Kostholdsveiledning og trening for å bekjempe metabolske risikofaktorer for hjerte- og karsykdom hos norske pasienter med alvorlige psykiske lidelser: protokoll for en randomisert, kontrollert studie.

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Bakgrunn: Pasienter med alvorlige psykiske lidelser som schizofreni og bipolar lidelse 1 har betydelig høyere risiko for hjerte- og karsykdom (HKS) sammenlignet med øvrig befolkning som resulterer i 10-20 års kortere forventet levealder. Vektøkning som følge av antipsykotiske medikamenter samt livsstilsfaktorer som røyking, fysisk inaktivitet og usunt kosthold medvirker til risikoøkningen.

Hensikt/målsetting: Målet med studien er å undersøke effekten av en strukturert livsstilsintervensjon med kostholdsveiledning og regelmessig fysisk trening på estimert HKS-risiko hos norske pasienter med en alvorlig psykisk lidelse, sammenlignet med kontroll.

Design: 70 overvektige deltakere med schizofreni eller bipolar lidelse 1 rekrutteres fra psykiatriske behandlingsinstitusjoner i Oslo og randomiseres til intervensjon- eller kontrollgruppe (standard behandling). Intervensjonsgruppa gjennomfører et seks måneders program med kostholdsveiledning fra kliniske ernæringsfysiologer og regelmessig trening ledet av treningsinstruktører fra Norges Idrettshøyskole. Målinger ved baseline og etter intervensjon inkluderer antropometri, blodprøver, kostholdsvaner målt med recall-intervju og matvarefrekvensskjema, samt livskvalitet og psykisk helse målt med pasientrapporterte utfallsmål (PROMs). QRISK-verktøyet benyttes for å estimere HKS-risiko. Etter intervensjonen sammenlignes intervensjonsgruppa med kontrollgruppa, som deretter får tilbud om samme program av etiske hensyn.

Overordnede mål: Vi forespeiler en signifikant reduksjon i HKS-risiko målt med QRISK, reduksjon i kroppsvekt, samt bedring i metabolske risikofaktorer, kostholdskvalitet og PROMs i intervensjonsgruppa sammenlignet med kontrollgruppa.

Nytteverdi: Ingen norske studier har undersøkt effekten av sunn livsstil hos denne pasientgruppa. Ifølge ferske tall fra Folkehelseinstituttet (2024) eksisterer en betydelig ulikhet i dødelighet fra ikke-smittsomme sykdommer mellom psykisk friske og -syke nordmenn. Retningslinjer for oppfølging av somatisk helse hos personer med alvorlige psykiske lidelser følges ikke tilstrekkelig i klinisk praksis. Denne studien har potensial til å gi ny innsikt i hvordan livsstilsintervensjoner kan implementeres for å bedre helsen til personer med alvorlige psykiske lidelser. Funnene kan ha viktig klinisk relevans og bidra til utviklingen av rettferdige og helhetlige behandlingsmetoder som kan integreres i klinisk praksis.

Antall ord(bakgrunn til nytteverdi)**:** 300

Finansieringskilder og interessekonflikter: Nasjonalforeningen for folkehelsen har innvilget et 3-årig doktorgradsstipendiat f.o.m. 01.juli 2025. Ingen av de involverte forskerne har øvrige interessekonflikter.

Clinical short-term challenges of intact and hydrolysed barley gluten peptides of CeD patients in remission

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Abstract

Background: Patients with celiac disease (CeD) are restricted to a gluten free diet and are advised to limit the gluten intake to no more than 10 mg per day to prevent symptom recurrence and long-term complications[1]. The threshold for a safe gluten intake remains debated, with current guidelines primarily based on research focused on wheat rather than rye and barley. It is largely unknown whether hydrolyzed gluten proteins from barley, which are frequently used in food industry, retain immunogenetic properties. Due to the lack of reliable quantitative results, it remains challenging to assess whether these trace amounts pose immunologically risk for CeD-patients. Recently, the release of IL-2 into blood from activated gluten specific CD4+ T-cells, has protruded as a sensitive and objective biomarker of a rapid immune activation 4 hours after one-dose gluten challenge in CeD-patients[2,3].

Objective: To examine serum IL-2 production following oral barley challenge as a marker of T-cell activation and to determine if this correlates with symptom onset.

Study design: This study used a randomized single-blinded crossover design with five periods and 20 sequences. Participants received five one-dose challenges (wheat 1 g, barley 1g, barley 0,05 g, hydrolyzed barley 0,05 g and placebo), each followed by a 4-week wash out period. The challenge vehicle was gluten flour mixed into flavoured lactose-reduced chocolate milk.

Endpoints: Primary endpoint: Immune response to low-dose barley vs. low-dose hydrolyzed barley, assessed by serum IL-2 levels. Secondary endpoints: 1) immune response to high-dose wheat vs. high dose barley 2) immune response to high- vs. low-dose barley 3) gastrointestinal

symptom pre- and post-challenge measured by VAS-score 4) gluten immunogenic peptides in urine and feces pre- and post-challenge, assessed by G12 antibody 5) baseline cytokine response to *in vitro* gluten peptide stimulation (wheat and barley) in whole blood.

Preliminary results: A total of 19 women and 8 men CeD were enrolled in the study. The median age was 54 years for women and 52.5 years for men. All participants had been diagnosed with CeD and had been following a gluten-free diet for at least two years (median years living on a gluten free diet = 13). To date, 15 participants have completed five challenges, and we aim to complete the study by March 2025. There were one dropout after the first challenge.

The project is funded by the Research Council of Norway, and there is no conflicts of interest.

References

1. Catassi C., Fabiani E., Iacono G., D'Agate C., Francavilla R., Biagi F., Volta U., Accomando S., Picarelli A., De Vitis I., et al. A prospective, double-blind, placebo-controlled trial to establish a safe gluten threshold for patients with celiac disease. Am. J. Clin. Nutr. 2007;85:160–166. doi: 10.1093/ajcn/85.1.160
2. Goel G, Tye-Din JA, Qiao S-W, Russell AK, Mayassi T, Ciszewski C, et al. Cytokine release and gastrointestinal symptoms after gluten challenge in celiac disease. Sci Adv. 2019;5(8):eaaw7756
3. Tye-Din JA, Skodje GI, Sarna VK, Dzuris JL, Russell AK, Goel G, et al. Cytokine release after gluten ingestion differentiates coeliac disease from self-reported gluten sensitivity. United European Gastroenterol J. 2020;8(1):108-18.

Sammenhengen mellom amming og vektutvikling gjennom livet blant mødre i «Kvinner og kreft»-studien

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Bakgrunn: Vektoppgang i forbindelse med graviditet kan øke risiko for å utvikle overvekt og fedme blant mødre. I teorien kan amming gjøre vekttap etter fødsel lettere fordi det fører til økt energiforbruk hos mor, og forskning tyder på at ammelengde er forbundet med mødres vektutvikling opp til 7 år etter fødsel. Det er dog usikkert om amming har noe å si for utviklingen av overvekt og fedme på lang sikt.

Formål: Å utforske sammenhengen mellom ammelengde per barn og mors vektutvikling fra 18 år til ulike tidspunkter seinere i livet.

Design: «Kvinner og kreft» er en populasjonsbasert prospektiv kohortstudie med over 170 000 kvinner født mellom 1927 og 1965. Data om amming, høyde, vekt og andre relevante faktorer ble samlet inn gjennom tre spørreskjemaer (Q1-Q3) fra 1991 til 2017. Vi studerte sammenhengen mellom amming per barn og vektutvikling med multippel lineær regresjon, justert for konfunderende faktorer.

Resultater: Det var en signifikant trend mellom økende ammelengde per barn og mindre vektoppgang fra 18 år til Q2 og Q3. Ved Q3 (gjennomsnittsalder: 55.7) hadde kvinnene som ammet 12-<15 måneder per barn, 0.65 kg/m^2 (95% konfidensintervall: 0.40, 0.89) mindre økning i KMI fra 18 år, enn mødre som ammet >0-<3 måneder ($p<0.001$). For en normalvektig kvinne med gjennomsnittlig høyde, tilsvarer dette ca.1.8 kg. Analysene av mødrene som ammet 9-<12 måneder/barn gav tilsvarende effektestimater ($p<0.001$). Sammenhengen var spesielt tydelig hos kvinnene med høyest KMI ved 18 år.

Konklusjon: Lenger ammelengde per barn var assosiert med mindre vektoppgang gjennom livet, særlig blant mødre som hadde overvekt eller fedme i ung alder. Våre resultater indikerer at amming kan spille en rolle i forebygging av overvekt og fedme blant mødre, noe som er relevant for mange norske kvinner og helsepersonell som er i kontakt med disse kvinnene.

Antall ord (fra introduksjon tom. konklusjon): 290

Finansieringskilder og interessekonflikter: Prosjektet er finansiert av Direktør Throne Holsts stiftelse for ernæringsforskning. Forfatterne har ingen interessekonflikter.

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Title: Follow-up, dietary adherence and quality of life in Norwegian children and adolescents with celiac disease.

Background: Celiac disease (CeD) and the lifelong, strict gluten-free diet (GFD) might influence health-related quality of life (HRQoL). In Norway, unlike most other countries, the general practitioner is responsible for the follow-up, as soon as the patients are in remission. According to European guidelines, the content of follow-up should consist of anthropometric measurements, serology, and dietary assessment. Further, European guidelines recommend that follow-up is conducted every second year.

Aim: The main purpose of this study was to assess adherence to GFD and HRQoL according to patient follow-up.

Design/Methods: In close collaboration with the Norwegian Coeliac Society, we conducted a web-based survey during spring 2023. Information on follow-up the last two years was collected. Adherence to GFD was assessed by validated questions, originally developed in the Netherlands, giving a total score from 0-84, where lower values indicate better compliance. HRQoL was measured using the 23-item PedsQL™ Generic Core Scales, for children aged 2-18 years, giving a total score from 0 to 100 points.

Results: We included 893 pediatric patients aged 2-18 years. Out of all, 71% had been to follow-up the last two years, but only 51% of adolescents aged 16-18 years. Follow-up by specialist or general practitioner included serology (84% vs 93%), anthropometry (14% vs 3%) and dietary assessment (1% vs 1%). Mean adherence score was 4.8 (SD 7.6). Those who had been to follow-up had better adherence (mean 4.3, SD 5.6) compared to those who had not been to follow-up (mean 6.2, SD 10.9, $p=0.008$). Mean PedsQL total score was 74.6 (SD 15.6), compared to a healthy reference population (83.8, SD 12.7, $p<0.001$). HRQoL did not differ between those who had been to follow-up and those who had not.

Conclusion: Our findings emphasize the need for further studies on follow-up, adherence to GFD, and HRQoL in the pediatric CeD population.

Finansiering og interessekonflikter: Studien var finansiert av Forskningsfondet for cøliaki. Ingen interessekonflikter.

Metabolsk dysregulering og dysfunksjon i utvikling av hjertesvikt – et masterprosjekt

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Bakgrunn: Hjertesvikt med preservert ejeksjonsfraksjon (HFpEF) er en vanlig tilstand i befolkningen med få behandlingsmuligheter og høy mortalitet. HFpEF er assosiert med metabolsk dysfunksjon i hjertemuskelceller, men det er uklart om metabolsk dysfunksjon er en kausal driver av sykdomsutviklingen. Å identifisere kausale drivere av metabolsk dysfunksjon vil kunne bidra til å utvikle bedre behandlinger og forebygge sykdomsprogresjon tidlig i forløpet.

Hensikt: O-ring basert aortakonstriksjon (ORAB) i mus tillater for første gang å kartlegge detaljert temporal utvikling av hjertesvikt og metabolsk dysfunksjon, og hensikten med denne masteroppgaven er å evaluere hvorvidt (1) metabolsk dysfunksjon er en kausal faktor i utvikling av hjertesvikt og (2) hvilke transkripsjonsfaktorer som bidrar til metabolsk dysfunksjon.

Design: 9 uker gamle C57bl/6js mus ble operert med ORAB eller kontrollkirurgi. Ekkokardiografi og annen fenotyping ble gjort ved seks ulike tidspunkter etter operasjon, og venstre ventrikkel ble enten sekvensert ved single nucleus ATAC/RNA-sekvensering eller spatiell transkriptomikk. Fenotypiske data sammenliknes med sekvenseringsdata for tid og region av venstre ventrikkel ved bruk av R.

Resultater: Data blir for tiden analysert, og vil bli presentert på konferansen. Preliminære resultater viser at spesifikke områder av myokard er mer utsatt for metabolsk dysfunksjon enn andre, som indikerer større heterogenitet innad i hjertet enn tidligere antatt. Transkripsjonsanalyser viser en endring i genuttrykk innenfor energimetabolisme over tid. Sammenheng mellom transkriptomer, motivanalyser og hjertefunksjon vil bli presentert.

Diskusjon: Det er lite tilgjengelig data på transkriptomnivå som tar for seg flere tidspunkter og ulike regioner i hjertet under utvikling av hjertesvikt, og denne studien er den første som ser detaljert på temporal sammenheng mellom hjertefunksjon og transkriptomikk knyttet til metabolsk dysfunksjon. Multiple tidspunkter gir bedre muligheter til å koble eventuelle sammenhenger enn tradisjonelle metoder, men krever også nye analysemetoder.

Antall ord (fra introduksjon t.o.m konklusjon): 281

Finansieringskilder og interessekonflikter: Prosjektet er finansiert av Norges Forskningsråd.

Kostholdsstrategier for langvarig remisjon av diabetes mellitus type 2 – en randomisert kontrollert studie (CARBCOUNT)

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ABSTRACT

Bakgrunn: De siste 20 årene har andelen nordmenn med fedme doblet seg, og nesten 10 % av befolkningen har nå type 2 diabetes (T2D). T2D er blant de mest ressurskrevende sykdommene å behandle, på grunn av høyt medikamentforbruk og alvorlige langtidskomplikasjoner. Kostholdsintervensjon og vekttap kan reversere sykdommen (remisjon), men det er behov for bedre dokumenterte strategier for bærekraftige kostholdsendringer.

Mål: Å sammenligne effekten av to kostholdsstrategier på endringer i langtidsblodsukker (HbA1c), endringer i medikamentbruk og remisjon av T2D etter 3 og 15 måneder.

Metode: Studien er en randomisert kontrollert studie som inkluderer personer med T2D i ≤10 år og kroppsmasseindeks (BMI) ≤27. Deltakerne randomiseres til enten (1) DiRECT-programmet, en godt dokumentert kostholdsstrategi for T2D-remisjon (3 måneder med kostholdserstatning (ca. 900 kcal) etterfulgt av et lavkalorikosthold i 12 måneder), eller (2) CARBCOUNT-programmet (3 måneder med lavkarbo- og høyfettkosthold (<30 g karbohydrater) etterfulgt av 12 måneder med <80 g karbohydrater). Deltakerne følges tett opp av klinisk ernæringsfysiolog og lege, og har tilgang til e-læringskurs og verktøy som fremmer bærekraftige kostholdsendringer.

Resultater: Vi har til nå inkludert 94 deltakere, og rekrutteringen fortsetter frem til slutten av januar. Ettersom ikke alle deltakere har fullført 15 måneder, presenteres foreløpige resultater. Prosentvis vektreduksjon for begge kostholdene kombinert var 7 % etter 3 måneder, 7,7 % etter 9 måneder og 5,8 % etter 15 måneder. Prosentvis reduksjon i HbA1c var 22 % etter 3 måneder, 16,7 % etter 9 måneder og 10,5 % etter 15 måneder. Dette tilsvarer en absolutt reduksjon i HbA1c fra baseline på 11,8 mmol/mol etter 3 måneder, 9,1 mmol/mol etter 9 måneder og 5,8 mmol/mol etter 15 måneder. I tillegg har vi gjennomført en gradvis nedtrapping av antidiabetika, inkludert GLP-1-analoger, parallelt med kostholdsintervensjonene.

Konklusjon: Ved å dokumentere hvordan ulike kostholdsstrategier oppnår remisjon av T2D, kan prosjektet vårt bidra til å overbevise beslutningstakere om at samfunnet kan spare enorme kostnader på lang sikt ved å implementere nye dokumenterte strategier og involvere flere kliniske ernæringsfysiologer i behandlingen av T2D.

Children and young people's perspectives on obesity treatment and body image: a qualitative study

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Background: Pediatric obesity treatment programs are mostly planned, implemented, and evaluated by adults; however, few researchers have investigated children`s perspectives on obesity treatment. Further, some parents are opting their children out of available treatment programs due to concerns about the potential negative impact on children`s body image. Thus, this study aimed to explore children`s perspectives on obesity treatment and body image.

Method: A full-day workshop was performed with nine participants (9-18 years old) recruited from an obesity clinic. Participatory child-friendly methods were used to explore children's and adolescents' experiences and views about obesity treatment and body image. Four youth experts were involved in developing and quality-assuring the entire workshop. Three participatory tasks and one plenary exercise were transcribed verbatim and analyzed by inductive thematic analysis.

Results: This study identified five key themes: 1. Content of obesity treatment, 2. Communication with health professionals, 3. Perceptions of obesity treatment, 4. Body image, and 5. Social support from family and peers. Lack of information before the first meeting, mixed experiences with weighing, and detailed dietary advice were the main topics discussed regarding the content of obesity treatment. In communication with health professionals, the youngest children indicated they sometimes felt left out of the conversations because their parents talked too much. The adolescents appreciated the understanding and non-judgmental health professionals but requested more time to address mental health issues and some suggested less parental involvement. The participants reported several healthy dietary choices, and disappointment when failing to reach their treatment goals. All participants reported issues regarding weight-based bullying and stigma related to obesity.

Conclusion: Children and adolescents are willing to share their views and experiences with obesity treatment and body image and report both positive and negative experiences with obesity treatment. These perspectives are important for future obesity management, including communication with clinical dietitians.

Word count: 300

Declaration of funding and conflicts of interest:

This Ph.D. project is funded by The Norwegian Women's Public Health Association, and the authors have no conflicts of interest to declare.

Diabetes Body Project: Acute Effects of an Eating Disorder Prevention Program for Young Women with Type 1 Diabetes. A Multinational Randomized Controlled Trial.

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Word count: 298

Funding: This study is funded by Breakthrough T1D (4-SRA-2022-1227-M-B). The sponsor of the study was not involved in the setup of the study design, writing the report, or the decision to submit the report for publication.

Clinical trial reg. no: NCT05399446, clinicaltrials .gov

Duality of Interest: There are no conflicts of interest to declare.

A Brief Report is published in Diabetes Care, 2024:
https://diabetesjournals.org/care/article/doi/10.2337/dc24-1599/157535/Diabetes-Body-Project-Acute-Effects-of-an-Eating

Introduction: Young women with type 1 diabetes present a high-risk group for developing disordered eating behaviors and eating disorders, however effective prevention interventions are lacking.

Objective: To evaluate acute intervention effects of a novel dissonance-based eating disorder prevention program for young women with type 1 diabetes (*Diabetes Body Project*) in a multi-national randomized controlled trial (Oslo University Hospital, Amsterdam UMC, Stanford University, Harvard Medical School).

Methods: Young women (14-35 years) with type 1 diabetes and body image concerns were randomized to either *Diabetes Body Project* groups consisting of 6 weekly, virtual 1-hour sessions facilitated by one health care professional and one peer educator, or an educational video control condition. Eating disorder symptoms was defined as the primary outcome. Secondary outcomes were eating disorder behaviors and risk factors, diabetes specific psychological constructs (diabetes distress, quality of life) and blood glucose time-in-range. Outcomes were assessed at pretest and posttest (1-2 weeks after the intervention).

Results: A total of 293 young women with type 1 diabetes were recruited. Compared to educational controls (n=146), participants in the *Diabetes Body Project* intervention (n=147) showed significant improvements (all p <0,05), with small Cohen's *d* effect sizes for eating disorder symptoms (*d* = -0.30, 95% CI -0.06, -0.69), diabetes distress (*d* = -0.42), quality of life (*d* = 0.39) and dietary restraint (*d* = -0.31), and medium effect sizes for diabetes-specific disordered eating behaviors (*d* = -0.70), body dissatisfaction (*d* = -0.59), and pursuit of the thin appearance ideal (*d* = -0.56).

Conclusions: The *Diabetes Body Project* produced significantly greater acute effects with overall small to medium effect sizes compared to the educational video control condition. As a brief low-cost virtual eating disorder prevention intervention, the *Diabetes Body Project* has potential for broad implementation in pediatric and adult diabetes care by health care professionals including dietitians.

Malnutrition, weight loss and adherence to recommended energy and protein intake postoperative among patients with oesophageal and gastric cancer

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Background: Malnutrition and weight loss are common among patients with oesophageal and gastric cancer undergoing curative treatment, often due to treatment side effects and tumour symptoms. These factors can affect the patient's prognosis and treatment outcomes.

Objectives: The present study aimed to investigate the prevalence of malnutrition and weight loss in oesophageal and gastric cancer patients before and after surgery and whether patients met their estimated energy and protein requirements on their fifth postoperative day.

Methods: Adult patients with oesophageal or gastric cancer who underwent surgery and had scheduled follow-ups by a dietitian at Haukeland University Hospital before and/or after surgery from March 2020 to October 2022 were included. The data was retrospectively extracted from medical records and curve systems. The prevalence of malnutrition was defined based on ICD-10 diagnosis codes.

Results: A total of 113 patients (76% men) with oesophageal (n=59) or gastric cancer (n=54) were included. At baseline, 17% met the criteria for severe and 25% for moderate malnutrition. The median weight loss from baseline to surgery was 0% (-2.6-1.6). The highest prevalence of malnutrition and most extensive weight loss was two weeks after discharge: 50% of the patients met the criteria for severe malnutrition and a median weight loss 5.3% (2.4-8.1). On the fifth postoperative day, 56% had adequate energy intake, 41.5% had adequate protein intake, and 39% had adequate energy- and protein intake.

Conclusion: This study observed a lower prevalence of preoperative malnutrition and weight loss than previous studies. Our findings may emphasise the importance of early and close follow-up by dietitians. However, postoperative weight loss and malnutrition remain significant concerns, with low adherence to nutritional recommendations on the fifth postoperative day potentially contributing to these outcomes. These insights highlight the need for further research and guidelines to optimize this patient group's nutritional treatment and outcomes.

Number of words (from introduction to conclusion): 300

Funding sources and conflicts of interest: None

Saved as: KEFF-konferansen: abstrakt – Larsen

Post-weaning results from a randomized controlled trial on weight and cardiometabolic risk factors - effects of breastfeeding promotion intervention and dietary treatment in postpartum women with overweight and obesity

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Background: Postpartum women have increased risk of weight gain, potentially elevating risk of future cardiometabolic disease. Breastfeeding has been proposed to reduce this risk.

Aim: The aim was to examine the effects of a breastfeeding promotion intervention (BPI) and a dietary treatment (Diet) for weight loss on body weight and cardiometabolic risk factors after weaning.

Design: We used a 2x2 factorial design to assess independent and combined effects of BPI and Diet. Pregnant women (n=156) with a pre-pregnancy BMI=25-35 kg/m^2 were recruited and randomly assigned to four groups: BPI, Diet, both treatments, or no treatment. We measured body weight, body composition, waist and hip circumferences, markers of glucose and lipid metabolism, and blood pressure at 2 weeks and 6 months postpartum, and after weaning (>12 months postpartum). Data were analyzed using linear mixed models.

Results: The post-weaning visit included 89 women. Among all women, >75% breastfed for 12 months or longer. Among women with BPI, median (25, 75 percentile) duration of breastfeeding was 14.0 (11.0, 20.0) months, while women without BPI breastfed for 14.5 (12.5, 19.5) months (P=0.31). There were no effects of BPI on breastfeeding duration, use of infant formula, or any other outcome at 6 months postpartum or post weaning. Reductions in body weight and percentage fat mass from Diet at 6 months postpartum (P<0.001) were still statistically significant post weaning (P<0.05). Favorable effects on waist and hip circumference, fasting glucose and insulin concentrations observed at 6 months postpartum (P<0.05) were no longer evident post weaning and no effects were observed on blood lipids or blood pressure.

Conclusion: BPI as implemented among these long-breastfeeding women did not affect breastfeeding duration, body weight, or cardiometabolic risk factors. Diet resulted in a reduction in body weight and percentage fat mass at both 6 months postpartum and post weaning.

Antall ord (fra introduksjon t.o.m konklusjon): 298

Finansieringskilder og interessekonflikter: Norges forskningsråd, Stiftelsen Dam via Norske Kvinners Sanitetsforening, Oslo Universitetssykehus, Throne Holsts stiftelse for

ernæringsforskning og Universitetet i Oslo. Kirsten B. Holven har mottatt personlige honorarer fra Sanofi, ikke relatert til innholdet i dette manuset. De andre forfatterne erklærer ingen potensielle interessekonflikter.