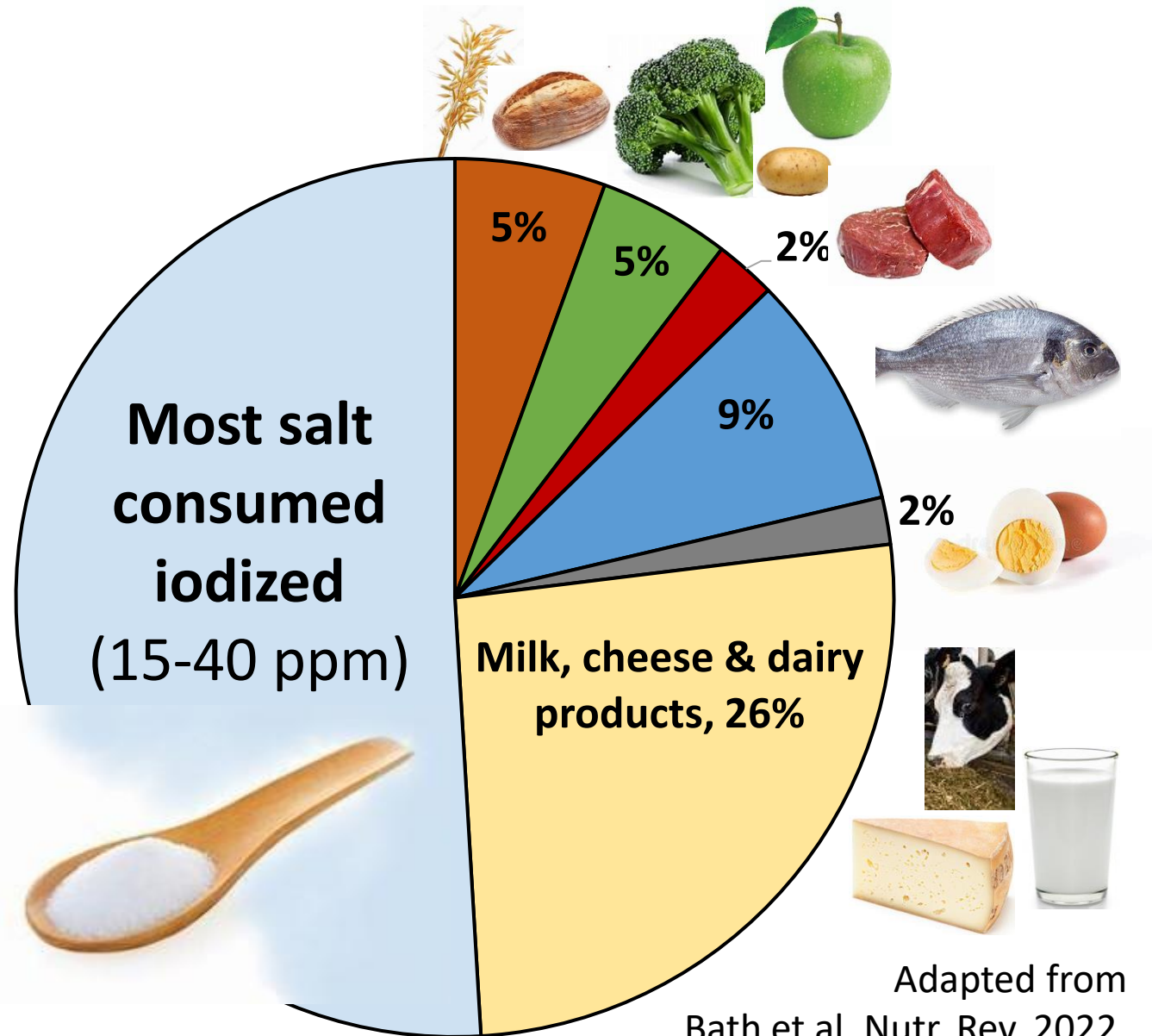


Adapted from:  
Bath et al. Nutr. Rev. 2022,  
Carlsen et al. Nutrients 2018

# Adequate iodine intake in all population groups



WHO 2007,  
Dold et al. J Nutr. 2018



## World Summit for Children

World leaders agreed to a goal of elimination of iodine deficiency

## UN General Assembly

Goal to eliminate iodine deficiency

## WHO/UNICEF

Recommend universal salt iodization



**1990**

**1994**

**2002**

**2021**

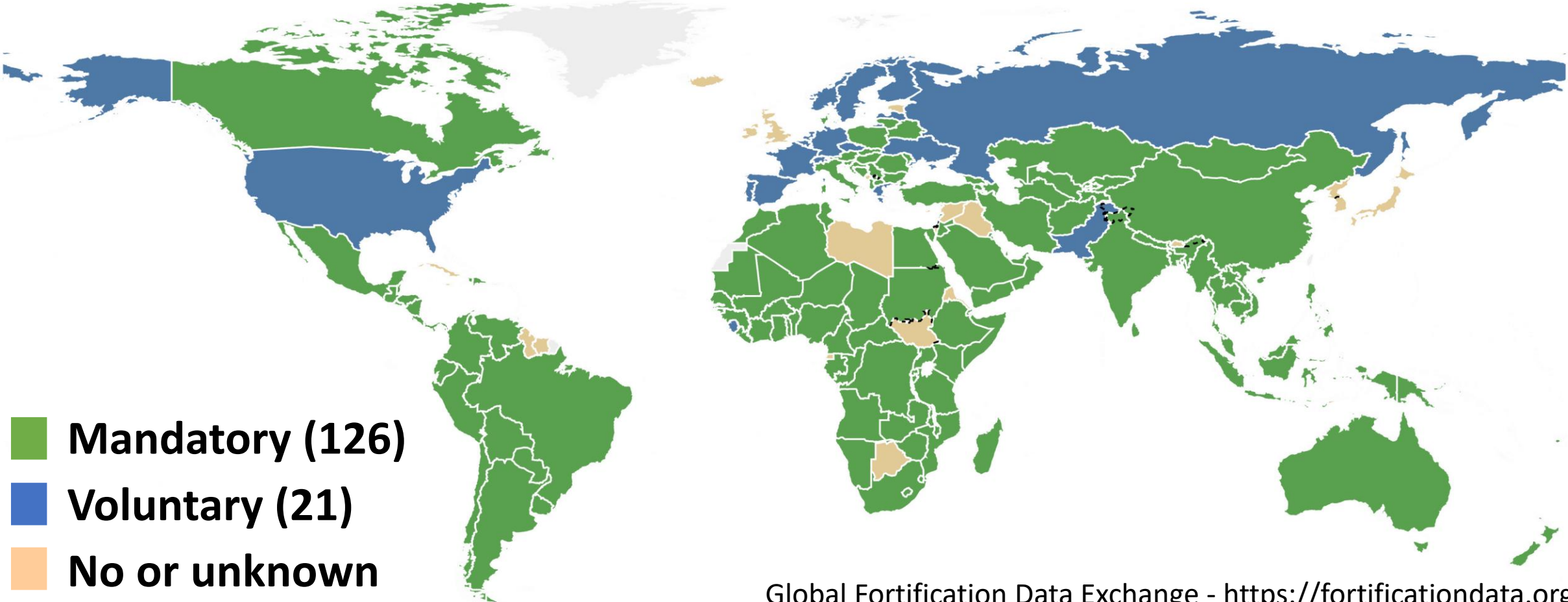
**<20%**

of the world's  
population  
consumed  
iodized salt

**89%**

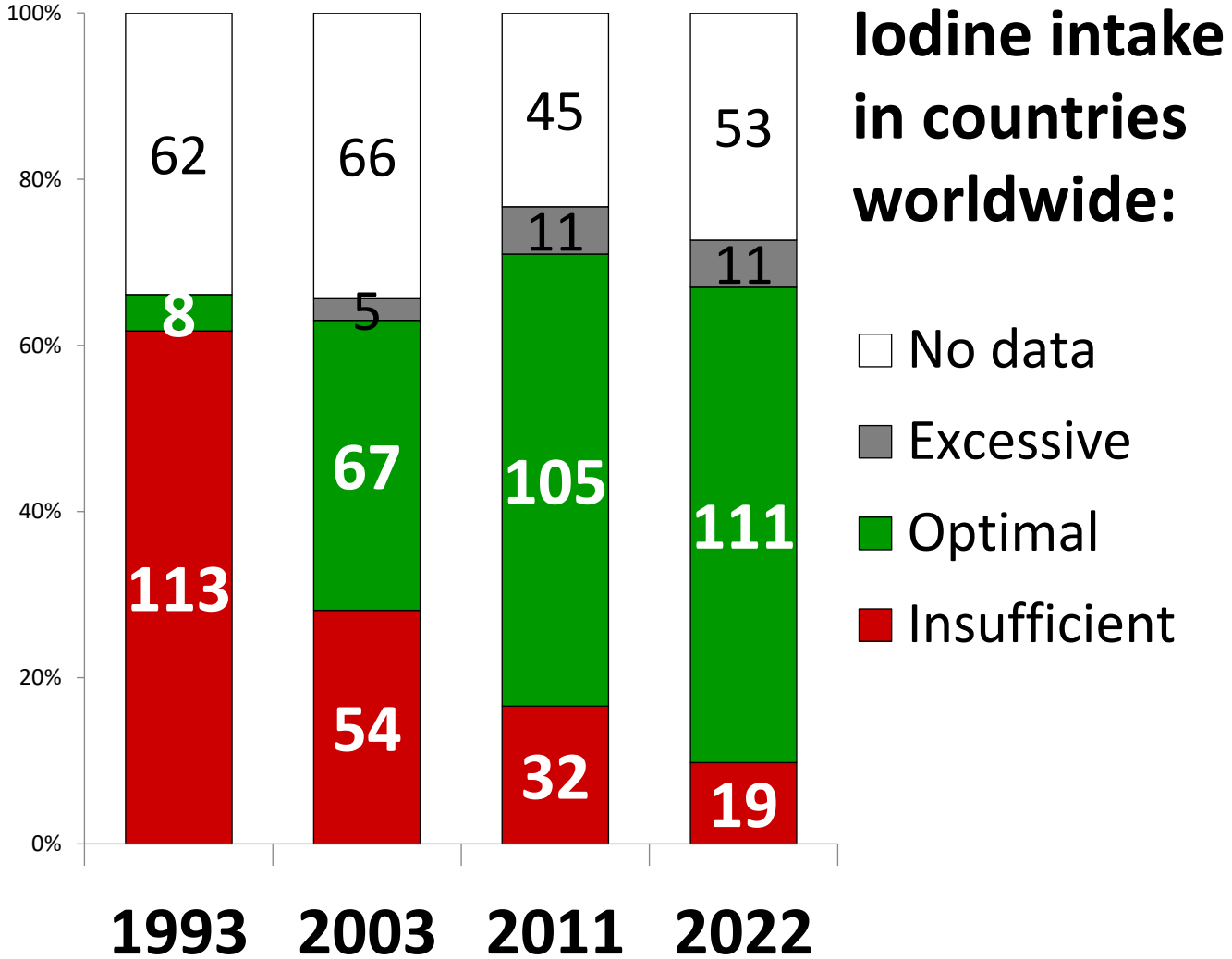
of the global  
population  
consumes  
iodized salt

# 147 countries have legislation for salt iodization



Global Fortification Data Exchange - <https://fortificationdata.org>

**Global  
public health  
success**



Iodine global Network 2022 - <https://ign.org>  
Zimmermann & Andersson Eur J Endocrinol. 2021



## Efficacious

for the prevention of  
iodine deficiency

WHO 2014

## Safe

Iodine fortification at  
15-40 ppm well below  
the upper intake levels  
for iodine as given by  
the EFSA (600 µg/day)



Iodine

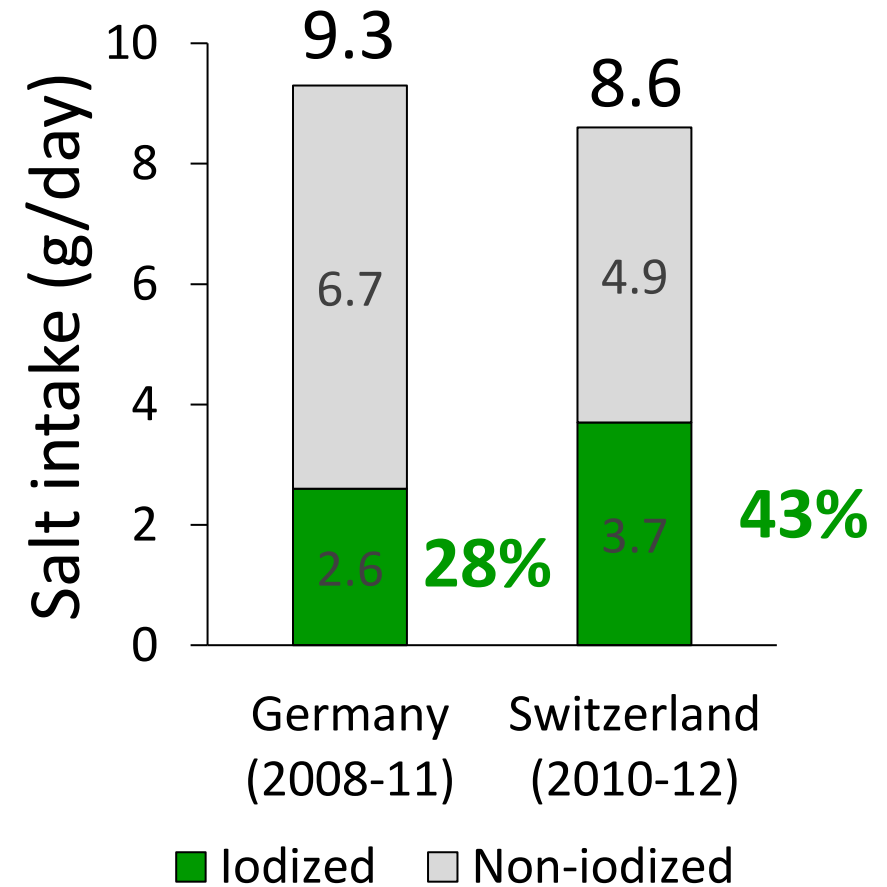
## Cost-effective

- Prevented 720 million cases of clinical iodine deficiency disorders worldwide  
- potential global economic benefit of nearly \$33 billion
- Health gains predicted over 120 years in Germany were 33 million QALYs  
and 5 million life years

Gorstein et al. Thyroid 2020, Shaffner et al. Thyroid 2021

# Challenges in Europe

- Memory of historically severe iodine deficiency fading
- Voluntary salt iodization
- Policies differ between countries
- Only partial use of iodized salt in processed foods →
- Salt reduction
- Decreased consumption of milk and dairy products (+vegan diets)



# Maintaining adequate iodine intake for the next 100 years

