

## Press release

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## Basic information

Name: Mette Fogh                      Email: [mefogh@rm.dk](mailto:mefogh@rm.dk) Phone: 50471317

Department of: Clinical Medicine

Main supervisor: Jens Meldgaard Bruun

Title of dissertation: Childhood Obesity Interventions in Denmark - Long-term Evaluation of Treatment, Prevention and Early Growth Trajectories

Date for defence: 8. May at (time of day): 14.00 Place: In Auditorium Verdensrummet (A201-170), Entrance A, Steno Diabetes Center Aarhus, Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N

Press release (Danish)

Ny ph.d.-forskning: Begrænset langtidseffekt af overvægtsindsatser understreger behovet for tidlig, koordinerede strategier og støttende strukturer

Børneovervægt er forbundet med øget risiko for både psykosociale og fysiske komplikationer, som ofte følger med ind i voksenlivet. Trods mange indsatser i hospitaler, kommuner og dagtilbud er den langsigtede effekt fortsat usikker. Ny forskning fra Aarhus Universitet og Steno Diabetes Center Aarhus viser, at indsatser kan føre til kortvarige forbedringer i børns BMI, men at varige ændringer er svære at fastholde, og at centrale vægtmønstre ofte etableres allerede i 0-5 års alderen. Resultaterne peger på behovet for tidlige, koordinerede og flerstrengede indsatser, hvor behandling og forebyggelse understøttes af støttende miljøer og strukturelle rammer, der fremmer sunde valg i børns hverdag. Ph.d.-projektet gennemført af Mette Fogh forsvares den 8. maj 2026 og er et nyt ph.d.-projekt fra Aarhus Universitet, Health.

I sin ph.d.-afhandling "Childhood Obesity Interventions in Denmark" har Mette Fogh, ph.d.-studerende ved Aarhus Universitet, undersøgt de langsigtede effekter af forskellige indsatser rettet mod børneovervægt i Danmark. Afhandlingen bygger på tre ikke-randomiserede interventionsstudier gennemført i henholdsvis hospitalsbaseret behandling, kommunale tilbud og børnehaver samt et systematisk review af tidlige vægt- og BMI-forløb i alderen 0-5-år.

Resultaterne fra hospitals- og kommunestudierne viser, at individuelle og familieorienterede behandlingsindsatser kan føre til kortsigtede reduktioner i BMI hos børn og unge – med de største effekter i specialiserede hospitalsforløb. Effekterne aftager dog over tid, hvilket illustrerer de betydelige udfordringer ved at fastholde ændringer i vægtudviklingen, når overvægt først er etableret.

Forebyggelsesstudiet i børnehaver fandt ingen samlet effekt på BMI eller risiko for overvægt. Den manglende effekt kan blandt andet forklares ved lav interventionsintensitet samt COVID-19-relaterede forstyrrelser. Samtidig ses en tendens til lavere BMI blandt børn fra familier med flere uddannelsesniveauer, hvilket peger på et potentiale for, at universelle tidlige indsatser kan bidrage til at mindske social ulighed i sundhed. Det systematiske review dokumenterer desuden, at vægt- og BMI-mønstre i den tidlige barndom er stærke indikatorer for senere vægtudvikling og kropssammensætning. Højt stabile og stigende vægtforløb samt tidlig adiposity rebound er forbundet med øget risiko for overvægt, forhøjet BMI og fedtmasse i barne- og ungdomsårene. Omvendt er faldende og normal stabile vægtforløb forbundet med en lavere senere risiko.

Samlet set viser resultaterne, at enkeltstående indsatser ikke er tilstrækkelige til at ændre etablerede vægtmønstre på lang sigt. Afhandlingen understreger derfor behovet for tidlige, koordinerede og flerstrengede strategier, der integrerer behandling og forebyggelse med støttende miljøer, lokalsamfundsenngagement, strukturelle og politiske rammer, som fremmer sund adfærd i børns

hverdag. Sådanne sammenhængende tilgange har potentiale til både at understøtte en sund vægtudvikling og skabe vedvarende, langsigtede forbedringer. Forsvaret af ph.d.-projektet er offentligt og finder sted den 8. Maj 2026 kl. 14 i Auditorium Verdensrummet (A201-170), Aarhus Universitetshospital, Steno Diabetes Center Aarhus, Indgang A, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N. Titlen på projektet er Childhood Obesity Interventions in Denmark - Long-term Evaluation of Treatment, Prevention and Early Growth Trajectories. Yderligere oplysninger: Ph.d.-studerende Mette Fogh, e-mail: mefogh@rm.dk, tlf. 50471317.

Bedømmelsesudvalg:  
Associated professor Tue Wenzel Kragstrup (chairman)  
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Department of Public & Occupational Health, Amsterdam UMC

Press release (English)  
New PhD research: Limited long-term impact of childhood obesity interventions – highlighting need for early, coordinated strategies and supportive structures

Childhood obesity is associated with an increased risk of psychosocial and physical complications that often persist into adulthood. Despite extensive efforts across hospitals, municipalities, and early childhood settings, the long-term effectiveness of current interventions remains uncertain. New research from Aarhus University and Steno Diabetes Center Aarhus shows that while some interventions can reduce children's BMI in the short term, lasting changes are difficult to achieve, and crucial weight trajectories are often established very early in life —highlighting the need for earlier and more coordinated prevention strategies that are supported by healthier everyday environments and structural conditions.

The project was carried out by PhD student Mette Fogh, who is defending her dissertation on 8 May 2026.

During her project, Mette Fogh, PhD student at Aarhus University and Steno Diabetes Center Aarhus, investigated the long-term effectiveness of childhood obesity interventions implemented under real-world conditions in Denmark. Her dissertation, "Childhood Obesity Interventions in Denmark", comprises three non-randomized intervention evaluations conducted in hospital-based treatment, municipality-based programs, and kindergartens, complemented by a systematic review of early childhood BMI and weight trajectories.

The hospital- and municipality-based studies show that individual, family-based interventions can achieve short-term reductions in BMI, particularly within specialized hospital care. However, these effects often attenuate over time, highlighting the challenges of sustaining weight changes once obesity is established. A universal prevention intervention carried out in kindergartens found no overall effect on BMI or risk of overweight. This is likely due to low intervention intensity and COVID-19-related disruptions. Nevertheless, the study identified a trend toward lower BMI among children from families with lower educational levels, indicating that early, universal interventions may hold potential for reducing social inequalities in health. The systematic review included in the dissertation demonstrates that early childhood BMI and weight trajectories are strong predictors of later anthropometric outcomes. High-stable and increasing weight patterns, as well as early adiposity rebound, are associated with an increased risk of overweight, higher BMI, and greater fat mass in childhood and adolescence. In contrast, decreasing or average-stable trajectories are associated with minimal later risk.

Taken together, the findings show that single-setting interventions are insufficient to alter entrenched BMI patterns once established. The research emphasizes the need for coordinated, early, and multi-level strategies that integrate treatment and prevention with supportive environments, community engagement, and broader structural and policy-level conditions that shape children's everyday opportunities for healthy weight development. The defence is public and takes place on 8 May 2026

at 14.00 in Auditorium Verdensrummet (A201-170), Entrance A, Steno Diabetes Center Aarhus, Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, 8200 Aarhus N, Aarhus University, Road, City. The title of the project is (A201-170). For more information, please contact PhD student Mette Fogh, email: mefogh@rm.dk, Phone +45 5047 1317.

Assessment committee:  
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