

The Finnish Asthma and Allergy programs

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In Finland (population 5,5 million), two 10-year national campaigns were initiated starting in 1994. These actions were supported by the Ministry of Social Affairs and Health and the National Institute for Health and Welfare.

The first nation-wide programme, the *Finnish Asthma Programme 1994-2004*, emphasized the importance of first-line anti-inflammatory treatment of asthma. While the disease burden was reduced markedly, the asthma programme did not have an effect on the increased prevalence of asthma or allergies. Meanwhile new studies signalled striking contrast of allergic disease prevalence between urbanized Finnish population and more rural Russian Karelia (areas with similar genetic background). These findings led to the theory that the reasons for the allergy epidemic was not so much the new risk factors of our modern environment, but maybe the loss of protective factors. Reduced contact to natural environments and other complex factors have impoverished human microbiota, caused immune dysfunction and led to inappropriate inflammatory responses.

Hence, the *Finnish Allergy Programme 2008-2018* was introduced to test new thinking in practice. The six key objectives of the allergy programme are: 1) prevent allergy; 2) improve tolerance; 3) improve allergy diagnosis; 4) reduce work related allergies; 5) focus on severe allergy; 6) reduce allergy and asthma costs. The focus is on everyone living in Finland: the general population, patients with allergies and asthma and their families, public-health and patient organizations, private sector, as well as experts and authorities.

So far, from the beginning of the allergy program, around 20 000 professionals participated in the various learning activities. The lay-public has been targeted by non-governmental organizations for allergy and asthma, respiratory health and skin disorders. Patient organizations arranged regional education for their key personnel and peer workers. Education continued also for the personnel of pharmacies, day-care centres,



The travel grant for the speaker was kindly provided by EAACI according to the EAACI-KAAACI speaker support program

and schools. The national guidelines for the treatment of asthma, allergic rhinitis, atopic eczema, food allergy and allergy diagnosis were also revised and published.

The burden of allergy and asthma has been further reduced since the beginning of the asthma programme. In the 2000s, asthma emergency visits decreased by 46% (children 62%) and hospital days by 67%. According to nation-wide survey, self-reported asthma has become a milder and better controlled disease. At the start of the Finnish Asthma Programme in 1994, it was estimated that 20% of the patients had severe condition. This figure decreased to 10% in 2001 and to 4% in 2010. In comparison with the 2001 and 2010 cohorts, emergency visits had dropped by 86% and hospitalizations by 88%. In 2013-2015, the prevalence of allergy diets decreased by 43 % to 4.3 %. In 2007-2013, verified occupational allergies fell by 40 %. In the first decade of the 2000s, the direct allergy and asthma costs, together with costs for disability pensions, fell by 15%.

The mid-term results of the ongoing Finnish Allergy Programme indicate that the burden of allergic conditions in the society has started to decline. Improving diagnostic methods, focusing on more severe allergies, and emphasizing allergy health rather than mild conditions, have encouraged a more efficient use of health-care resources. Although it is too early to give credit to the programme of any biological changes in the population, the asthma and allergy programmes have led to actions relevant to society and health-care as a whole.

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