

Workshop about diet and nutrition of children

On the 27th of September 2013, a Workshop was held by Unit for Nutrition Research at the University of Iceland/University Hospital Landspítali, in collaboration with the Icelandic Heart Association regarding diet and nutrition for children.

Caption of the workshop was: **Are we on heading in the right direction? Does the society need to change emphasis or methods in the field of health promotion of diet and nutrition for children?**

Moderator: **Inga Þórsdóttir, president of Health Sciences, University of Iceland**

On the occasion Ms. Hafdís Helgadóttir held a lecture based on her Master's thesis, *Dietary intake and blood lipid profile in six-year-old Icelandic children 2001-2002 and 2011-2012*.

Abstract of the lecture: It has been suggested that nutrition and diet in childhood has long-term effects on growth, development and health later in life. Knowledge of dietary intake of different groups within a population is important for public health, as it can be used for policy making and as a foundation for strategies aimed at improving dietary intake and thus influencing public health. In the research she compared dietary intake, nutrition and blood lipids in six-year-old Icelandic children from two national dietary surveys conducted 10 years apart, in 2001-2002 and 2011-2012. The secondary aim was to assess the association between the contribution of energy giving nutrients and blood lipids among six-year-old children. When comparing dietary intake in six-year-old children in 2001-2002 and 2011-2012 an increase in total consumption of fruits and vegetables (63%), meat and meat products (26%), cheeses (41%), breakfast cereals (61%) and cool drinks (12%) was observed. Consumption of milk and milk products decreased by 19% and consumption of cakes, potatoes and soda was significantly lower in 2011-2012 compared to 2001-2002. Changes in fat quality were observed where intake of saturated fatty acids and trans fatty acids were lower in 2011-2012 (13.3 E% and 0.8 E%) compared to 2001-2002 (14.7 E% and 1.4 E%, $p < 0.0001$). At the same time, intake of unsaturated fatty acids increased. Intake of added sugar decreased by 1.6 E% ($p = 0.0003$) between the two studies and higher intake of dietary fibre was observed 2011-2012 compared with 2001-2002 (13.2 g/day compared to 11.1 g/day, $p < 0.0001$). Total cholesterol and LDL concentrations in blood serum were significantly lower in 2011-2012 compared with 2001-2002 (4.6 mmol/L vs. 4.4 mmol/L, $p = 0.003$ and 2.8 mmol/L vs. 2.5 mmol/L, $p < 0.0001$, respectively). In a multiple linear regression model, one E% increase in SFA intake was related to 0.03 mmol/L increase in LDL cholesterol ($p = 0.04$). Ms. Helgadóttir said in her lecture the results show several

Improvements in dietary habits of six-year-old children in Iceland from 2001-2002 to 2011-2012, while it is still a long way to go for the diet among children to be in adherence to food-based dietary guidelines. The change in intake of dietary fat during the period (increased intake of unsaturated

fatty acids at the expense of saturated fatty acids and trans fatty acids) might have contributed to improved blood lipid profile among six-year-old children

After the lecture short presentations and panel of experts in the field of public health discussed the issue and sought to answer the questions above.

Gunnar Sigurðsson, professor and M.D., Icelandic Heart Association; *Effect of desirable lifestyle changes in adults and it's impact on CHD in Iceland 1981-2006.*

Abstract: In his presentation Mr Sigurðsson discussed why mortality has decreased 80% in Iceland between 1981 and 2006. If the mortality rate from 1981 had remained unchanged until 2006 the death rate from CHD would have been 374 lives, instead of 79 lives lost to CHD in Iceland. How much of this decrease can be attributed to changes in risk factors and how much to treatment effects (medicine and treatment of CHD in hospitals). In his presentation this he used ICELAND IMPACT from 2010¹. Explaining the fall in CHD deaths in Iceland 1981-2006 leads us to conclude based on the IMPACT model that 72% can be attributed to risk factors changes by the nation and 27.5% to treatment effects. Icelanders smoke less, blood pressure has lowered, they exercise more in their spare time but the most important is the cholesterol level has dropped due to less consumption of saturated fats. The decrease would have been even more if not for the increase in weight (BMI has increased from 25 to 28 between 1967 and 2006) and increase of Diabetes (type 2).

In the table below estimated CHD deaths prevented or postponed as a result of population risk factor changes in 2006 can be seen.

RISK FACTORS	Risk factor levels 1981	Risk factor levels 2006	Risk factor change	RR or Coefficient	DPP Best	% DPP
Smoking	46,5%	22,6%	-23,8%	2,52	65	22,0%
Systolic BP	126,3	121,2	-5,1 mmHg	-0,03	65	22,0%
Cholesterol	6,01	5,14	-0,87 mmol	-0,68	95	31,6%
Physical activity	23,2%	46,2%	23,0%	1,27	15	5,4%
BMI	25,0	27,0	2,0	0,03	-15	-4,4%
Diabetes	1,7%	3,6%	1,9%	1,93	-15	-4,6%

¹ [Analyzing the Large Decline in Coronary Heart Disease Mortality in the Icelandic Population Aged 25-74 between the Years 1981 and 2006.](#)

Hólmfríður Þorgeirsdóttir, project manager of health determinants regarding nutrition, Directorate of Health; *Priorities and projects in the field of child nutrition.*

Abstract: In her presentation Ms Þorgeirsdóttir discussed mutual development project of the Public Health Institute of Iceland (now the Directorate of Health) and 25 municipalities all around the country going on 2005-2010 called “Everything affects us, especially ourselves”. The aim of the project was to promote healthy lifestyles of children and their families by emphasising the importance of eating a healthy diet and increasing physical activity. An additional aim was to prevent diseases among children and youths. The municipalities formulated their own policy and action plan regarding children’s lifestyle, supervised by the Public Health Institute (PHI). Lectures were held for staff in elementary schools, preschools and school canteens, based on guidelines developed by PHI. The PHI evaluated the project.

Health Promotion in Schools

The Directorate of Health (which merged with the Public Health Institute of Iceland on May 1st of 2011) aims to promote healthy habits among children and adolescent through various channels, e.g. through a holistic whole-school approach within health promoting primary (aged 6-15) and secondary (aged 16-20) schools. All secondary schools in Iceland (31) now participate in the project and 43 primary schools (out of 175). A health promoting preschool project is currently under development. These projects are implemented upon four major foundations; nutrition, physical activity, mental health and lifestyle (which deals with e.g., alcohol, tobacco and substance use). Through this initiative, the Directorate has shaped guidelines for school canteens, educational material promoting both nutrition and physical activity, and collaboration with various relevant agents in the community.

The Directorate of Health, in collaboration with Centre of Child Health Services (within the Primary Health Care System), has developed teaching material intended for school nurses to use during health education among pupils aged 6-16. Furthermore, this collaboration between the Directorate and the Centre of Child Health Services resulted in the launch of an educational website: <http://www.6h.is>.

Health Promoting Community

The Directorate of Health is running a Health Promoting (HP) Community project that starts with a pilot municipality, located near Reykjavík. The project in question will first and foremost act as an “umbrella” for various other projects, including HP Schools and HP Workplaces projects that are already being run by the Directorate of Health. The pilot community has established a steering group that supervises the project, formulates policy and establishes where special emphases are required.

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The Directorate of Health supports the community by developing a checklist that can be used to evaluate their status, map what is being done well and where special emphases are required, and provide the foundation for measuring and evaluating outcomes. Furthermore, the Directorate of Health will provide assistance throughout, via the Health Promoting Projects mentioned earlier, as well as by providing a framework of recommendations, based on best practice.

Helga Sigurðardóttir, manager of School Division Canteens in Reykjavik City; *Focus in Reykjavik School Canteens regarding nutrients and diet.*

Abstract: Ms. Sigurðardóttir discussed planned changes in child nutrition in schools in the capital city Reykjavik, for pre-, primary school children as well as in after school programme. Emphasis will be on composing menus according to recommendations from Directorate of Health, coordinate nutrition

calculations and improve the quality of materials. Provide information and education to those who are responsible for canteens.

Ingibjörg Gunnarsdóttir, professor and director of Unit of Nutrition Research; *summary*

In her summary Mrs Gunnarsdóttir emphasised that health professionals and others working in public health have to work together to the same goal – good health for every age. As for the caption of the meeting we are heading in the right direction, thanks to many for the last 40 years. Nutritionists, doctors and nurses for example as well as the general public that has listened to the message and changed their habits by less consumption of saturated fats and salt. Also by smoking less and in general living more healthy active lives. That has also had good impact on childrens health as can be seen in Mrs Helgadóttir lecture. However the story tells us that we need to be careful and watch out for the threats. Today the threat comes from the low carbohydrate/high fat diet that has become popular in Iceland. Diet that has been presented on faulty assumptions, and also as a lifestyle change that the general public should adopt.

Note from the organisers:

Discussions after the presentation were in line with what is said in the summary. The organisers decided that the meeting should emphasise on what is positive in Iceland not only what can be done better. I think we all know that. It is important to also focus on positive changes especially for those who are working in the field of public health.

Media:

<http://www.visir.is/breytingar-a-mataraedi-barna/article/2013131009892>