

Nutrition biomarkers and nutrigenetics in the Swiss Kidney Project on Genes in Hypertension

Diet is known to play a key role cardiometabolic health and to influence the risk of many common chronic diseases. It is difficult and challenging to measure with precision dietary intake of people.

The aim of the project is to explore the link between objective nutrition biomarkers (blood or urine measurements) with genetic variants and cardiometabolic phenotypes in the general Swiss adult population.

The Swiss Kidney Project on Genes in Hypertension is a multicentric, population-based cohort including 1128 participants from three Swiss regions (Vaud, Geneva and Bern). The project is embedded within the European Project on Genes in Hypertension (EPOGH). A rich collection of objective nutrition biomarkers (serum ferritine, vitamin D, calcium, magnesium, zinc, manganese, full blood count, urinary Na, K, iodine, calcium, magnesium, zinc and manganese and many others) has been assessed at baseline and during the 3-year follow-up examination. Genome-wide genetic and epigenetic markers are available thereby allowing to explore nutrigenetics and nutriepigenetics. Blood pressure, pulse wave velocity and anthropometric measurements are available in all participants.

This project will help further our understanding of the nutrition status of the Swiss adult population and its link with cardiometabolic risk.