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Agroscope Liebefeld-Posieux Research Station ALP

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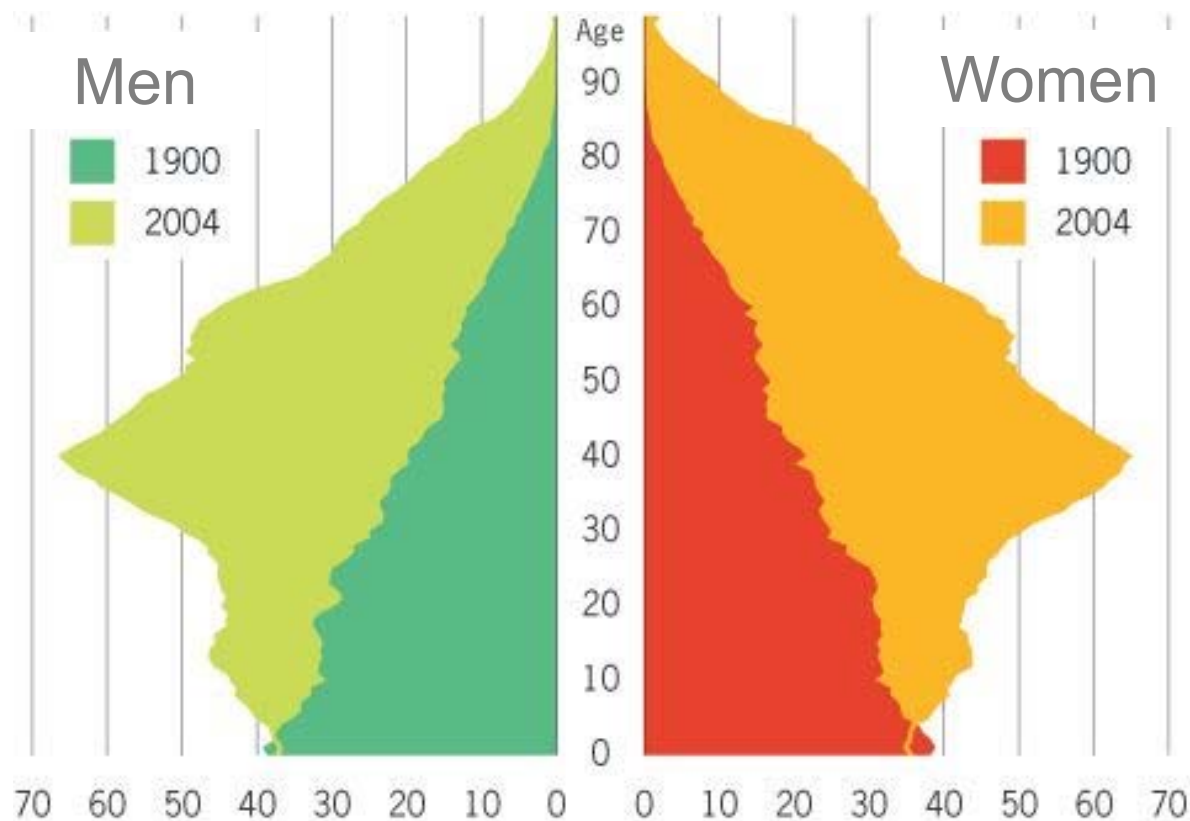


Why milk is beneficial for the elderly and how they consume it

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Demography: Switzerland 2005





What milk and dairy products offer:

- = broad composition
- deliver various nutrients
 - proteins
 - conjugated linoleic acid (CLA)
 - short chain fatty acids
 - vitamin A, B12, B2, D
 - calcium
- milk as raw material for numerous processed foods





Impact of milk and dairy products on health

1) Sarcopenia

- excessive decomposition of proteins during aging
- branched chain amino acids from whey proteins used for protein synthesis → muscle synthesis



2) Osteoporosis

- positive effect of Ca & vit. D from milk
- lactose and phosphopeptides improve Ca-absorption
- whey proteins with positive impact



Impact of milk and dairy products on health

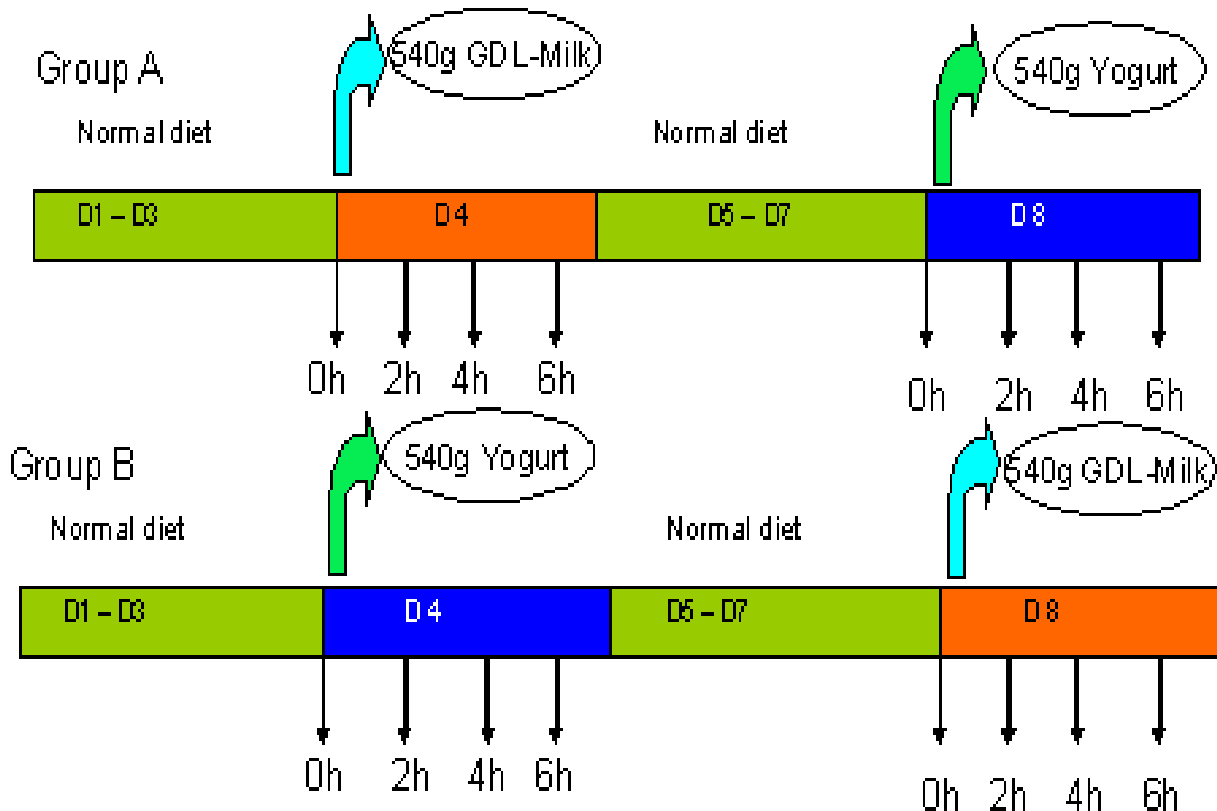
3) Immune system (IS) → „Inflammaging“

- whey proteins high in amino acid cystein
- cystein as component of glutathione
 - strengthening of IS → protection against oxidative stress
- nutrigenomics study at ALP with milk and yoghurt



Impact of milk and yoghurt on human gene expression

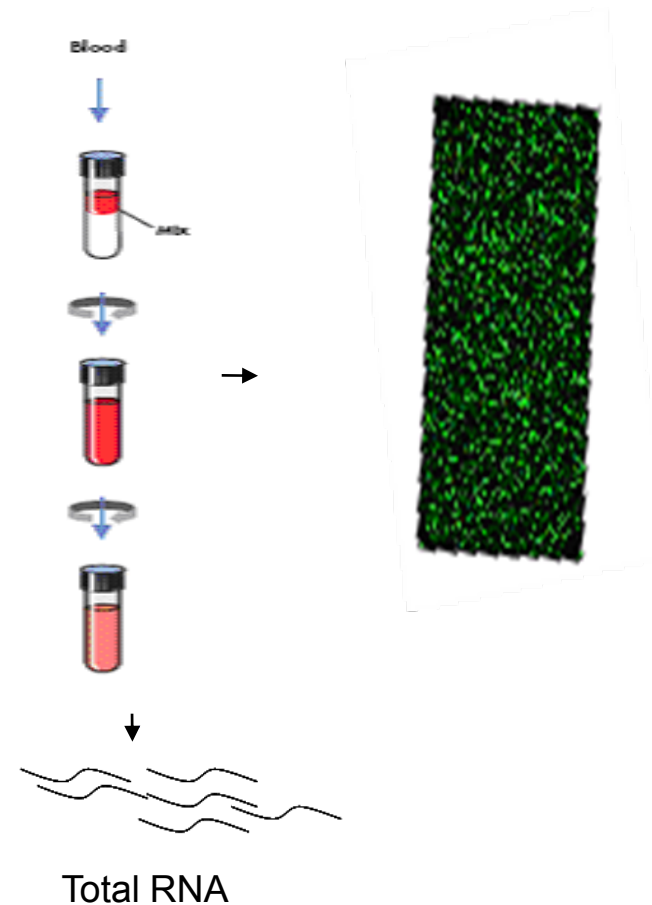
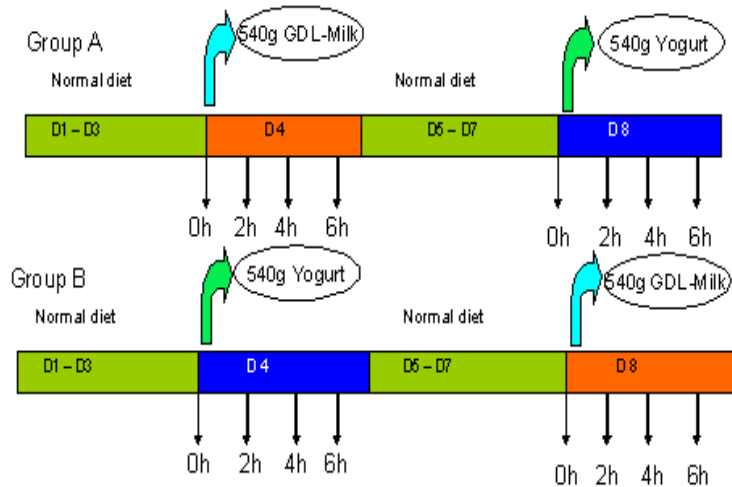
A randomised, controlled, single blinded cross over study





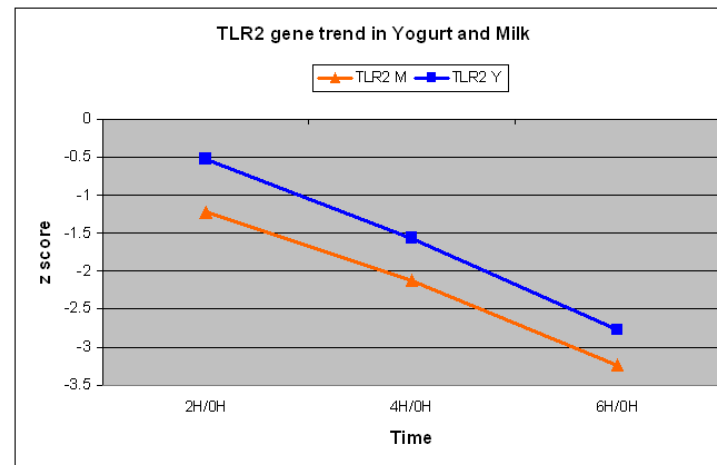
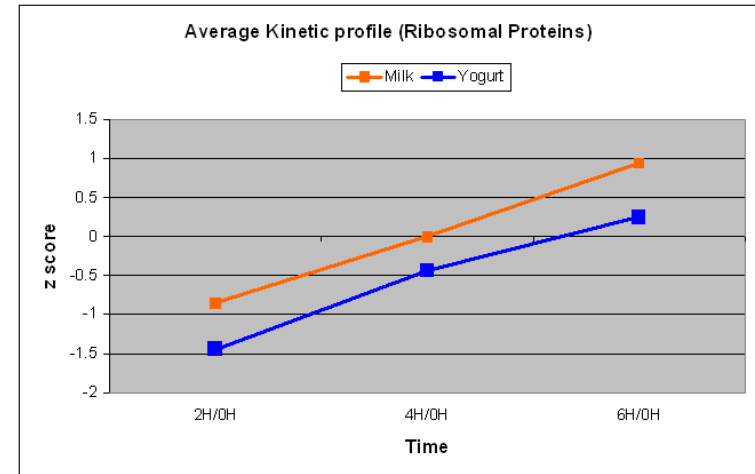
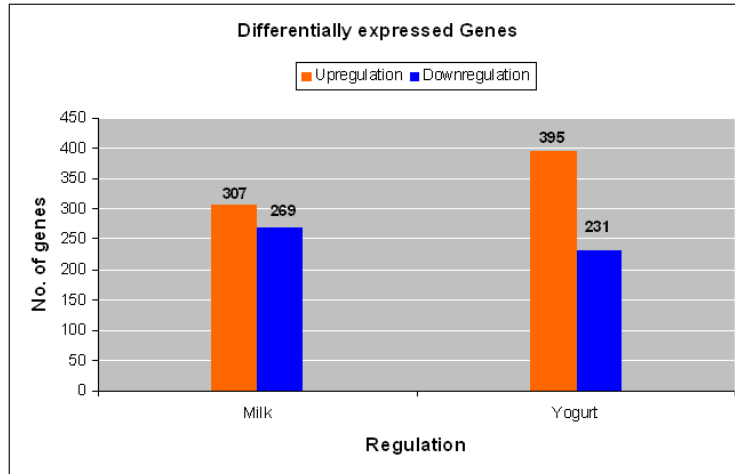
Impact of milk and yoghurt on human gene expression

A randomised, controlled, single blinded cross over study





Impact of milk and yoghurt on human gene expression





ALP Consumer questionnaire

**Survey about the consumption of
milk and dairy products of people
50 years and older**



Consumer questionnaire: data

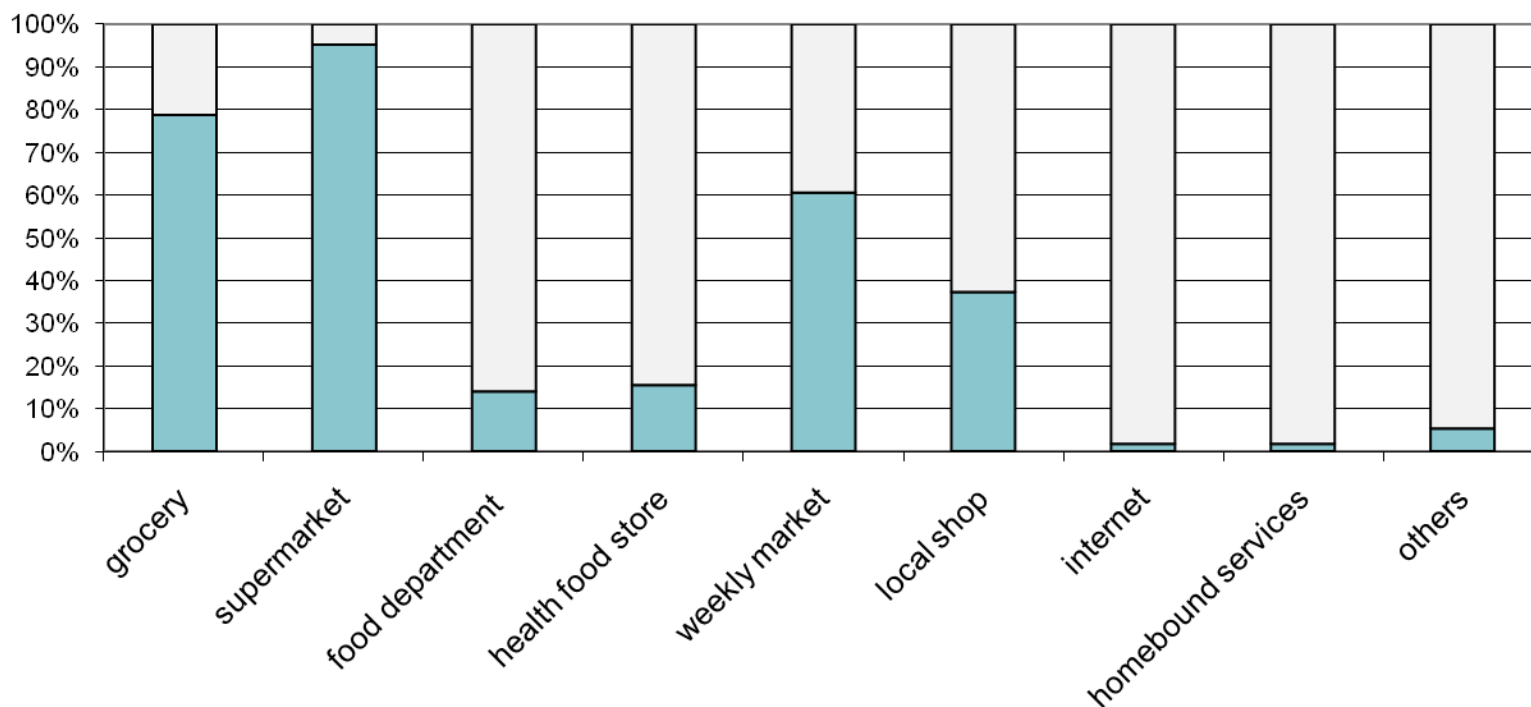
- **participants:** 253
- **sexes:** 54% ♀ 46% ♂
- **occupation:** 50.6% working 38.7% retired
- **age:**
 - < 50 1.2%
 - 50-59 47%
 - 60-69 36%
 - 70-79 14.6%
 - 80 > 1.2%





Food purchase (N=253)

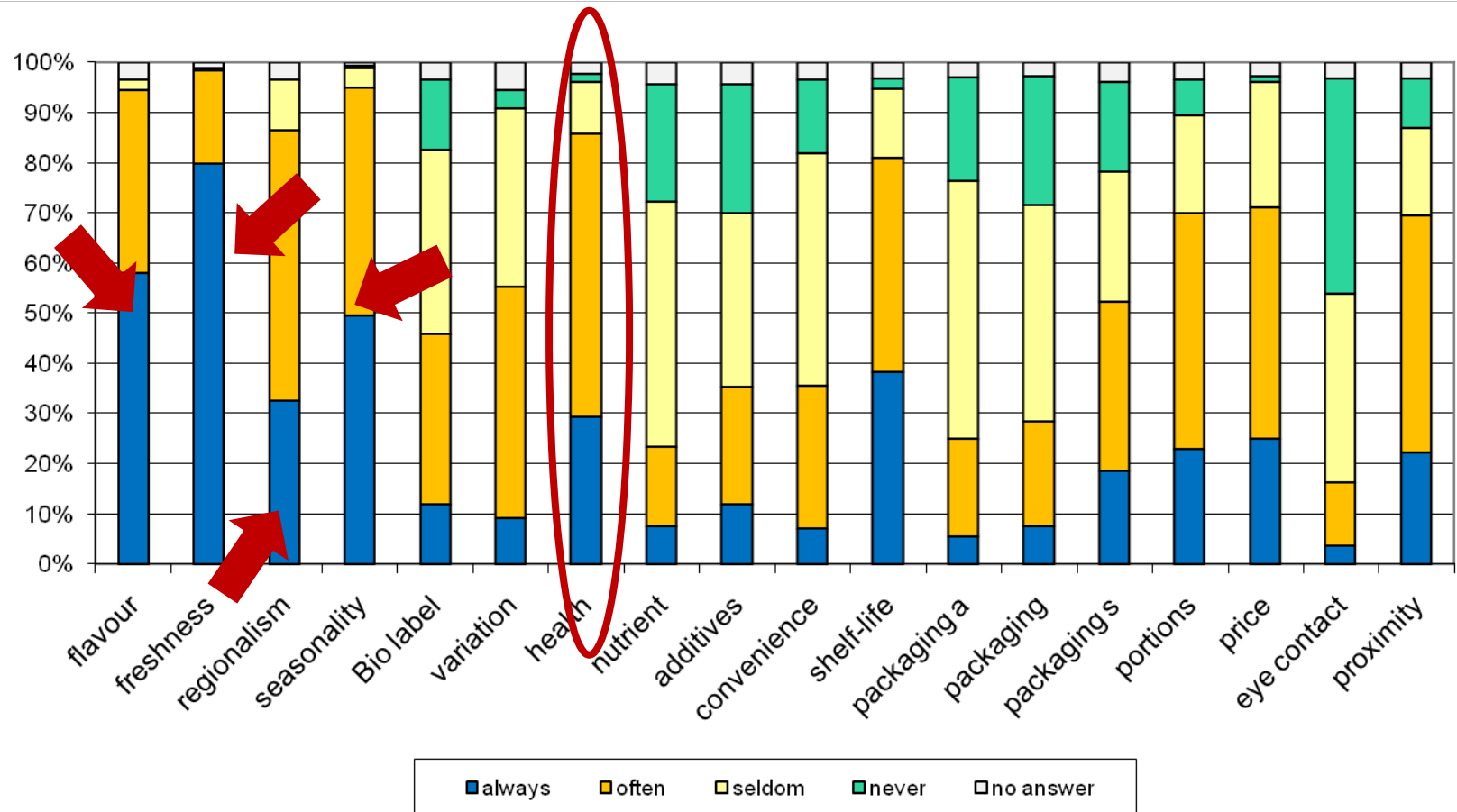
Where do you usually buy food
(at least every other week)?





Food purchase (N=253)

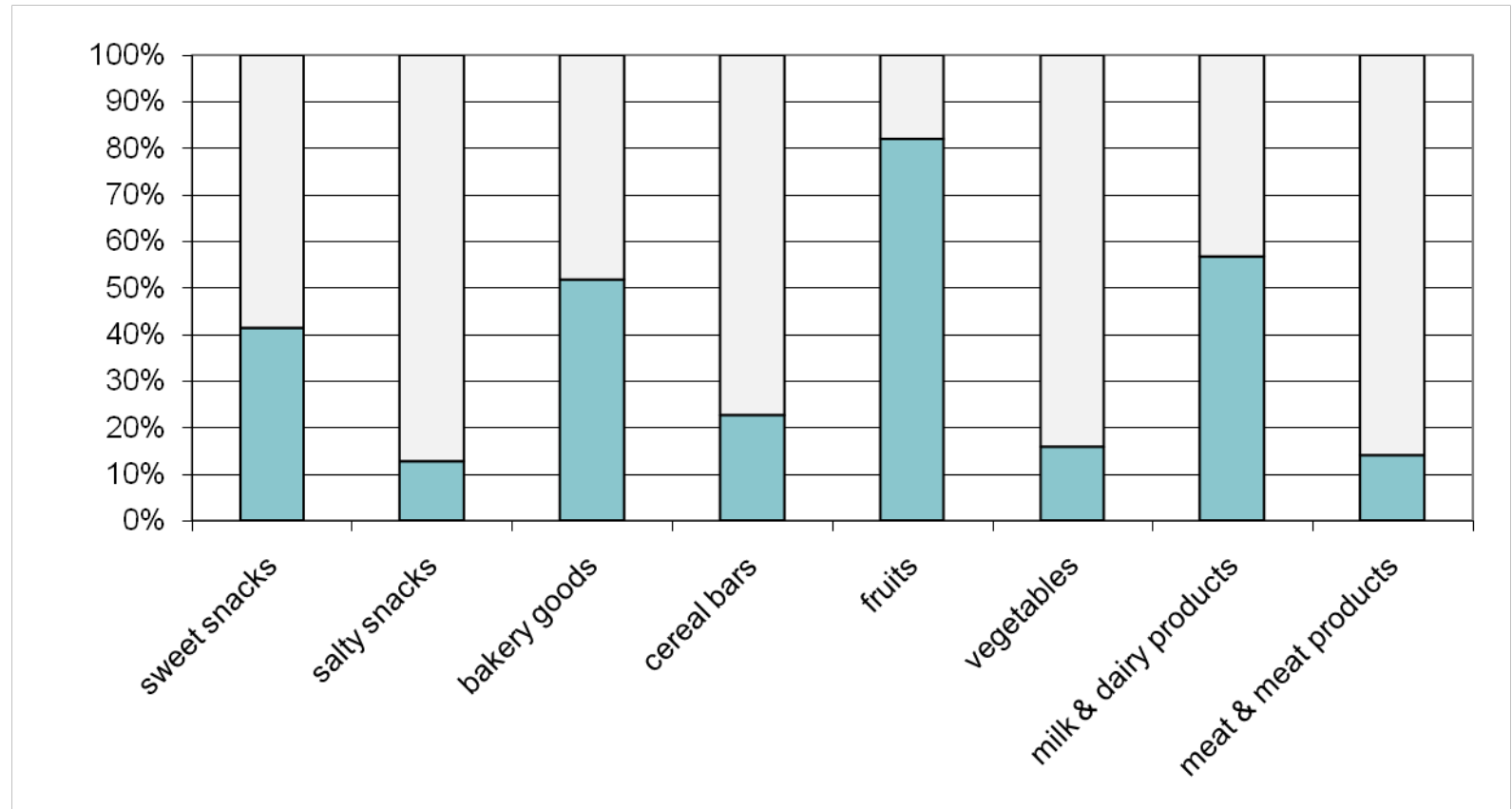
What is important for you when you buy food?





Snacks (N=222)

Which kind of snacks do you prefer?

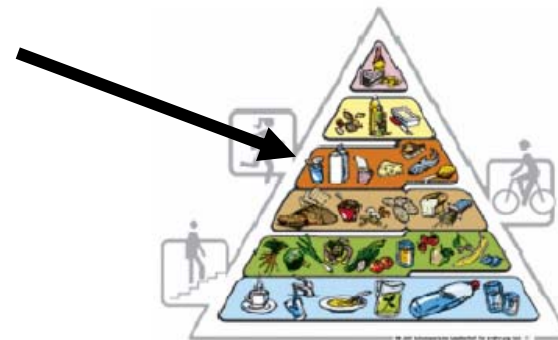


Milk and dairy products (N=253)

- How often do you consume milk and dairy products?

→ 3 per day or more	8.7%
→ 1-2 per day	71.1%
→ several times per week	19.4%
→ less than once a week	1.6%

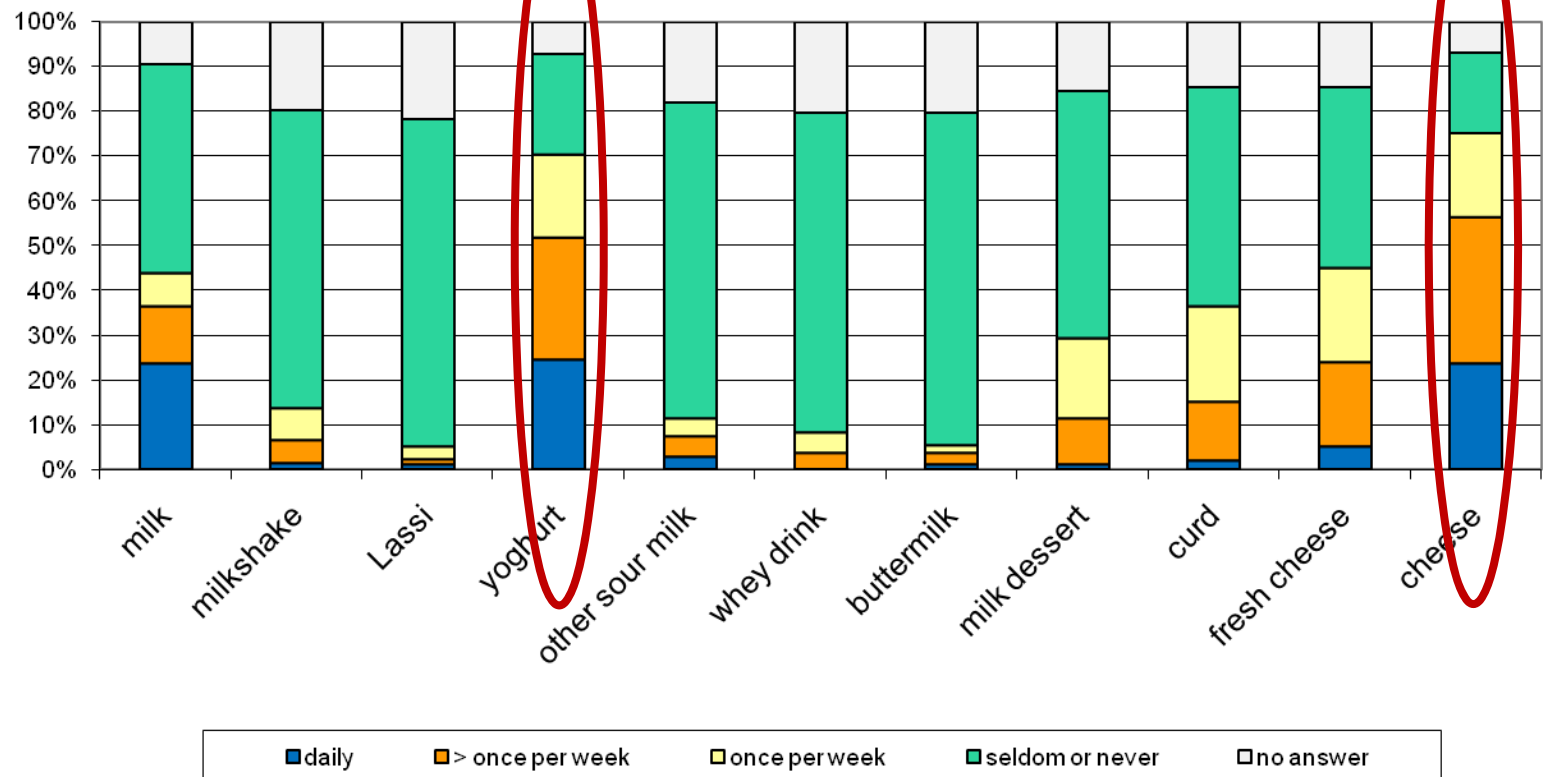
Recommendations of food-
pyramid: 3 portions/day





Snacks (N=222)

How many times do you consume following dairy products as snacks?



Taste

- 31.6% deem the flavoured yoghurt regarding to its sweetness as convenient and **51.3% as too sweet** (N=253)

→ Consumer degustation





Outlook

- our aim: concentrating on nutrition of the elderly in combination with milk and dairy products
- basic research:
 - * metabolism & -omics technology & classical analytics
 - * changing of the sensory perception: taste and aroma
- applied research
 - * products for the elderly



Thank you for your attention