

Results of the SEAFOODplus project

More health through seafood

One of the most important objectives of the integrated research programme SEAFOODplus is to gain new, convincing evidence for the health value of fish products. The participating researchers from 17 different nations want to contribute towards more fish being eaten in Europe and help fish products become a natural part of the diets of as many people as possible. At their annual conference in Bilbao in June 2007 it again became clear that they have moved a considerable step closer to these aims.

Nearly one third of all EU citizens are overweight, every tenth citizen can even be described as obese. This is a development that often leads to cardiovascular disease and disorders of the gastrointestinal tract, a situation which inevitably pushes health costs up. A particularly disturbing fact is that weight problems do not only occur in older people but more and more often at a younger age, i.e. already during childhood and adolescence. This is on the one hand due to changes in habits. Children are not as active as they used to be; they hardly partake in sports, and spend more time in front of the television and the computer. On the other hand, a lot of children and adolescents have an extremely unhealthy diet: they often eat too much, too fat, and too unbalanced. Overweight and obesity have in the meantime become serious problems in all developed nations and this is posing an ever increasing challenge to national health systems. This alone makes it clear how important the research carried out in the context of SEAFOODplus on healthy diets is.

In a large-scale study a research team behind Alfredo Martinez (University of Navarra) investigated whether and how a seafood-rich diet can contribute towards combating overweight in young Europeans. One question that particularly interested the researchers was which components

of fish can make a particularly strong contribution towards losing weight. Is it the Omega 3 fatty acids which have such a positive effect on the cardiovascular system or is it sooner the valuable fish proteins with their content of essential amino acids? To get to the bottom of this an eight-week study was conducted in Iceland, Spain and Ireland with 324 overweight men and women aged between 20 and 40. The researchers divided the participants at random into four groups who received daily diets with the same 1,600 kcal energy content.

1. Control group: participants in this group were given oil capsules as a dietary supplement. These did not contain fish oil but only sunflower oil
2. Lean fish group: participants in this group ate cod meals three times a week with each meal containing at least 150 g fish
3. Fatty fish group: participants in this group ate salmon three times a week, again with each meal containing at least 150 g fish
4. Fish oil capsules: DHA/EPA capsules, no fish otherwise

Already after four weeks the calorie reduced diets had had impressive effects. On average, the weight loss of an average man weighing 95 kg was 3.55 kg in the control group. Participants in the lean fish group lost 4.35 kg and in the fatty fish group 4.50 kg. Mem-

bers of the fish oil capsule group lost most weight: 4.96 kg. The balance is thus clearly "pro fish"; irrespective of whether respondents took fish oil capsules as a dietary supplement, ate lean or fatty fish, those who enriched their weight reduction diet regularly with fish lost at least 1 kg more weight than their counterparts in the control group. Weight loss was not quite as marked among women but revealed the same tendency. In the second half of the study the reduction in weight was not as marked as in the first half. Participants lost on average 45 percent of the weight loss achieved during the first four weeks.

Great differences in fish consumption throughout Europe

Despite this convincing evidence for the value of a seafood-rich diet, consumers in a lot of countries still choose these healthy foods surprisingly rarely. The discrepancy could often hardly be greater: although most consumers know that seafood is extremely healthy and that it contains a lot of essential substances they rarely follow the recommendation to eat fish at least twice a week. The reasons for this behaviour are believed to lie in various factors, but particularly in the annoying bones, excessive prices, and fluctuating availability, sometimes also in the intensive smell or flavour of fish. Apart from that, people's seafood consump-

tion is influenced by their social environment and next of kin, traditions, and other factors like age, sex or regional peculiarities. What role does health play as a motive for eating more fish? What additional information might lead to an increase in fish consumption? A group of scientists led Wim Verbeke (Ghent University Belgium) investigated these questions. In the context of their study which was conducted in five countries (Belgium, Netherlands, Denmark, Spain and Poland). Zuzanna Pieniak, a member of the group, reported that they examined whether connections exist between health, a healthy diet with a lot of fish, and satisfaction with one's personal life situation. The results of the survey might suggest starting points from which to develop strategies that would convince more people of the value of seafood.

Nearly 5,000 consumers were questioned in the selected countries. The differences were immense: whereas the average Spaniard eats fish more than 2.5 times per week, in a lot of Dutch households a fish dish is not even served once a week. Independent of frequency, however, all respondents were very aware of the fact that fish is an important element in a healthy diet. The researchers also noticed that people who eat a lot of fish anyway were more interested in following a healthy diet. In spite of this, a lot of the respondents in Spain, a country whose citizens



“Many barriers to healthy behaviour exist, but a prerequisite is accurate knowledge and understanding of the causes and consequences of particular diseases and the role of nutrition.”



“Specific seafood constituents could additionally improve the beneficial effects of a hypocaloric diet in overweight subjects.”



“The fish served on the menus of school dining halls is not very appealing and sometimes leads to the students’ refusal to eat it.”



“Health benefits, safety guarantee and quality mark are the most wanted fish information cues for respondents interested in healthy eating and involved with health in general.”

considerably more mobile today than in the past all information and recommendations concerning seafood should be uniform throughout Europe.

Careful adaptation of products to consumer groups

But what use is the most convincing evidence for the health value of seafood if it is not even propagated in the public sector and not consistently executed? Isabel Hernandez (Organisation ‘FROM’, Spain) and her research team analysed eating habits in Spanish schools over a number of years and established that fish is not served frequently enough and that it is often not served in a form that is suited to children. After analysing the data from the study the research team noted that the results were best in schools in which cooking was still carried out on-site. Everywhere where caterers supplied the pupils’ meals, the fish meals tended to come off less well – not only with regard to the quality of the food but also in respect of the appearance of the meals. The team concluded that the preparation, flavour and the general organoleptic status of most fish dishes are apparently not very geared to children and there is a lot of room for improvement here. In other words, it is not enough to simply put fish on the menu – you have to make sure it is actually eaten. ■

are among the strongest fish eaters in Europe, did not estimate their personal health status to be particularly high. Presumably eating fish in this Mediterranean country is sooner “natural behaviour” and less guided by a conscious desire to improve one’s health.

Seafood promotes development in children and young people

One thing is certain, however: that it is never too early to start eating seafood. Already in infancy, an optimal diet sets the course for healthy development. Scientists term this close connection between early diet and later health status “metabolic programming”. Already during pregnancy mothers-to-be can promote the development of their child by eat-

ing a lot of fish and seafood. It is considered proven that a fish-rich diet during and after the period of breast-feeding has a positive influence on a child’s health, neurological development, and the build-up and function of the brain. Monique M. Raats (University of Surrey, UK) regretted in her lecture that these elementary interrelations were not sufficiently known among the public and hardly propagated by politics.

The choice of foods for everyday nutrition is a very complex topic which is influenced by numerous social and psychological factors. Children, for example, are fully dependent on their parents, since it is the parents who decide what food is served, and in making this decision they influence the position that fish and seafood will

have for adolescents later on. The more parents know about the benefits of seafood products for their children and their own health the more often they will choose this valuable food. Knowledge about seafood is generally obtained from different sources. Up to know, little was known about which factors in a person’s environment have a particularly strong influence on his attitude towards seafood. It is possible to speculate whether one’s home, the opinions of friends and relatives might have more influence than statements made by health experts, or positive reports in the media. For this reason, Monique Raats demands that consumers should be better enlightened and informed, and their knowledge on the health benefits of eating seafood improved. And because people are



Announcing the last and final SEAFOODplus conference

The 5th and final SEAFOODplus conference will take place **9-11 June 2008** in the historical Circus Building just opposite the Tivoli Gardens in Copenhagen.

SEAFOODplus participants will present some of the amazing results obtained during 2004-2008.

For more information contact:
SEAFOODplus Coordinator Torger Børresen, tb@difres.dk, +45 45252577 or
Secretariat Manager Jette Donovan Jensen, jej@difres.dk, +45 45252575
www.seafoodplus.org

