

# Ursula ARENS

freelance nutrition writer

'write about nutrition'

email: [ursula@macunlimited.net](mailto:ursula@macunlimited.net)

Member of:

British Dietetic Association

Nutrition Society

Guild of Health Writers

SENSE: nutrition consultants

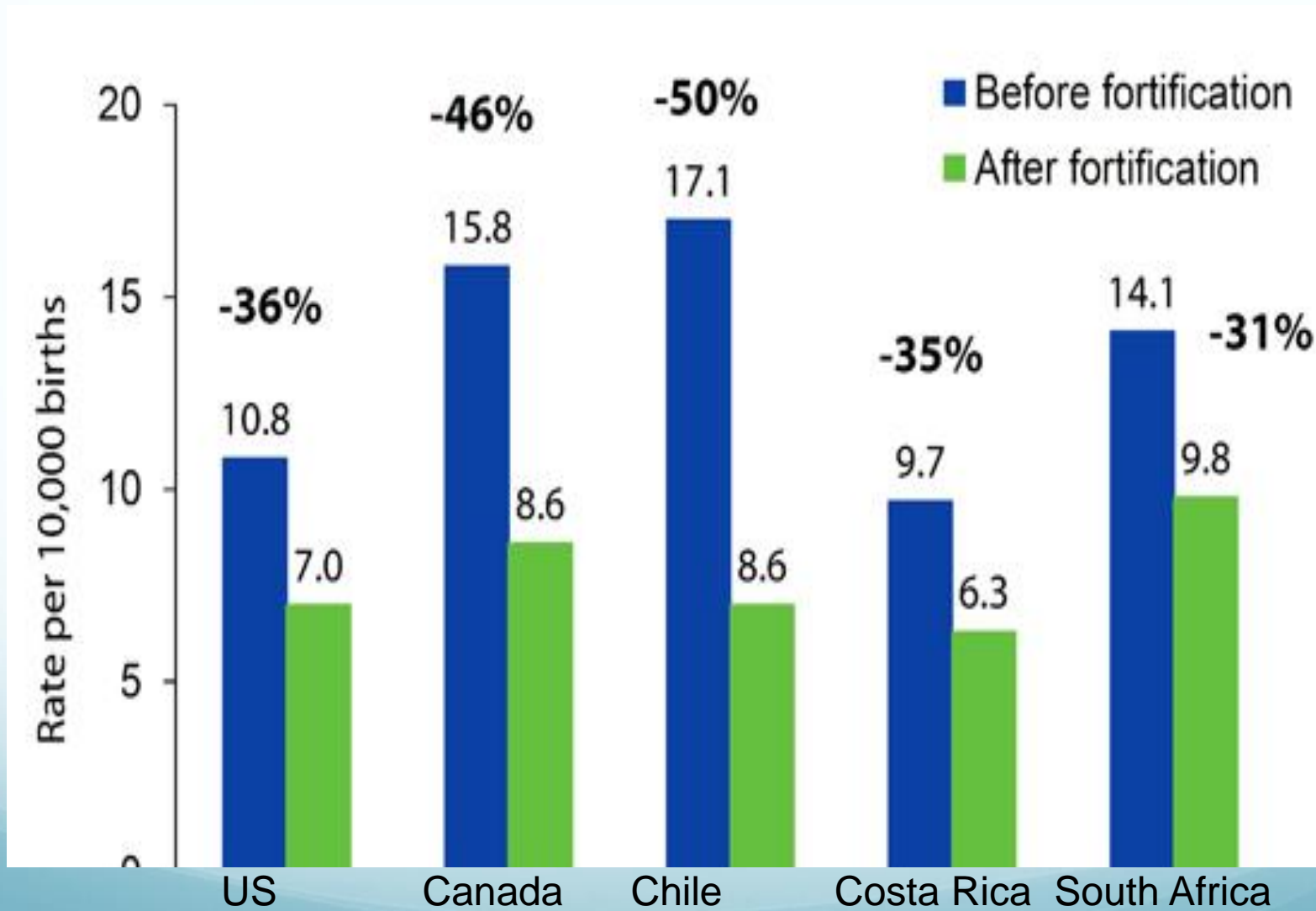
# First landmark study

- Medical Research Council Vitamin Research Study Group (1991)
- Prevention of neural tube defects: results of the MRC Vitamin Study. *The Lancet* 338 (8760) 131-137
- RCT, double blinded
- 7 countries, 33 centres, 1800+ high risk pregnancies
- Risk reduction with folic acid: 71 - 83%

# A to Z of folic acid fortifying countries

Antigua	Fiji	Kazakhstan	Palestine	US
Bahamas	Ghana	Liberia	Qatar	V & W
Chile	Haiti	Mali	R	X
Djibuti	Iran	Nepal	Saint Kitts	Yemen
Ecuador	Jamaica	Oman	Tanzania	Zimbabwe

# CDC, data and statistics, Folic Acid. Birth Defects COUNT



# UK Recommendations

## All support folic acid fortification

- Expert Advisory Group (EAG) report: 1992
- COMA: January 2000
- SACN: July 2006 / Sept 2009 / July 2017
- FSA: June 2007

# SACN, Sept 2009

- **Mandatory fortification of flour with folic acid would improve the folate status of women most at risk of pregnancies affected by NTDs.** It would also improve the folate status of other population groups in the UK. However, mandatory fortification, combined with the current practice of voluntary fortification of foods with folic acid . . . would increase the numbers in the population consuming levels of folic acid above the UL per day. Therefore, mandatory fortification should only be introduced in the UK if it is accompanied by:
  - Action to restrict voluntary fortification of foods with folic acid;
  - Measures for careful monitoring of emerging evidence on any adverse effects of long-term
  - Guidance on supplement use for particular population groups.
- **Mandatory fortification of flour alongside restrictions on voluntary fortification will confer a more even distribution of folic acid intakes across the population** compared to current voluntary fortification and supplement use. It will not lead to a substantial increase in the average population intake of folic acid but will reduce the risk of intakes exceeding the UL and increase intakes of those currently consuming the lowest total folate intakes (from foods containing naturally occurring folates and foods fortified with folic acid).

## Folate intake; women aged 16-49

	Food	All sources
Mean ug	205	239
Median ug	191	198
2.5% ug	74	76
97.5% ug	431	586
% below LRNI	8	7

NDNS 7- 8 (Roberts, 2018)

# Red blood cell folates; women aged 16 - 49

Mean	403 nmol/L
2.5%	191 nmol/L
97.5%	999 nmol/L
% below 748 nmol/L Risk of NTDs	91%
% below 305 nmol/L Risk of anaemia	16%

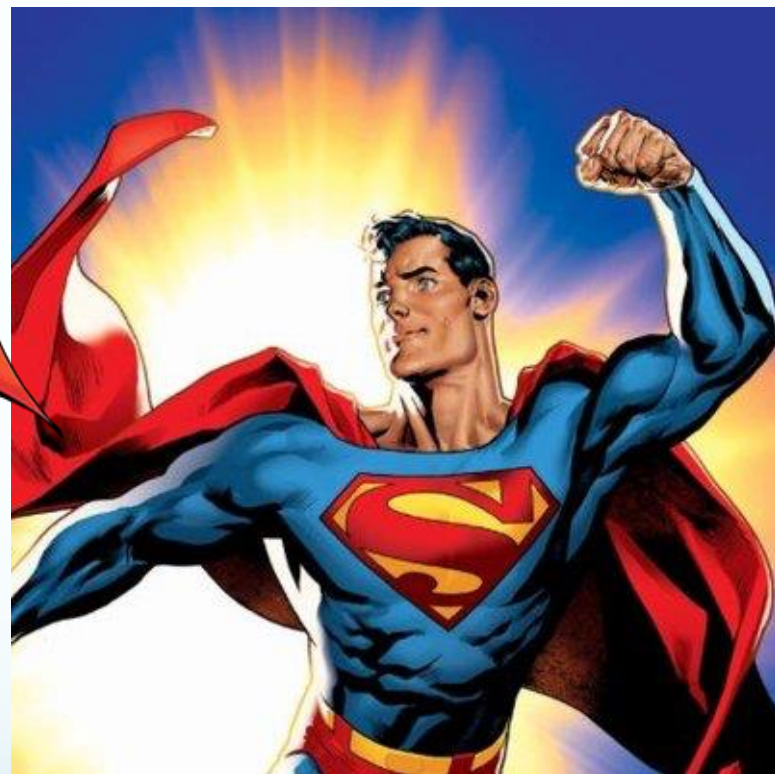
NDNS 7-8 (Roberts, 2018)



# Folic Acid Fortification Policy Heroes



**Prof Nicholas Wald**



**Prof Godfrey Oakley**