

FRUIT CONSUMPTION AND SELECTED GASTROINTESTINAL CANCERS MORBIDITY IN POLAND IN THE YEARS 1990–2012



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BACKGROUND

Fruit are sources of dietary fibre, many vitamins, minerals, and other bioactive compounds which could have a protective role in carcinogenesis.

Diet containing high amounts of fruit is identified as being associated with some cancers risk reduction. Data from the literature suggest that it may reduce, among others, the risk of gastric, esophageal, colorectal, pancreatic and liver cancer.

AIM OF THE STUDY

The aim of the study was to examine the relationship between trends in fruit consumption after the economic transformation and gastric, pancreatic, colorectal, liver and esophageal cancer morbidity in Poland.

METHODS

The study was based on gastric, pancreatic, colorectal, liver and esophageal cancer incidence rates derived from the National Cancer Registry in 1990–2012.

Data on fruit consumption (in kg/person/year) were derived from the national food balance sheets.

Spearman correlation coefficients were used to estimate the relationship between the examined variables.

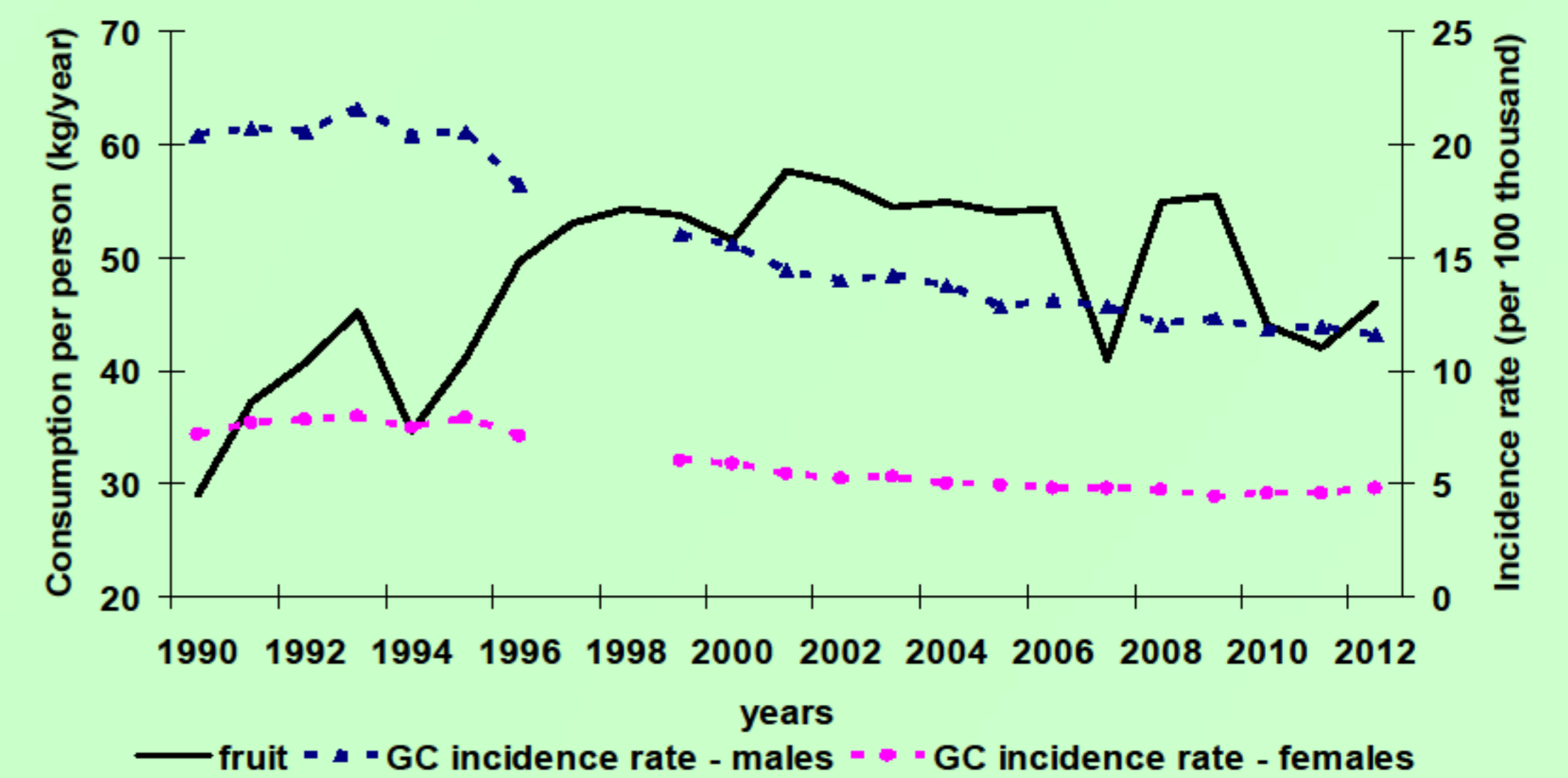
RESULTS

In 1990–2009 fruit consumption in Poland increased from 29.0 to 55.5 kg/person/year. It was somewhat lower in the last 3 analyzed years – 46.0 kg/person/year in 2012. The reason for this was mainly the reduced harvest at this time.

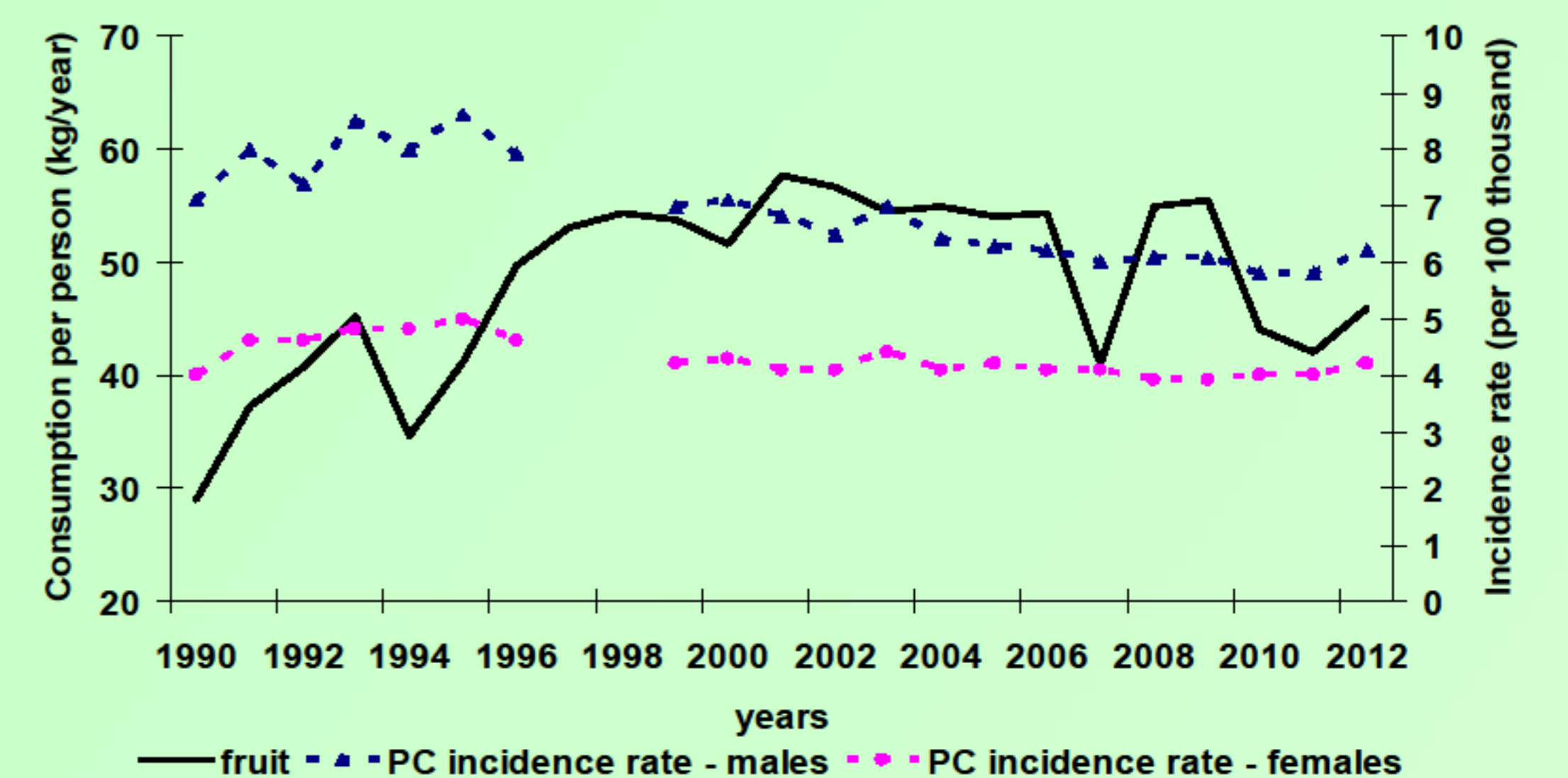
In the same period there was observed the decrease of gastric (GC) and liver cancer (LC) incidence rate and since the mid-90s of the twentieth century also the incidence of pancreatic (PC) and esophageal cancer (EC) declined. The colorectal cancer (CRC) morbidity continues to grow, but to a lesser degree than in previous years.

Adverse correlations were found between fruit consumption and gastric (-0.41 for males and -0.45 for females), pancreatic (-0.36 for males and -0.39 for females), liver (-0.52 for males and -0.40 for females), and esophageal cancer (-0.14 for males, correlation coefficient not statistically significant for females) incidence rates. There was no important correlation between fruit consumption and colorectal cancer morbidity during analyzed period.

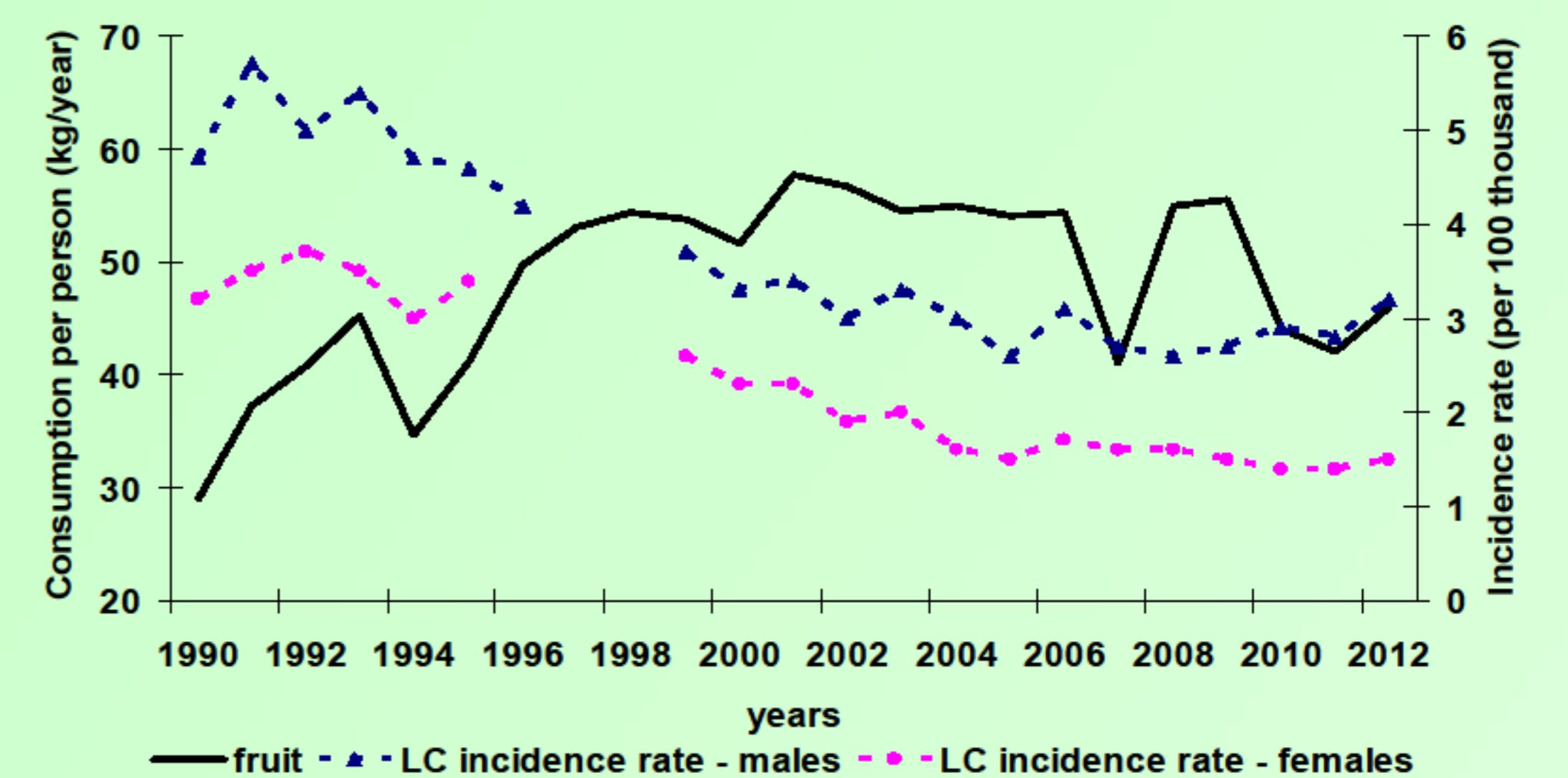
Fruit consumption and gastric cancer (GC) morbidity



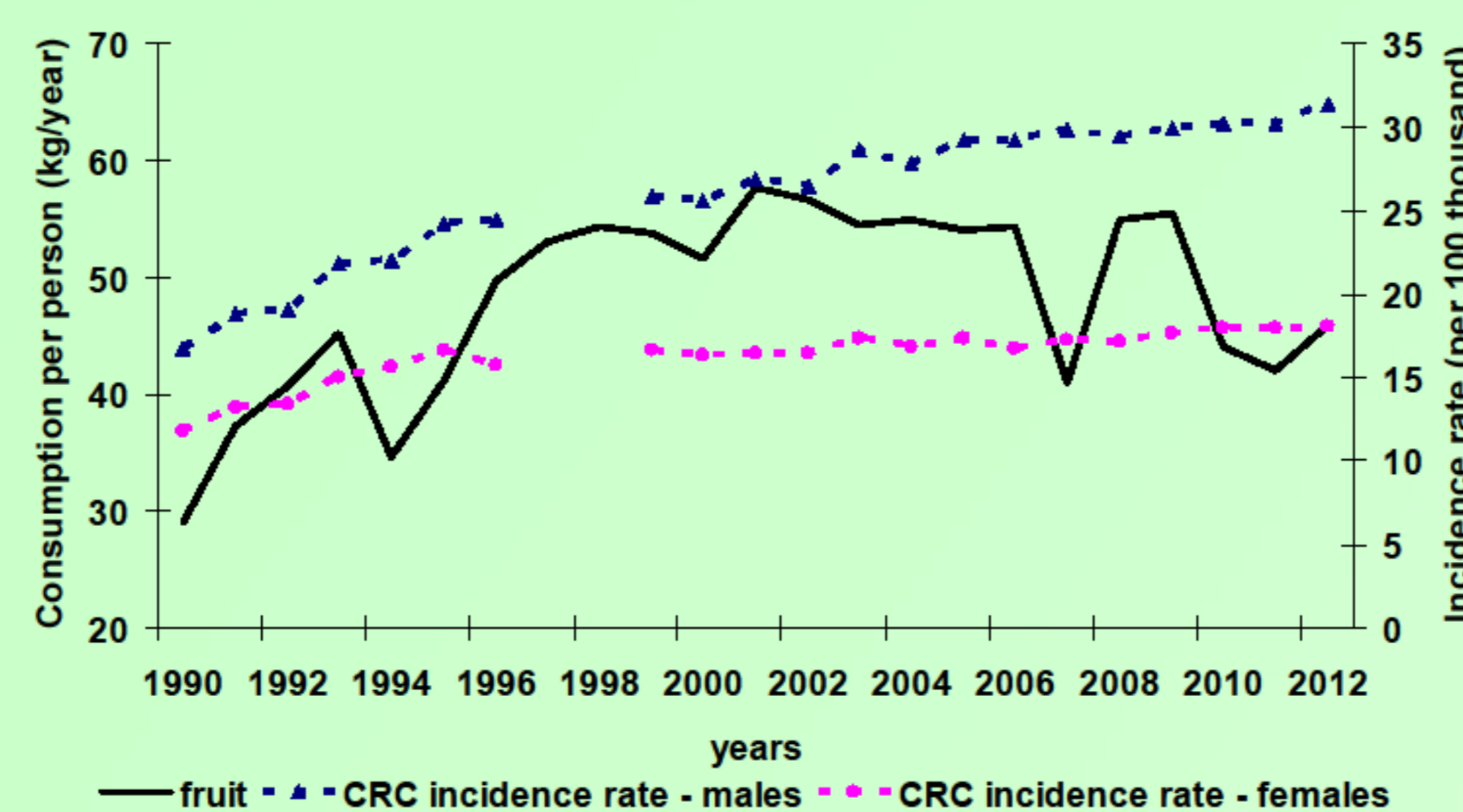
Fruit consumption and pancreatic cancer (PC) morbidity



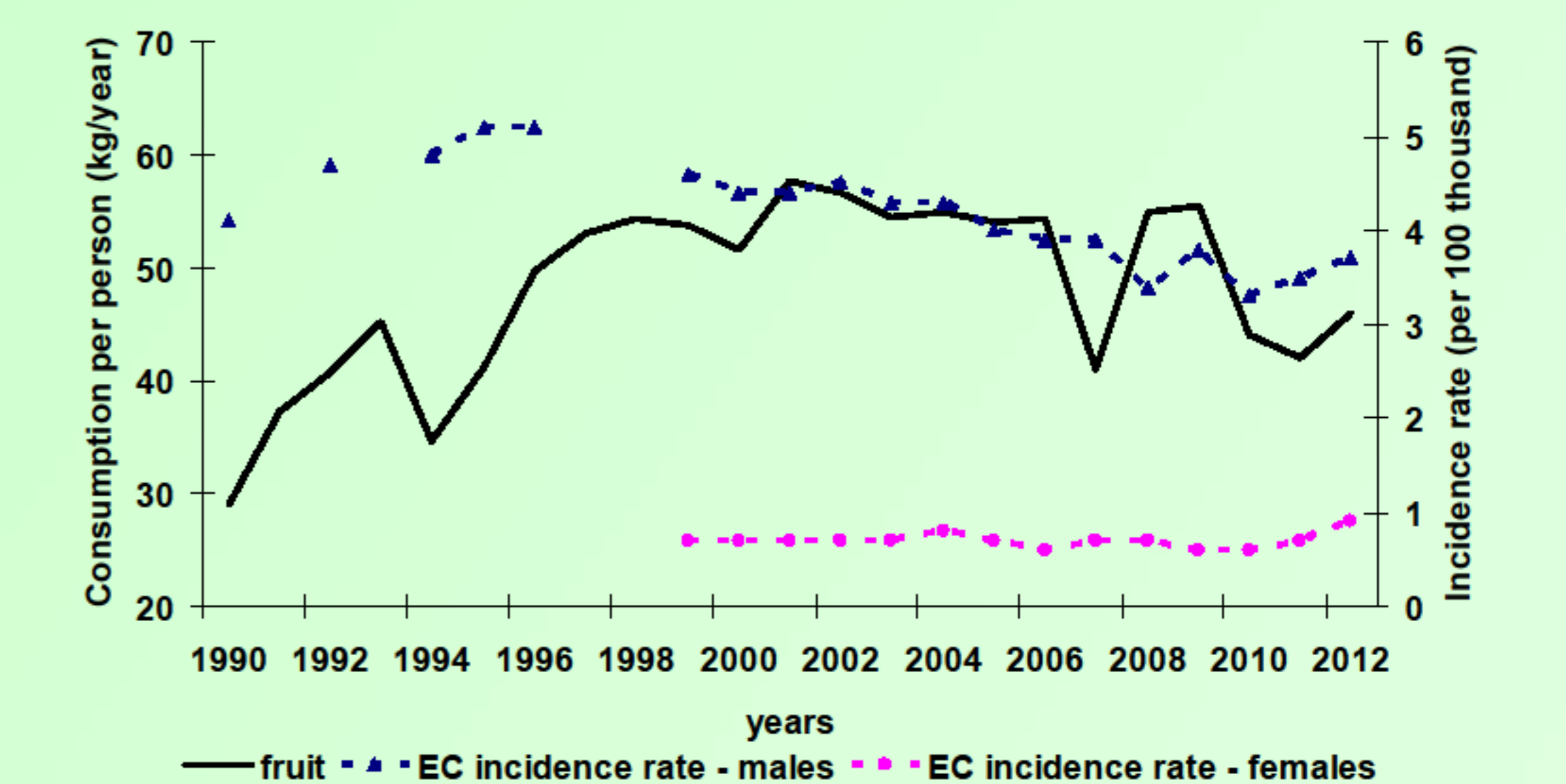
Fruit consumption and liver cancer (LC) morbidity



Fruit consumption and colorectal cancer (CRC) morbidity



Fruit consumption and esophageal cancer (EC) morbidity



CONCLUSIONS

- ✓ The increase in fruit consumption in Poland could favourably affect some gastrointestinal cancers such as gastric, pancreatic, liver and esophageal cancer morbidity in Poland and probably was one of the reasons of the observed decline in these cancers incidence in recent years.
- ✓ Furthermore positive trends in fruit consumption could influence on the reduction in the rate of increase of colorectal cancer incidence.

