


HEALTH SIGNIFICANCE OF FAT QUALITY OF THE DIET

BARCELONA, FEBRUARY 1-2 2009, INTERNATIONAL EXPERT MEETING

Steering committee members:

Prof. R. Uauy (Chair, President of International Union for Nutrition Science)
Prof. P. Puska (Co-chair, President elect of the World Heart Foundation)
Prof. I. Elmadfa (President elect of the International Union for Nutrition Science)
Dr. H. Zevenbergen (Nutrition director, Unilever)
Mrs. C. Diekman (Director of University Nutrition, Washington University,
Prof. B. Koletzko (University of Munich, Germany)



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Day 1

Time (hrs)

13.00-13.30	Registration participants	
13.30-13.45	<i>Prof. R. Uauy & Prof P. Puska</i> - Welcome & objectives of the meeting	
13.45-14.45	<i>Prof. R. Uauy</i> - Overview of recommendations and guidelines on fat quality of the diet to achieve optimal health	
14.45-15.30	<i>Dr. H. Zevenbergen</i> – Foods with a high fat quality are essential for healthy diets	
15.30-16.00	Break	
16.00-16.45	<i>Dr. T. Acreman</i> - Consumer perception and insights on fats and fatty acids: knowledge of fat quality of the diet	
16.45-17.30	<i>Prof. I. Elmadfa</i> – Dietary fat intake – a global perspective	
17.30-18.30	<i>Prof. B. Koletzko</i> (moderator) - Plenary discussion with speakers of the day	
19.00-22.00	Dinner (Steering committee will prepare Summary Statement of first day)	
22.00	Distribution draft Summary Statement of first day	

Chair day 1:
Mrs. C. Diekman

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Day 2

Time (hrs)

- 8.30-9.00 *Prof. P. Puska* – Fat and heart disease – Yes, we CAN make a change.
The case of North Karelia, Finland
- 9.00-9.30 Review of Summary Statement of first day
- 9.30-11.30 Break-out session “Communication for change” to come to Call to Action
- 11.30-12.30 Feedback from break-out session
- 12.30-13.00 Break (Steering committee will finalize Summary Statement)
- 13.00-13.30 Steering committee - Presentation of final summary Statement
- 13.30 Closure of meeting

Chair day 2:
Prof. I. Elmadfa



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Chair Ms. Connie Diekman opens the meeting



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Prof. R. Uauy welcomes participants



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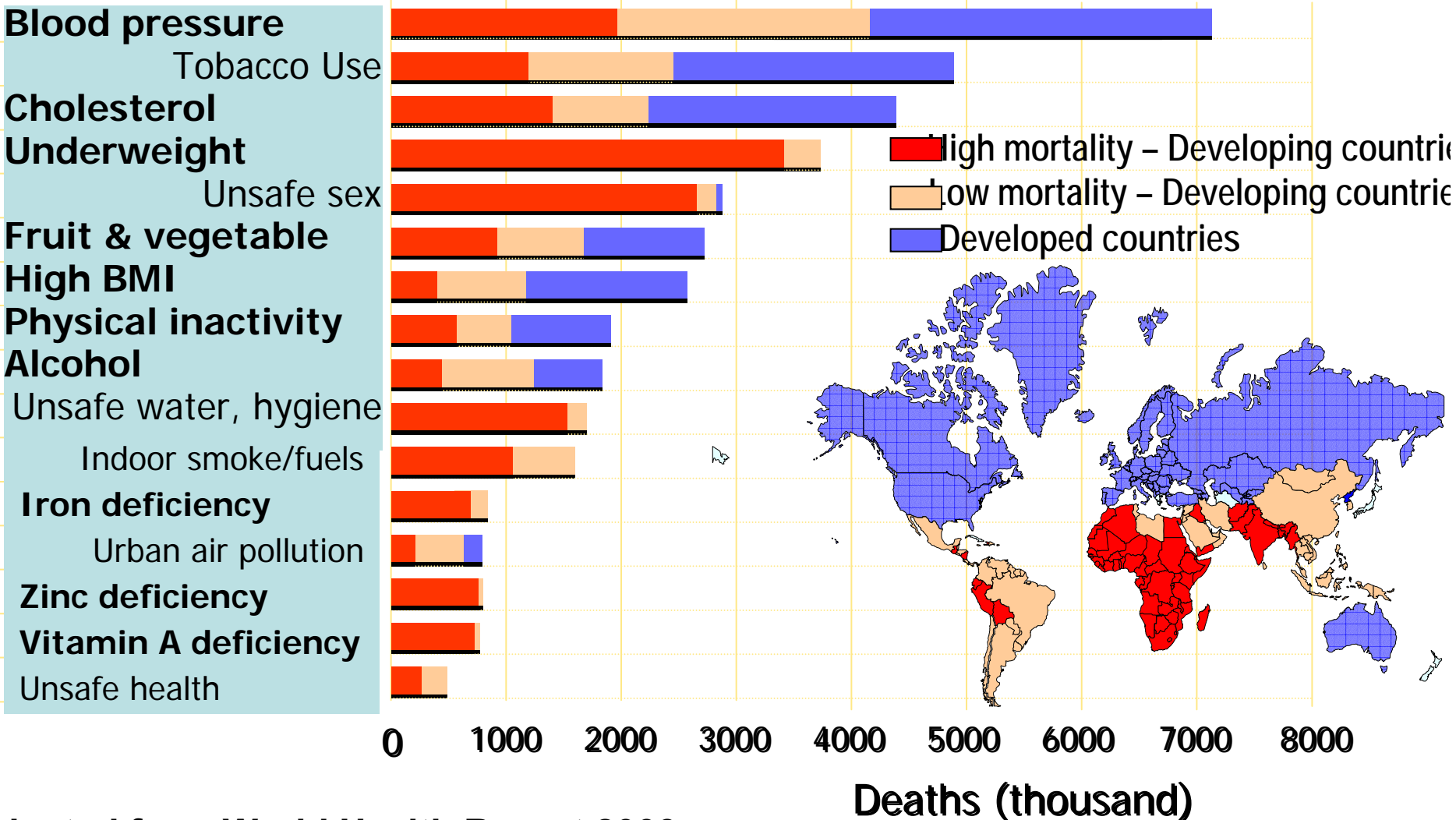
Prof. R. Uauy

‘Overview of recommendations and guidelines on fat quality of the diet to achieve optimal health’

Three key slides



Deaths attributable to 16 leading risk factors: all countries



Adapted from World Health Report 2003

Mechanisms by Which Dietary Fatty Acids Potentially Influence Risk of Coronary Heart Disease

- **Effects on Lipoprotein and Cholesterol metabolism receptor systems, gene expression and regulation (LDL, HDL, Lp(a), TG)**
- **Prostanoids:(Eicosanoids and Docosanoids) related functions Inflammation/cytokines**
- **Blood pressure / arterial stiffness**
- **Thrombosis and thrombolytic mechanisms**
- **Oxidative stress and re-perfusion injury**
- **Endothelial function and adhesion molecules**
- **Cardiac Rhythm (arrhythmias)**
- **Insulin Sensitivity**

WHO TRS 916 Report : strength of evidence on factors and risk of developing CVD

Evidence	Decreased risk	No relationship	Increased risk
Convincing	Regular physical activity Linoleic acid 18:2n-6 Fish and fish oils (EPA & DHA) Vegetables & fruits (including berries) Potassium Low to moderate alcohol intake	Vitamin E Supplements	Myristic and palmitic acids 14:0 16:0 Trans fatty acids High sodium intake Overweight High alcohol intake
Probable	α-Linolenic acid 18:3 n-3 Oleic acid 18:1 n-9 Fibre Nuts (unsalted) Plant sterols/stanols Folate	Stearic acid 18:0	Dietary cholesterol Unfiltered boiled coffee
Possible	Flavonoids Soy products		Fats rich in lauric acid Impaired fetal nutrition Beta-carotene supplement

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Dr. H. Zevenbergen

**‘Foods with a high fat quality are essential
for healthy diets’**

Three key slides

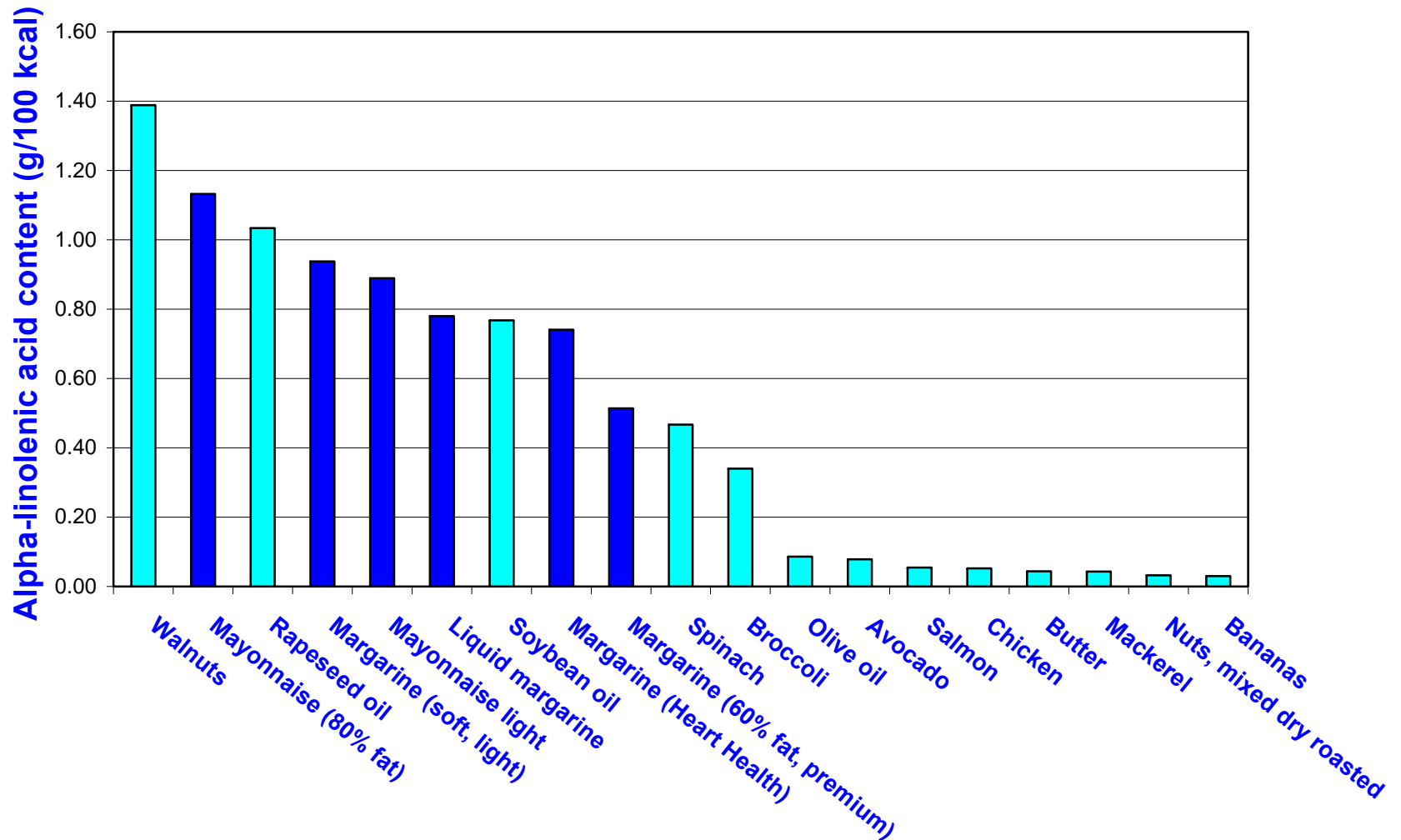


Main dietary sources of fat

- Major contributors to intake of saturated fat
 - Dairy (cheese, butter, milk)
 - Meat
 - Baked goods and snacks
 - Cooking fats
- Major contributors to intake of polyunsaturated fat
 - Vegetable oils
 - Margarines and mayonnaise
 - Nuts and seeds

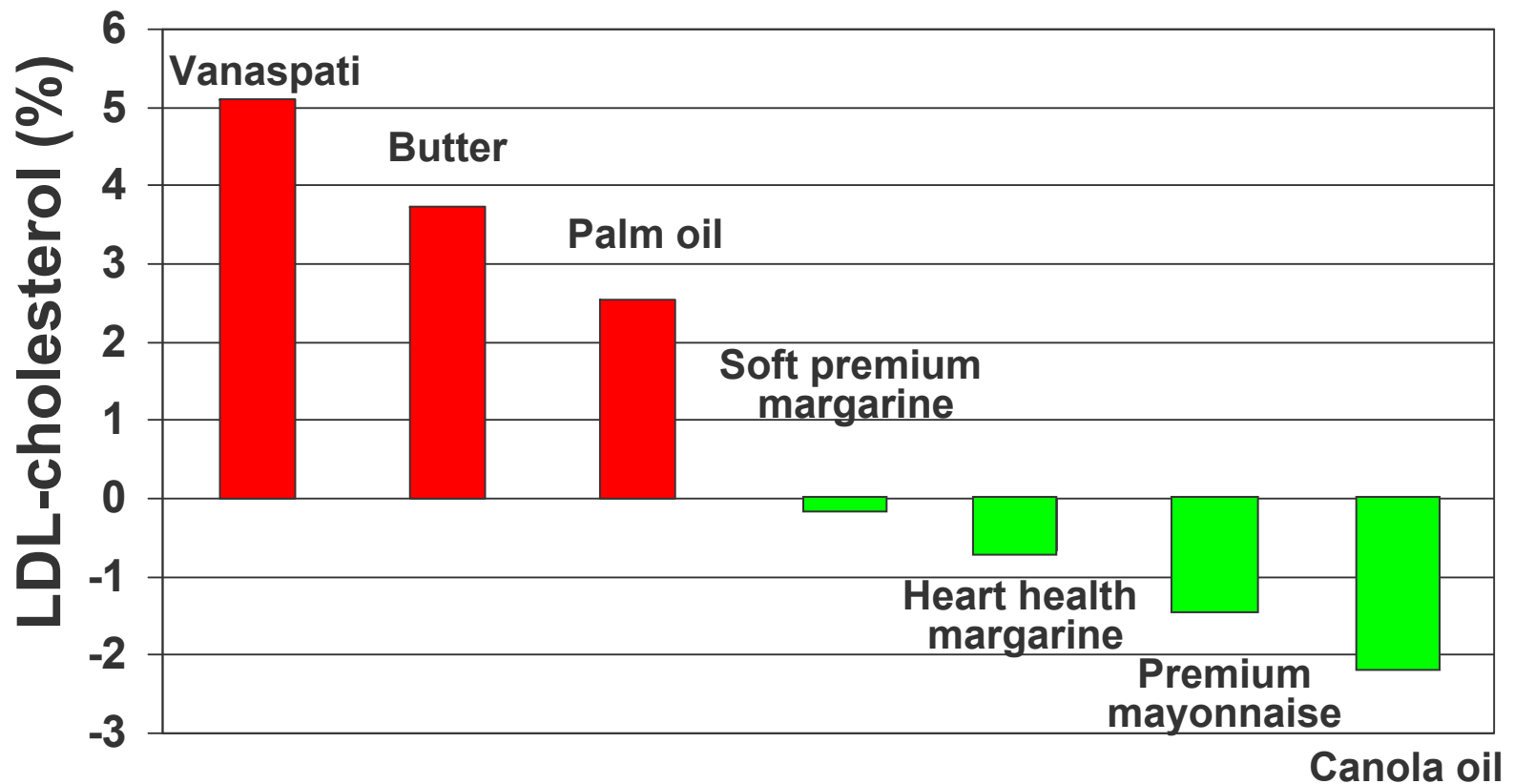


Margarines, mayonnaise and vegetable oils can play a significant role in achieving the recommended intake of the essential fat ALA



Butter and fats raise “bad” cholesterol (LDL) levels; soft margarines and mayonnaise don’t

Fat composition of foods influences their ability to lower or increase blood cholesterol: predicted effect of consumption of 20 g per day



Adapted from Mensink, Zock, Kester, Katan. Am J Clin Nutr 2003;77:1146-55.

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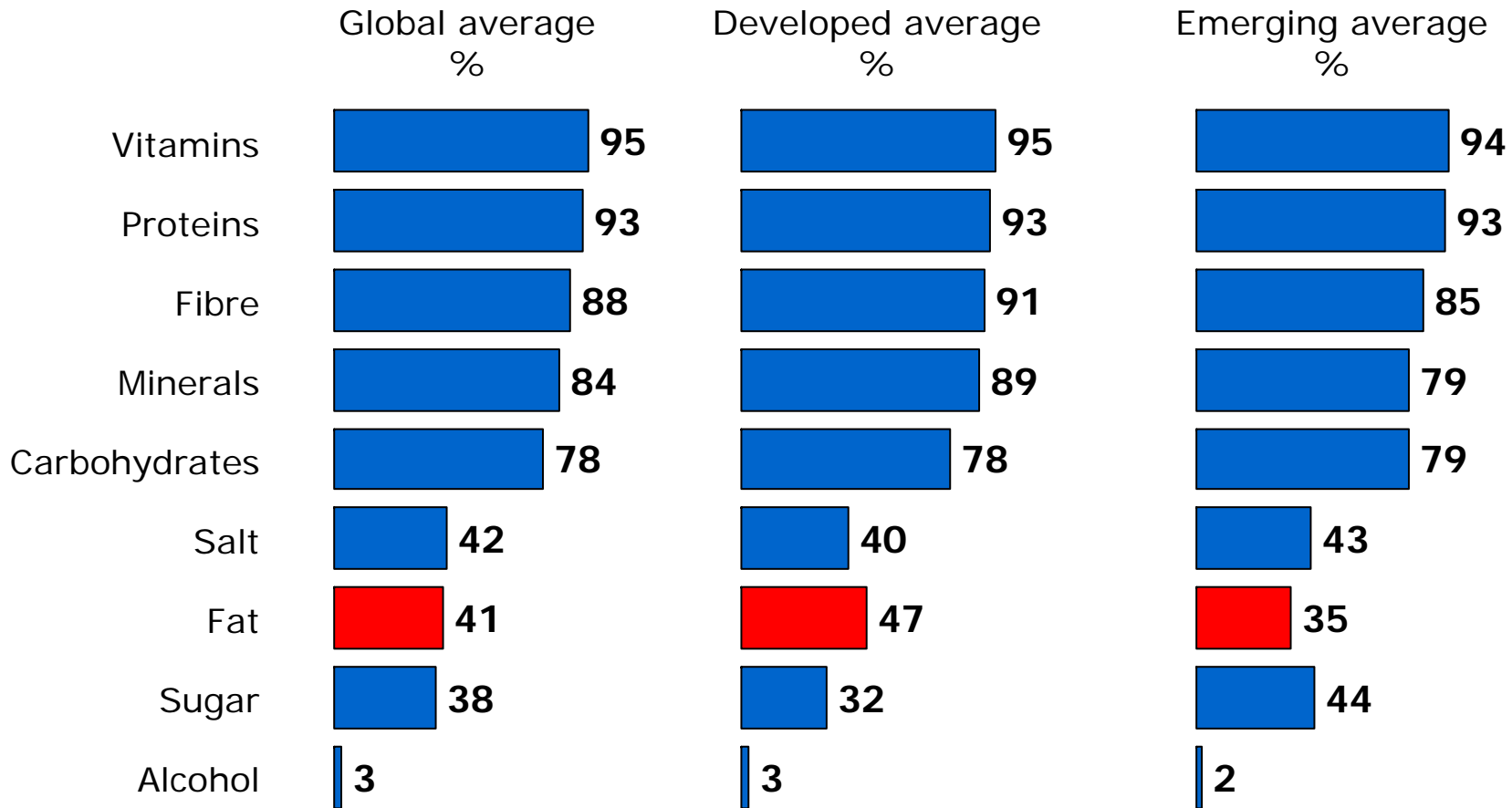
Dr. T. Acreman

‘Consumer perceptions and insights on fats and fatty acids: knowledge of fat quality of the diet’

Three key slides

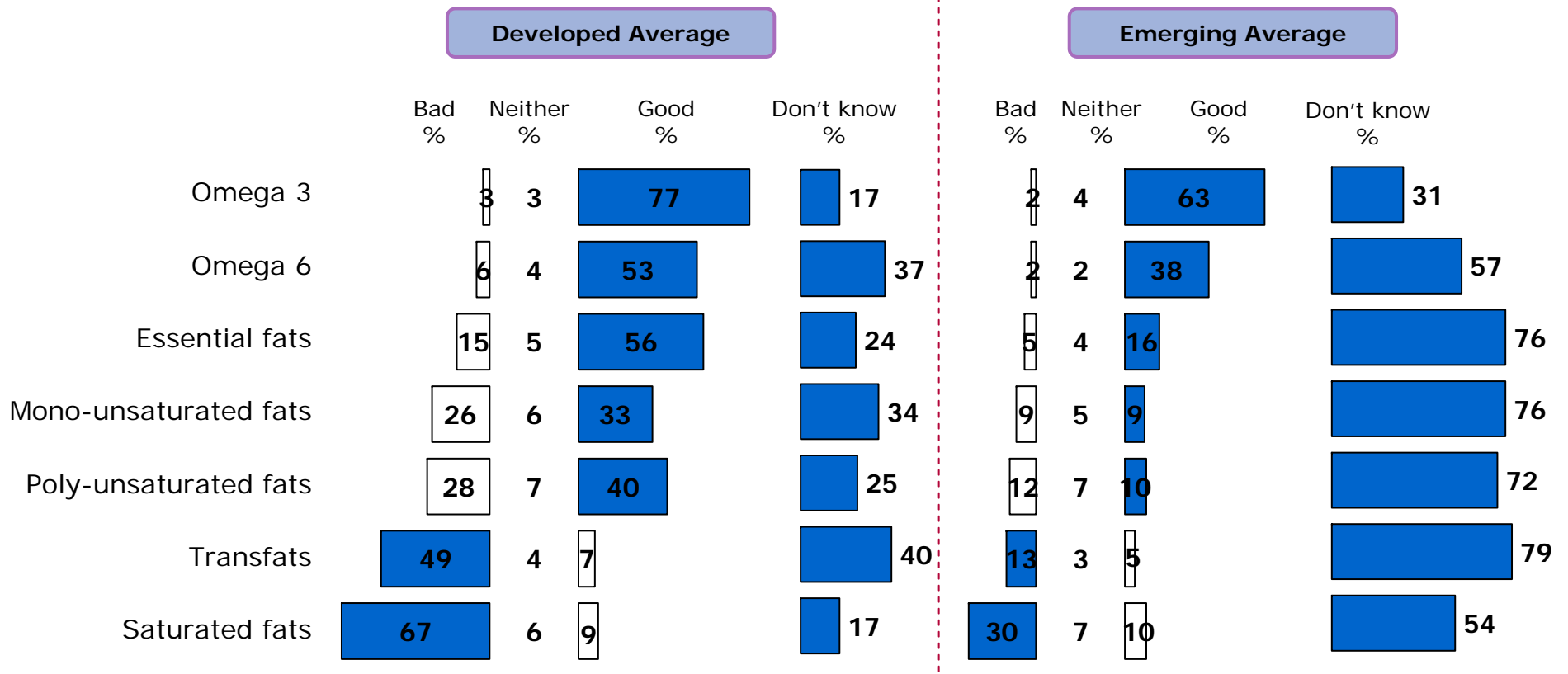


What do consumers think are the elements of a balanced diet?



Vitamins, proteins, fibre, minerals and carbohydrates are elements of a balanced diet.
Fats are not.

Do consumers know what types of fat are good or bad?

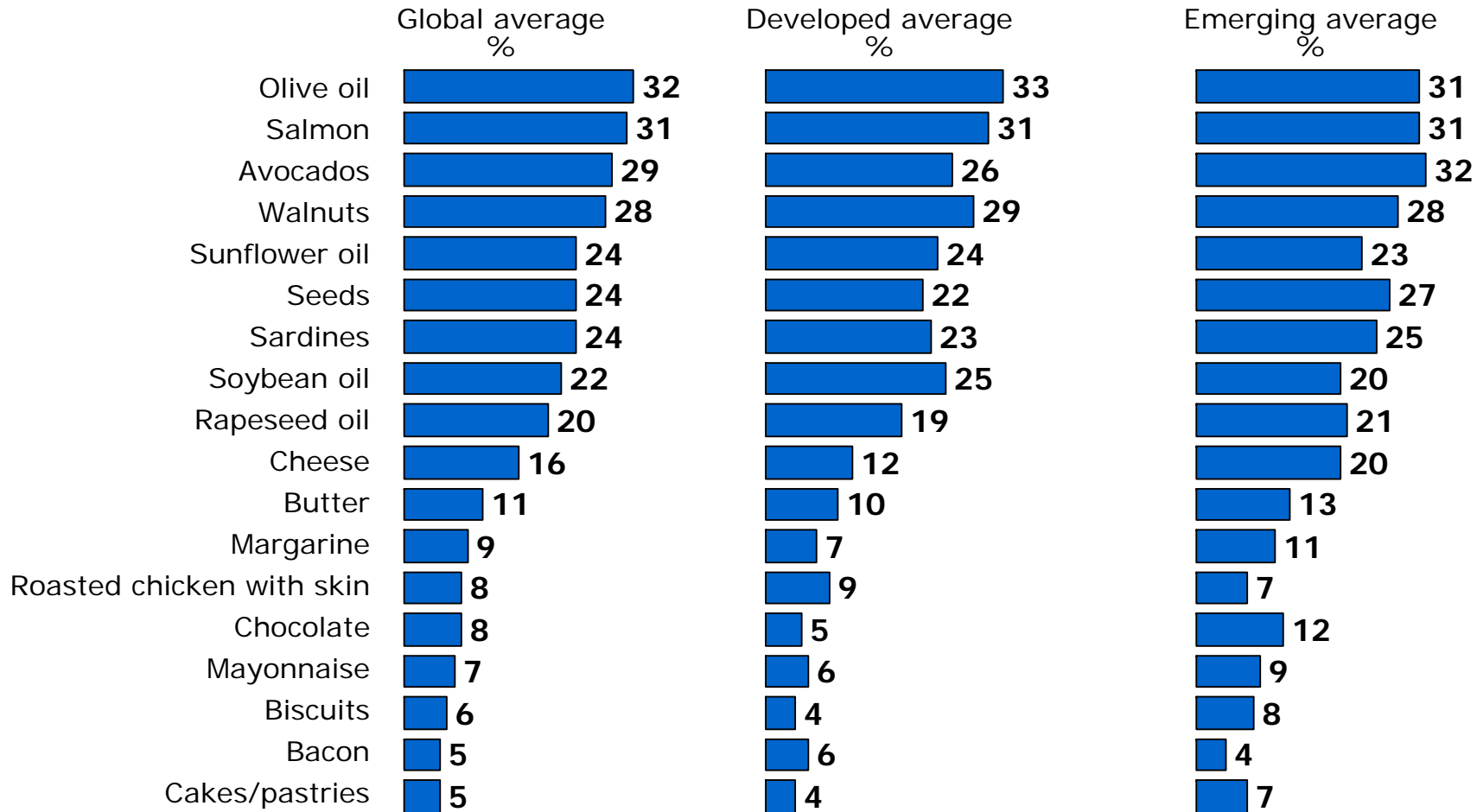


In general, consumers knowledge is low. They only know that saturated fats are 'bad' and omega 3 is 'good', but the latter are not seen as fats.

Whether fats are good or bad for you - Wave 1

Q - Now please tell me if you think each of the following types of food or components of food are good or bad for you. Do you think ... is good or bad for you?

Where do consumers think they can find essential fats?



Consumers can identify products with a healthy image, but cannot identify sources rich in essential fats.

Knowledge of foods providing Essential fats – Wave 2

Q - Now thinking about FAT which of these foods do you think are among the main providers of FAT? Please click on all those you think apply.

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Prof. I. Elmadfa

‘Dietary fat intake – a global perspective’

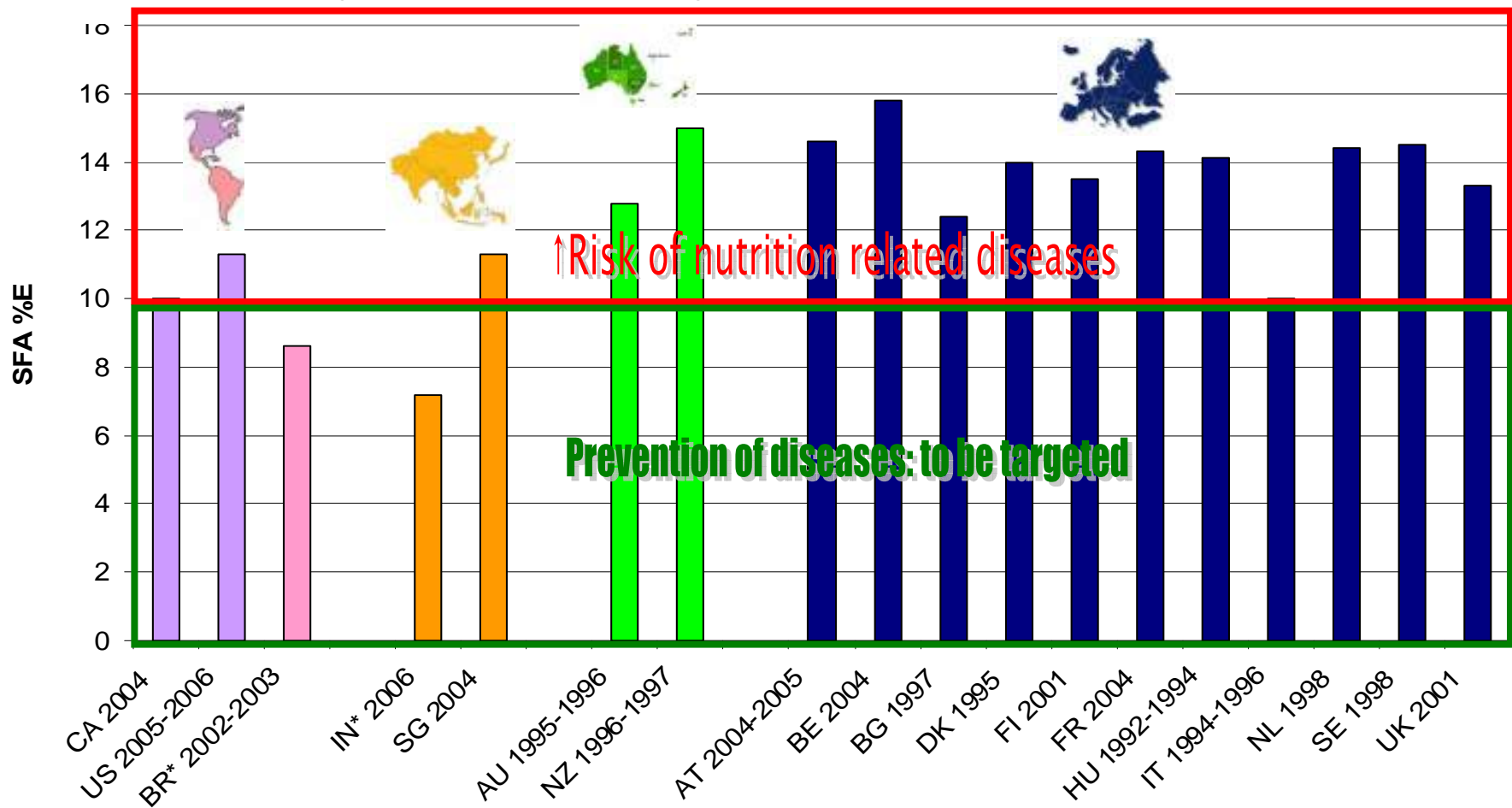
Three key slides





International data on intake of saturated fatty acids (SFA) in adults as %energy

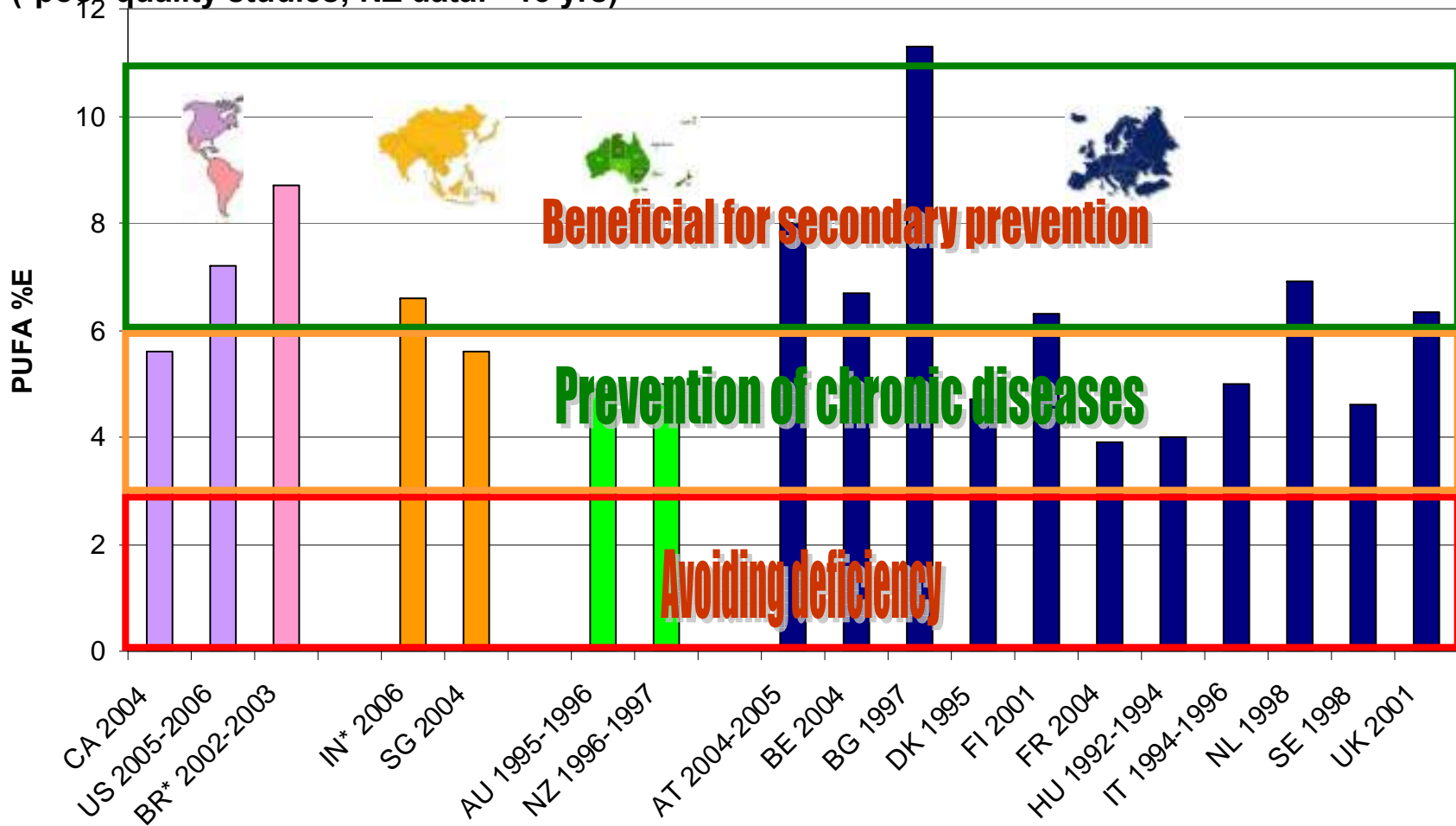
(*poor quality studies; NZ data: >15 yrs)





International data on intake of polyunsaturated fatty acids (PUFA) in adults as %energy

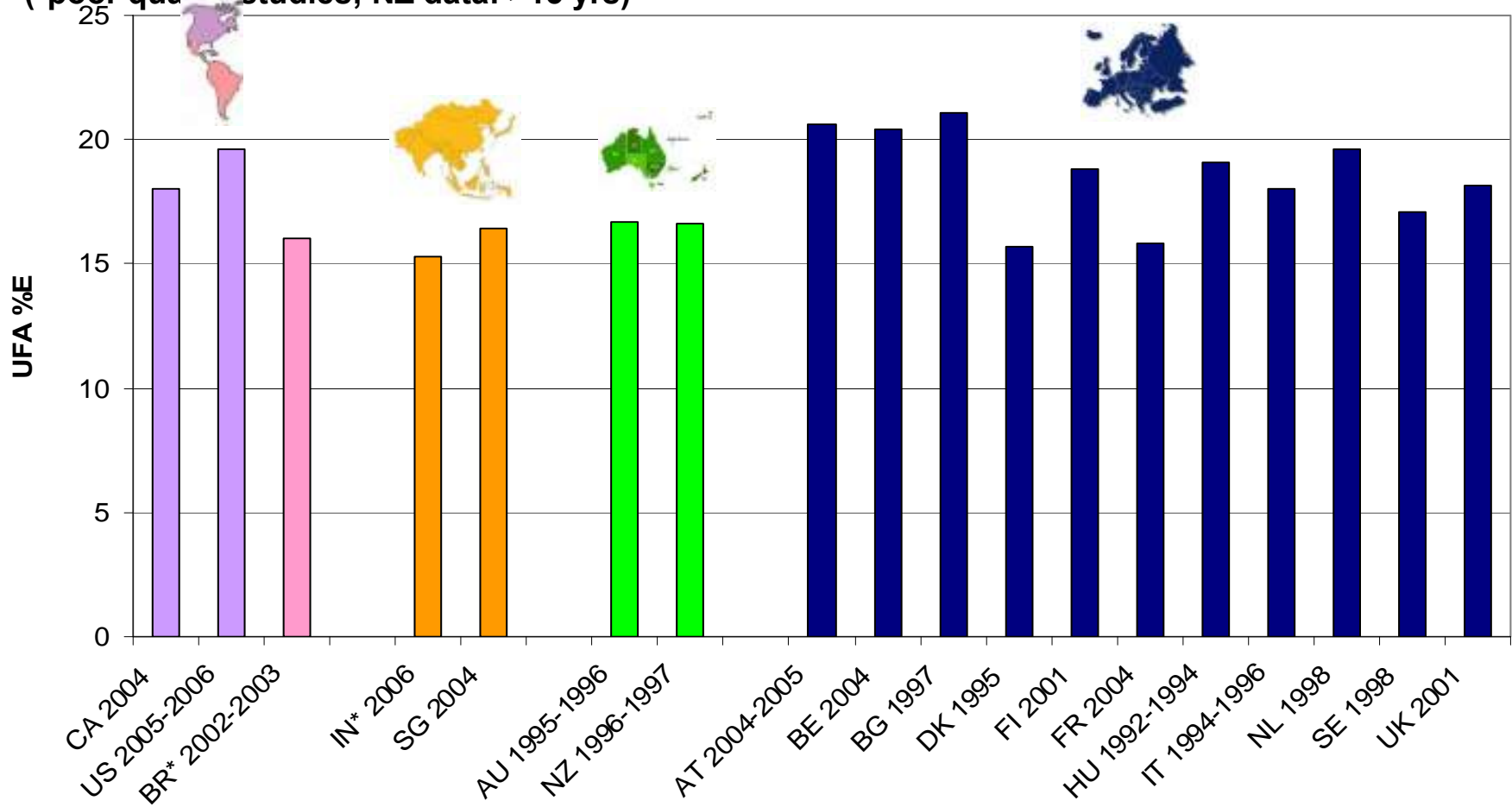
(*poor quality studies; NZ data: >15 yrs)





International data on intake of unsaturated fatty acids (UFA) in adults as %energy

(*poor quality studies; NZ data: >15 yrs)



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Prof. B. Koletzko

Panel discussion with speakers of the day

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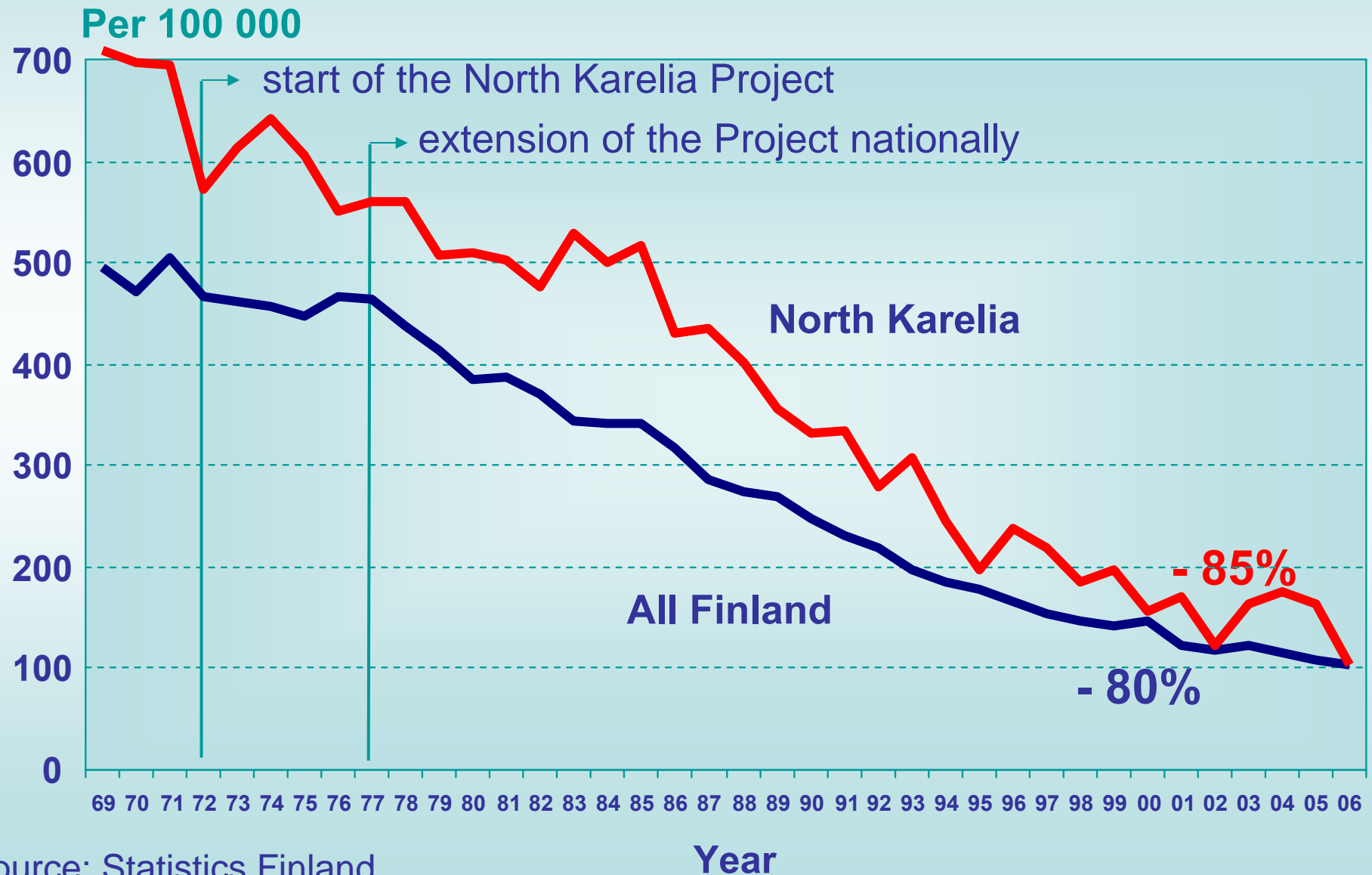
Prof. P. Puska

**‘Change in the fat quality of the diet can be made:
the example of the North Karelia study, Finland’**

Three key slides

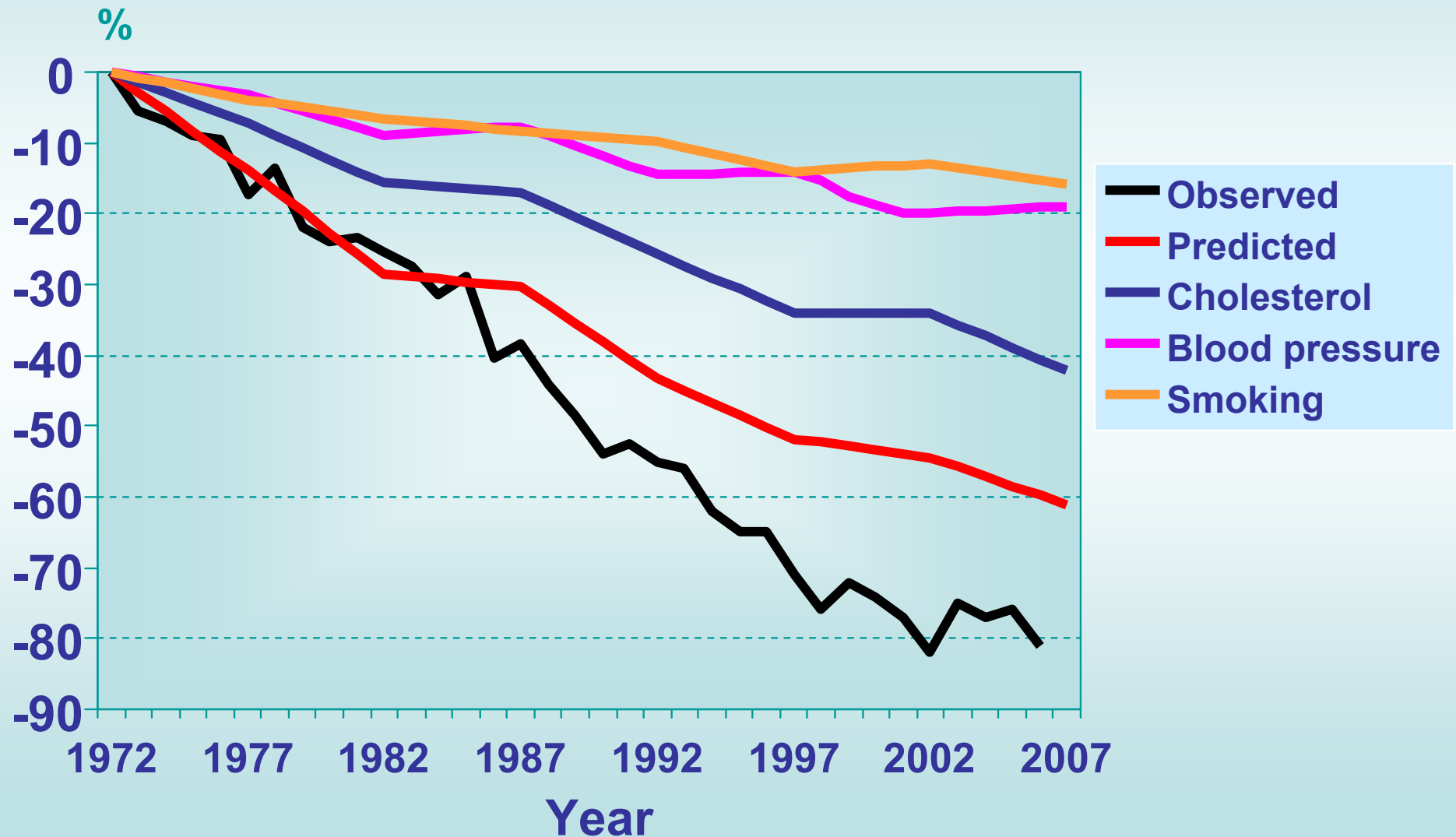


CHD Mortality in All Finland and in North Karelia, Men Aged 35-64



Source: Statistics Finland

Observed and Predicted Declines in Coronary Mortality in Eastern Finland, Men



Finland Has Shown: a change can be made

- **Prevention of cardiovascular diseases is possible and pays off**
- **Population based prevention is the most cost effective and sustainable public health approach to CVD control**
- **Prevention calls for simple changes in some lifestyles (individual, family, community, national and global level action)**
- **Influencing diet and especially quality of fat is a key issue**
- **Many results of prevention occur surprisingly quickly (CVD, diabetes) and also at relatively late age**
- **Comprehensive action, broad collaboration with dedicated leadership and strong government policy support**

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Review of summary statement



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Highlights of summary statement (I)

In line with authoritative international health bodies and current evidence, the following recommendations on the quality of fat in the diet are made for optimal health across the life course worldwide, from an age of about two years onwards:

- Fat may provide up to 30-35% of the daily energy intake;
- Saturated fat should provide no more than 10% of the daily energy intake;
- Essential polyunsaturated fats (omega 6 and omega 3) should contribute 6-10 % of the daily energy intake;
- The intake of trans fats should be less than 1% of the daily energy intake;
- The remainder of the energy from fat can be provided by mono-unsaturated fats.



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Highlights of summary statement (II)

- People should be advised how to decrease their saturated fat intake and increase the proportion of unsaturated and essential polyunsaturated fats and oils in a practical, sustainable and actionable way in order to be healthy today and tomorrow.
- One of the most effective options is the provision of concrete examples of replacing foods in a diet generally high in saturated and trans fats (e.g. butter, fatty cheeses, fatty meats, products fried in unhealthy fats) with products with lower content of saturated and trans fats, and preferably use of foods high in unsaturated and essential polyunsaturated fats (e.g. sunflower oil, soybean oil, rapeseed oil, olive oil and products made from these such as soft margarines and mayonnaise).



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Highlights of summary statement (III)

- An additional option is to provide people with important information on the content of food products on-pack in a clear, usable, understandable way, including energy content per portion size and fat quality.
- Use simple language when communicating with the public, e.g. good/healthy fats and bad/unhealthy fats and use consistent, scientific and coherent language when communicating with health experts.
- The food and food service industry should collaborate with health and nutrition experts to ensure appropriate messaging based on current recommendations, to eliminate trans, reduce saturated fats and provide accurate information to enable people to make healthier choices.



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Highlights of summary statement (IV)

-Nutrition and health experts should provide consistent evidence-based information supporting public health goals and become nutrition communicators. They also should continue to seek collaboration with the food industry, governments and NGOs.

-Health care professionals should take responsibility for ensuring that patients receive the right information and support on current dietary recommendations. They should provide their patients with advice on selection of dietary fats as they do on other preventive actions and if necessary, seek training to be able to provide proper advice or to refer them to nutrition specialists.



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Highlights of summary statement (V)

The International Expert Meeting calls on scientists, health care professionals, governments, food industry, health authorities and media around the world to advocate consistent, simple and effective messages to improve the fat quality of the diet of people everywhere and promote such changes for the prevention of chronic disease and to achieve optimal health.



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Signing of the summary statement

