



Overcoming the challenge of salt reduction in breakfast cereals

Brigid McKeivith (Nutritionist & RD, Nestle
Breakfast Cereals)

On behalf of the Irish Breakfast Cereal
Association

Overview



- Introduction
- Breakfast cereals in context
- Focus on sodium

Introduction



- The Irish Breakfast Cereal Association (IBCA) represents the interests breakfast cereal companies in Ireland
- Affiliated to Food & Drink Industry Ireland (FDII) within IBEC
- Members include - Flahavans, Kellogg's, Nestle Cereals and Weetabix

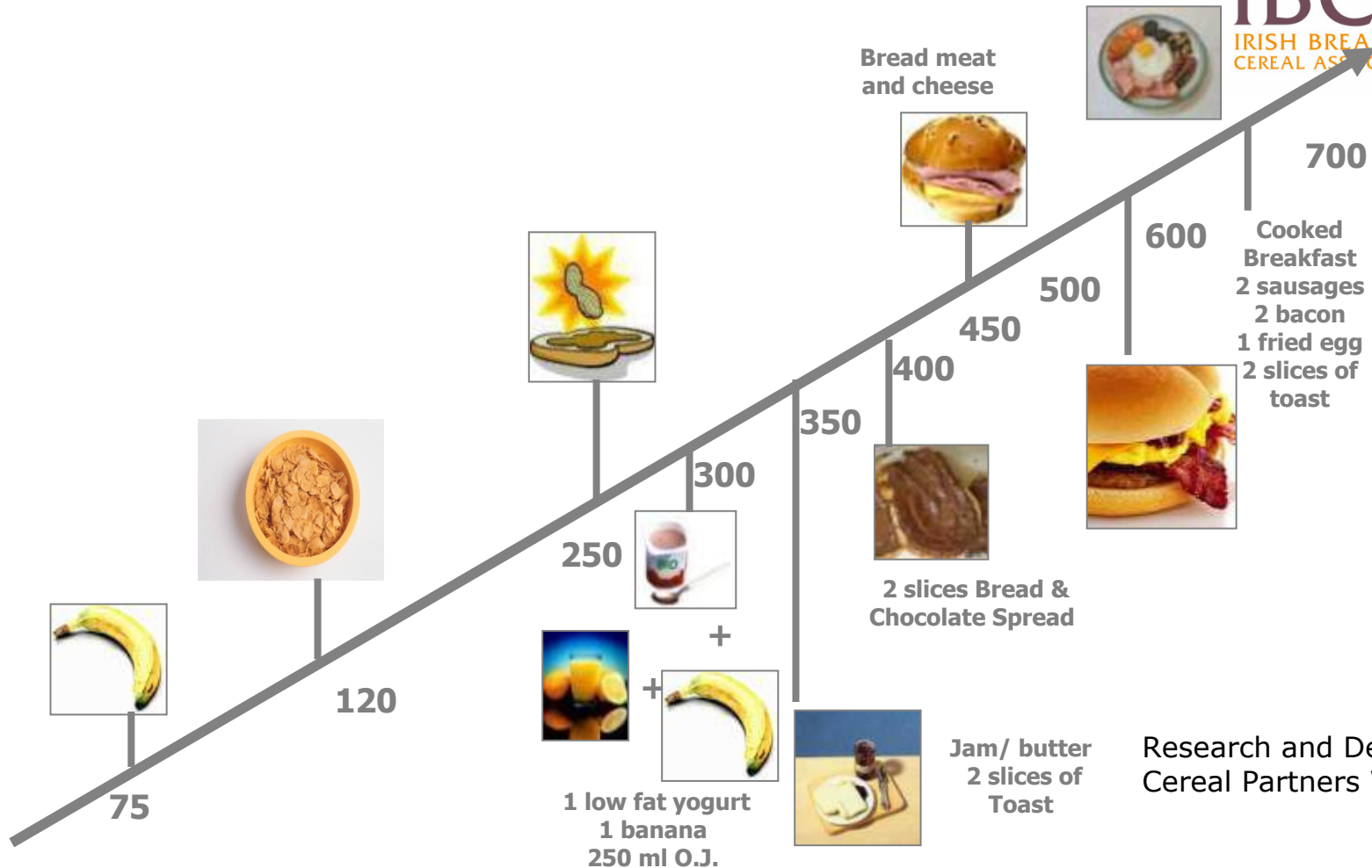
Breakfast Cereals in Context



- Breakfast cereals are a healthy breakfast choice
- They tend to be low in fat and saturated fat
- They are a lower calorie breakfast choice

Cereal : Low in Calories, High In Nutrients

(Kcals per serving)



Research and Development –
Cereal Partners Worldwide

Breakfast Cereals in Context



- They are an important source of nutrients e.g. amongst Irish adults they provide:
 - 7% fibre
 - 7% vitamin D
 - 11% folate
 - 13% iron

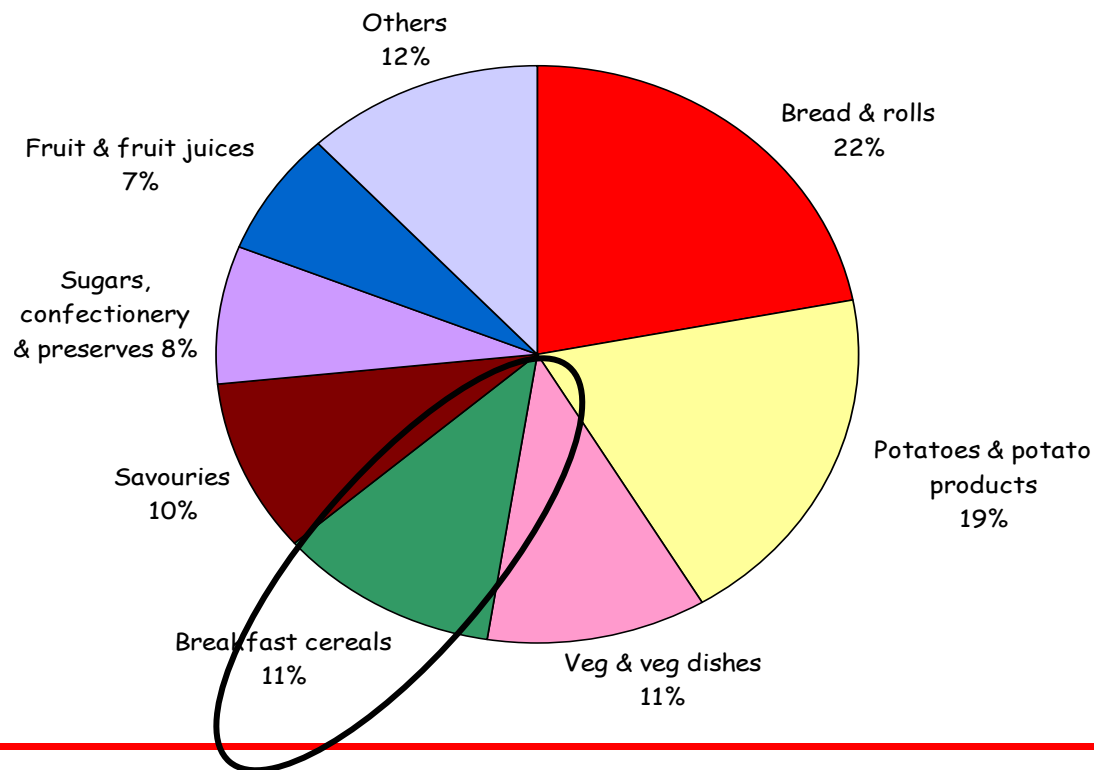
And only 4% total energy

Source: IUNA

Breakfast Cereals are an important source of dietary fibre



% Dietary Fibre intake from food groups

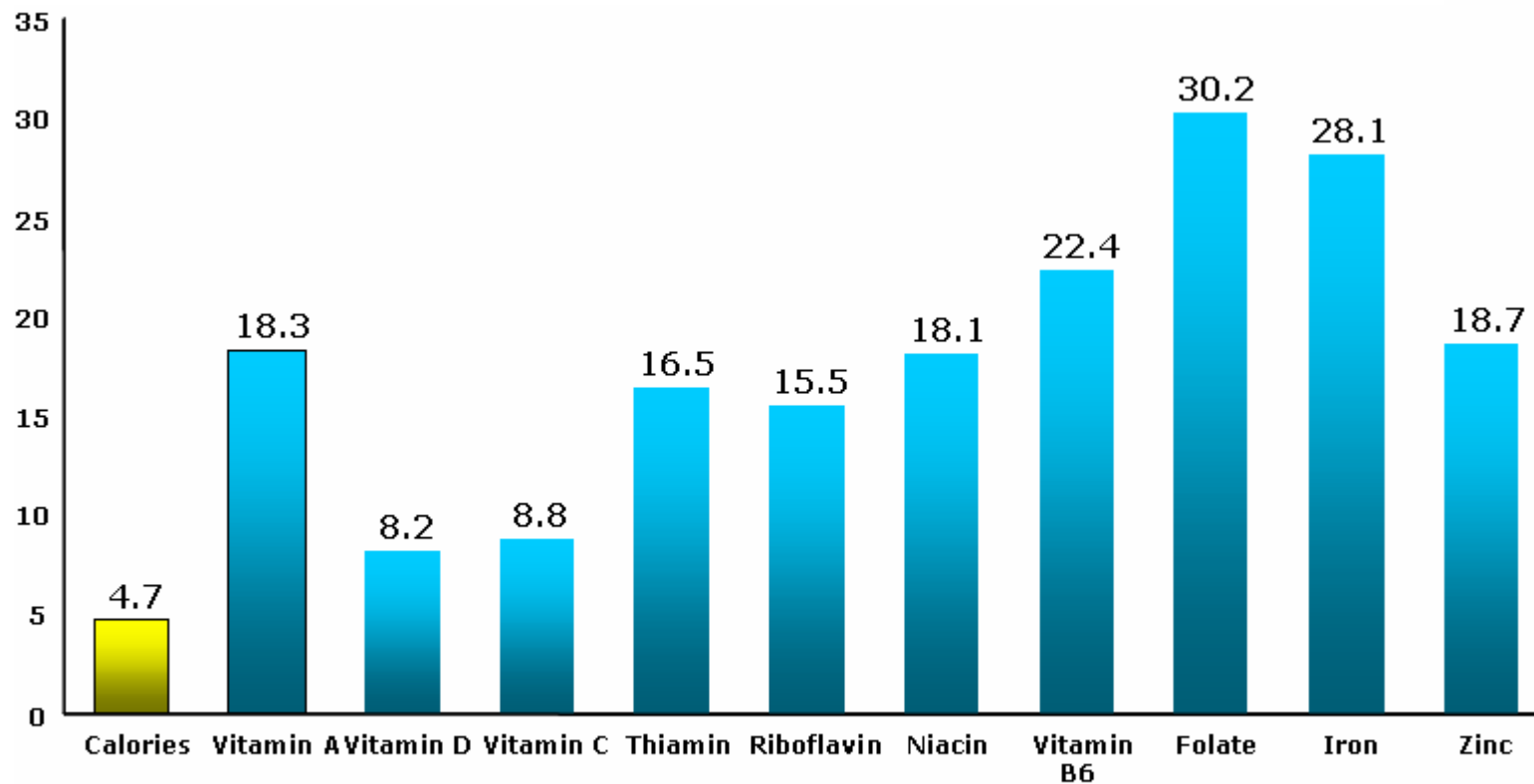


Irish National Teens' Food Survey



Fortified cereals are nutrient (but not energy) dense

Source :NHANES 2001-2002



Percent of selected nutrients provided by RTE cereal, children age 4-12

Breakfast Cereals in Context



- Breakfast cereals are not a major contributor of sodium in the diet
 - In Ireland breakfast cereals contribute 4.2% of total sodium intake in adults

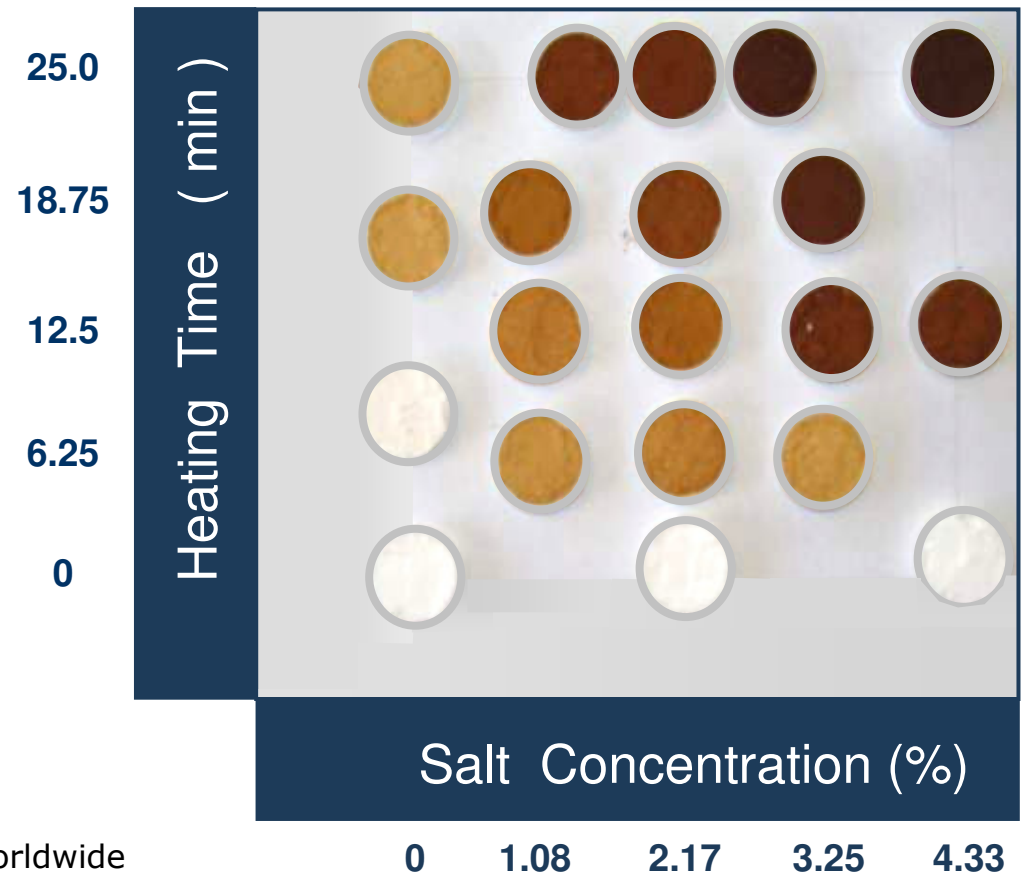


Focus on Sodium

Function of sodium in breakfast cereals



- Salt increases the rate of formation of Maillard reaction products for the formation of colour, taste and flavour



How is salt reduced?

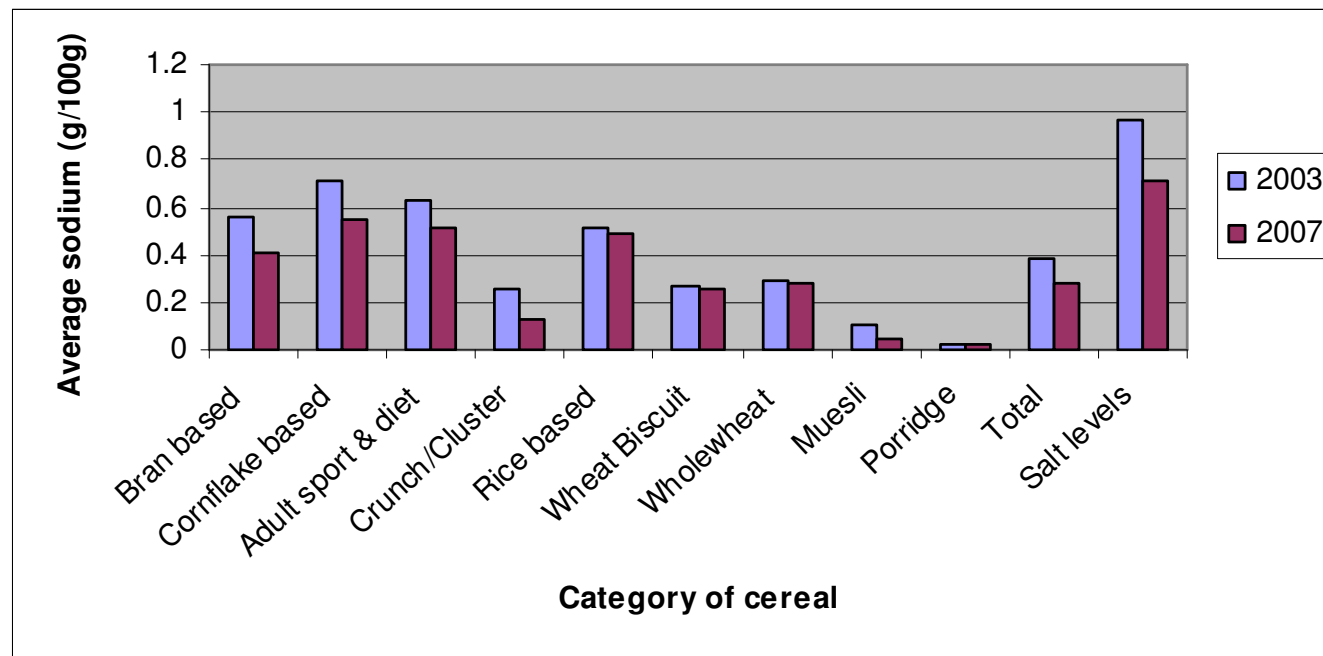
- The sensory “triangle test” is used to determine whether reductions can be perceived
- If successful, scale-up from pilot plant to factory trials, then to full-scale manufacturing processes
- Repeated stepwise approach achieves an acceptable reduction over time that could not be achieved in ‘one hit’
- This suggests that people do adapt to less salt
- What is not known is where the end point is
 - i.e. when consumers will not accept further reductions



Sodium Reduction



- Members of IBCA have been reducing the salt levels in their products since 1998
- Average salt reduction of products on a sales weighted portfolio basis between 1998 and 2009 was over 40%



Technical Challenges



- It is possible to reduce the salt content of breakfast cereals with no effect on perceived saltiness by removing some salt from the cereal base, then applying and drying a light coating of brine onto the surface of the cereal
- However, this process does not yield an acceptable product
 - the cooking processes generate complex biochemical reactions leading to flavour and texture development that are very sensitive to changes in the molecular and ionic environment
- It is necessary to cook salt into the cereal dough to achieve products that are acceptable and desirable to consumers

Barriers to future sodium reduction



- Five years ago most reformulation could take place as part of the business's usual cycle
 - this is less likely to hold true today
- As the amount of sodium has been reduced, the technical effect of the remaining sodium is now at a more critical level

Barriers to future sodium reduction



Barriers to companies may include the following:

- Costs of new technologies
- Costs of having multiple recipes and therefore losses in efficiency
- Administrative costs
- Commercial and Technical resources associated with new recipes – e.g. trials, pilot plant, taste testing
- Packaging write off costs

Future of Category



- At less than **30c per bowl**, breakfast cereals represent excellent value
- Industry goal to “Make healthy even healthier”
- NPD focuses on minimising salt and sugar in products and maximising fibre
- Gradual change required – allowing consumers time to adjust
- Important that “healthy tastes good”

Conclusion



- IBCA to continue will continue salt reductions where technically feasible and subject to continued consumer acceptance
- In addition we will look into salt reductions in certain children's brands of cereal