

Review highlights wealth of information on childhood obesity produced by groundbreaking Danish study

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A review of more than a decade of data from a groundbreaking Danish study into childhood obesity is being presented at this year's European

Congress on Obesity (ECO) in Maastricht, the Netherlands (4-7 May).

The HOLBAEK Study (formerly known as The Danish Childhood Obesity Data and Biobank) has been investigating childhood obesity and its complications since 2007.

It collects [clinical data](#) and [biological samples](#) (such as blood and saliva samples) from two groups of children and adolescents—a group of children and adolescents receiving treatment at The Children's Obesity clinic, an accredited European Centre for Obesity Management, Department of Pediatrics, Holbaek Hospital, Denmark, and a population-based cohort, which acts as a reference group.

It has collected data on around 8,000 children and adolescents, to date, in a comprehensive effort to better understand [childhood obesity](#), improve its treatment and reduce its consequences later in life.

Dr. Maria Martens Fraulund, Dr. Cilius Fonvig and colleagues at The Children's Obesity Clinic searched PubMed for papers published from 2007 to December 2021.

A total of 82 papers on research from the HOLBAEK Study met the criteria for inclusion in the review.

These included cross-sectional studies, intervention studies, studies investigating obesity-related complications, consortia studies, reference studies, methodological studies and clinical guidelines.

The cross-sectional studies revealed a wide variety of obesity-related complications to be already present at a young age, including dyslipidaemia (abnormal blood fats) (in 28% of children with obesity), [fatty liver disease](#) (in 31%), obstructive sleep apnoea (in 45%) and prehypertension or hypertension (in 52%). An example is available [here](#).

In the intervention studies, family-based weight management programs had a wide range of positive effects on overweight and related complications. Approximately 75% of patients reduced their degree of obesity, while also seeing reductions in dyslipidaemia, hypertension, fatty liver and sleep apnoea. The intervention is the Holbaek-method; a person-centered, multifaceted, family-based intervention developed by Dr. Jens-Christian Holm, also of The Children's Obesity Clinic.

The HOLBAEK Study has also provided new and updated pediatric markers for a range of biomarkers such as plasma lipids, antibodies, metabolism, and vitamin D (an example is available [here](#)) and the consortia collaborations have identified hundreds of new genes associated with the development of overweight and related diseases in adulthood (example [here](#)).

Dr. Martens Fraulund says: "The HOLBAEK Study has provided important insights into childhood overweight. It has highlighted that obesity is a serious multisystem disease that can be managed and treated effectively, reducing the degree of overweight and improving overweight-related complications.

"This review highlights the potential of the HOLBAEK Study to improve the general understanding of children and [young people](#) living with [obesity](#), how to approach this vulnerable group, how to educate [healthcare professionals](#) and so provide hope that we will manage this tremendous challenge in the future."

Provided by European Association for the Study of Obesity

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