



This presentation is part of WhoEUGrain (Grant agreement 874482), which has received funding from the European Union's 3rd Health Programme.

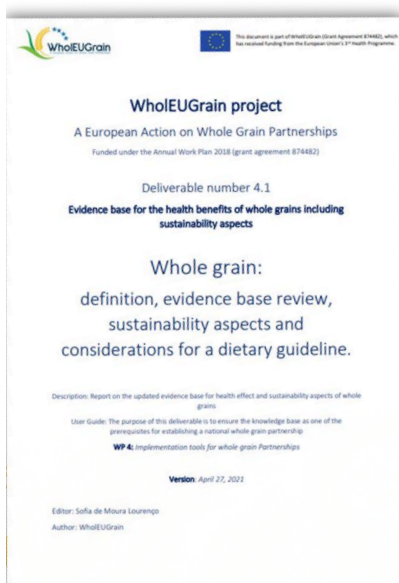


The case for whole grain

The evidence base for why investing in whole grain is good for public health

1

Why is evidence base important?



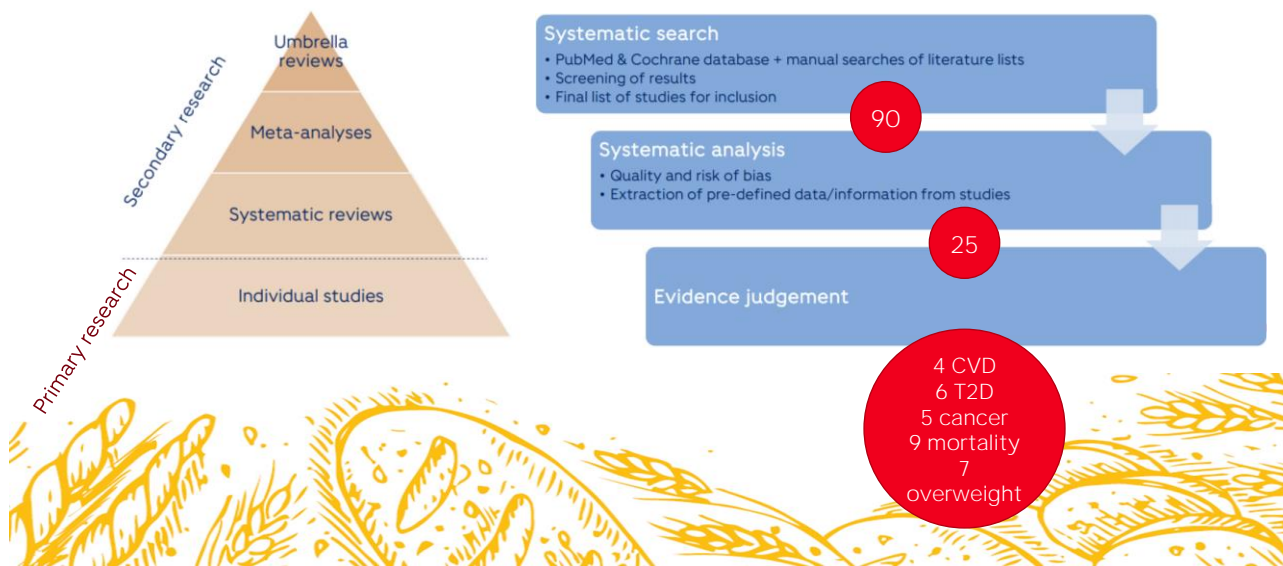
Evidence base important to:

- Establish food based dietary guidelines with quantitative recommendation - both for consumers and in public food service
- Convey consistent health messages
- Ensure trustworthy communication from governmental bodies and NGOs
- Prevention of NCDs



2

Umbrella review of the Health benefits of whole grain



3

Whole-grain intake and CVD, type 2 diabetes, cancer, mortality, and overweight		
2021		DECREASES RISK
STRONG EVIDENCE	Convincing	CVD, CHD Type 2 diabetes Mortality
	Probable	Colorectal cancer
LIMITED EVIDENCE	Limited - suggestive	Weight gain, overweight, and obesity
	Limited – no conclusion	Other types of cancer Stroke & Heart failure Adiposity parameters

4

Risk reduction for disease and mortality - Wholegrain product, servings or ingredient?



Table 1 – Equivalency between amount (in grams) of whole-grain products, number of servings of whole-grain products, and amount (in grams) of whole grain as an ingredient.

Disease & mortality risk	grams / day whole-grain products	= no. of servings whole-grain products	= grams whole grain ingredient
Significant reductions	90 grams	3 servings	48 grams
Further risk reductions	Up to 200-225 grams	6.5-7.5 servings	104-120 grams

5

Process for establishment of a recommendation for whole grain intake

Steps covered by the WholeEUGrain evidence base report

Steps covered by research institutes or public health institutions

Step covered by national authorities



6

DVFA – channels and communications

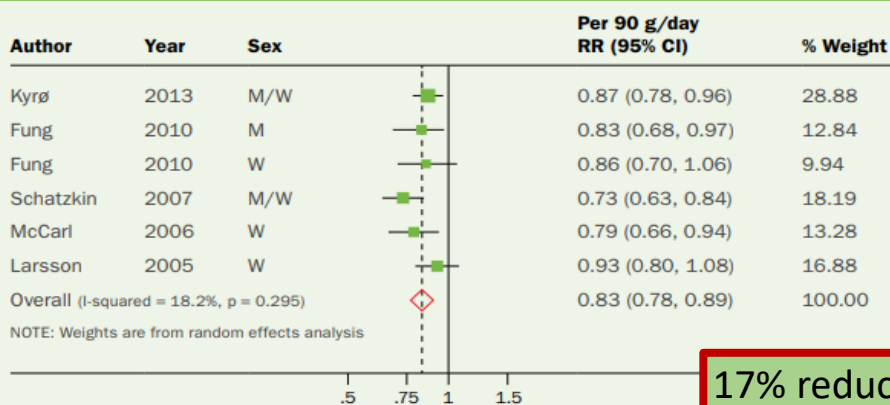
For the official food based dietary guidelines – an example

- Webpage altomkost.dk, explaining to the public and health professionals
 - different versions to different target groups (children, +65 aged, vegetarians)
- Public media campaigns 1-2 a year in corporation with the Food Partnership for Health and Climate
- <https://www.youtube.com/watch?v=RjulsCNK71A>
- Guidelines for the meals in professional kitchens (institutions, schools, public workplaces)
 - The professional kitchens serve many meals to the Danes every day - the public kitchens serve approx. 650,000 meals daily, plus meals from the private kitchens.
 - The professional kitchens therefore play an important role in introducing tasty, healthy and climate-friendly food to the Danes.



7

Figure 5.1: CUP dose–response meta-analysis¹ for the risk of colorectal cancer, per 90 grams increase in wholegrains consumed per day



17% reduced risk of colorectal cancer

Source: Kyrø, 2013 [84]; Fung, 2010 [85]; Schatzkin, 2007 [86]; McCarl, 2006 [87]; Larsson, 2005 [88].

<https://www.wcrf.org/sites/default/files/Wholegrains-veg-and-fruit.pdf>

8

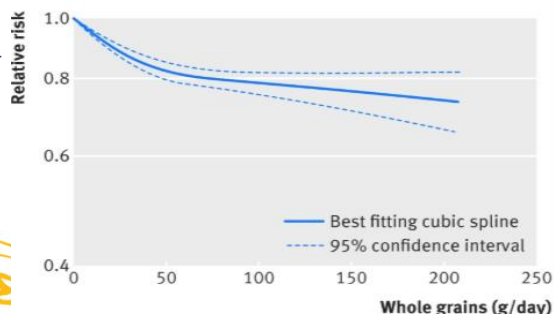
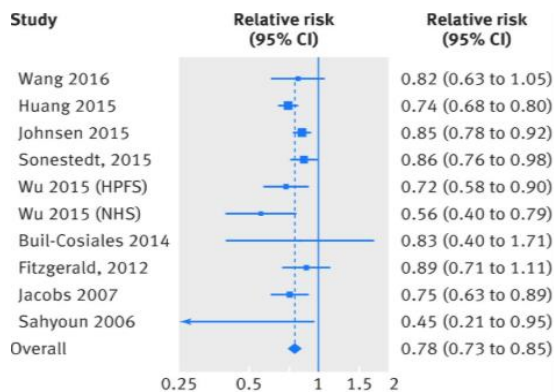
Health benefits - CVD

22 % reduced risk of CVD
 Similar findings for stroke and
 CHD

Forest plot for consumption of whole grains (per 90 g/day) and risk of cardio vascular disease, with graph illustrating non-linear response

The steepest risk reduction you see when adding the first whole grain serving!

Aune et al. 2016.

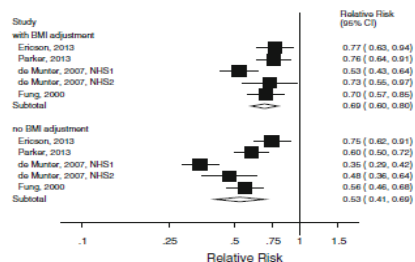


9

Health benefits - Type II diabetes

• 32% reduced risk of T2DM per 3 servings (90 g) per day (Aune et al. 2013)

A Whole grains and type 2 diabetes, dose - response, per 3 servings/d, analysis stratified by adjustment for BMI



B Whole grains and type 2 diabetes, nonlinear dose-response, analysis stratified by adjustment for BMI

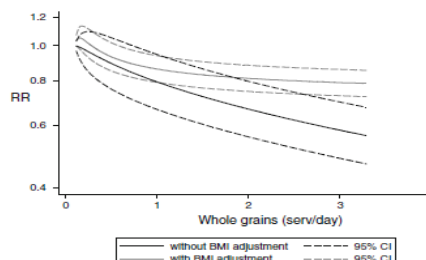
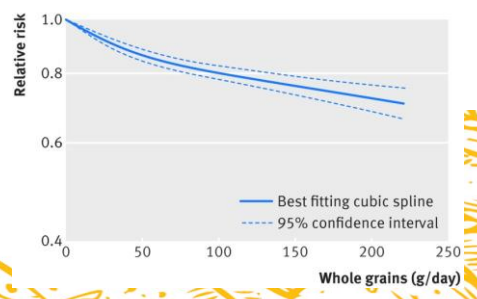
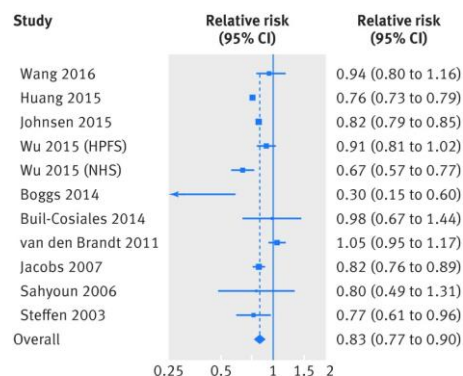


Fig. 4 Whole grains and type 2 diabetes, with and without adjustment for BMI. Summary estimates were calculated using a random-effects model

10

Health benefits – all cause mortality

17% reduced risk of all cause mortality



11

Risk reduction in NCDs and mortality entails



- Reduced burden of diseases
- Savings in health care costs
- Healthier work force and higher productivity
- Enables us to calculate return on investment and
- Develop compelling arguments for increasing whole grain intake in the European populations

WEGEU:

WP 3: CORNERSTONES OF
WHOLE GRAINS

WP 5: BUSINESS CASE OF
WHOLE GRAINS

12

Thank You for your attention!



- Contact information:
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- [Evidence base report](#)
- [Easy to read version](#)
- [Toolbox](#)

