

Project proposal: Nutrient status prior to birth and during childhood among young adult patients with Inflammatory Bowel Disease (IBD)

We are looking for one or two pregraduate students for a research year or master thesis project

Background. Micronutrient status has been reported to be disturbed among patients with chronic diseases such as inflammatory bowel disease (IBD). However, reports are conflicting and the extent to which any changes results from the disease or is involved in disease development is uncertain. Children may be more affected than adults due to higher demand during growth¹.

Aim. Describe micronutrient status in IBD among children and young adults and investigate the role of micronutrient status prior to birth and during childhood/adolescence in disease development using the Copenhagen Primary Care Laboratory (CopLab) database and the Danish Medical Birth Register (MBR)/CopLab Pregnancy database (CopLabPreg).

1. Review current literature on micronutrient status and risk-factors among IBD adult/children (literature review)¹
2. Describe pre-disease micronutrient status among IBD adult/children
3. Describe maternal/paternal micronutrient status and risk of IBD among the offspring

Methods. The Copenhagen Primary Care Laboratory (CopLab) database contains all test analyses results (n=176,000,000) from 2000 to 2015 from the Copenhagen General Practitioners' Laboratory (CGPL) covering the Copenhagen area. During 2017 we have merged data from the CopLab Database with the Danish Medical Birth Register (MBR) from Sundhedsdatastyrelsen and formed the CopLab Pregnancy (CopPreg) database which contains pregnancies, their offspring and the fathers, with clinical test results from the CopLab database and pregnancy and birth outcome information from MBR. The MBR contains data on all live and stillbirths by women with residence in Denmark and giving birth in Denmark. These include pregnancy health information, maternal characteristics and health status, delivery and birth outcomes and characteristics of the newborn.

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Practical Information. The study can be performed as a candidate/ research year study (with the possibility of continuing into a PhD-project). A candidate/student with interest for nutrition and statistics is preferred (e.g. Health Research (Folkesundhedsvidenskab), Medicine, or Nutrition). Two students working on their own project, but collaborating on methods, interpretation, etc., are preferred. You will be involved in describing the study, applying for relevant permissions and expenses/economy. The study may be performed at KU and/or SDU. Data access and analyses will take place at KU.

If interested please send us an email marked with "Project proposal CopLab IBD"

1. Fritz J, Walia C, Elkadri A, et al. A Systematic Review of Micronutrient Deficiencies in Pediatric Inflammatory Bowel Disease. *Inflamm Bowel Dis*. 2018.