in food consumption surveys? The answer in Switzerland.

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Background

Due to market globalization and high availability of various foods throughout the year, adjustment for seasonality at food level may have become unnecessary.

Objective

To describe food consumption across seasons using data from the first National Nutrition Survey in Switzerland.

Methods

- National population-based cross-sectional survey included the three linguistic regions of Switzerland.
- Data collection: from January 2014 to February 2015.
- 2 non-consecutive computer-assisted 24-hour dietary recalls (24HDR) using GloboDiet.
- Daily intakes were calculated for 24 food groups (*see below*). In addition, for five rarely consumed groups (e.g. fish) data were dichotomized (consumed vs. not consumed).
- Seasonal variations were estimated using quantile regression (P50 to P95) for clustered data, or mixed logistic regression. Both models were adjusted for sex, age, weekdays, BMI, linguistic regions, smoking, education, household size and income.

Conclusion

- **'Junk food seasonality'?**: large and significant seasonal variations were mainly observed in sugar and energy dense food groups, such as beer, soft drinks, ice-cream, cakes, chocolate products and biscuits.
- Seasonality was observed for 10 out of 24 food groups. The largest seasonality was observed for food groups that were not frequently consumed. Therefore, adjustment for seasonality at food group level may still be necessary but may have modest impact.
- Other factors, such as variations at nutrient level, should also be taken into account to comprehensively assess the seasonality in diet.
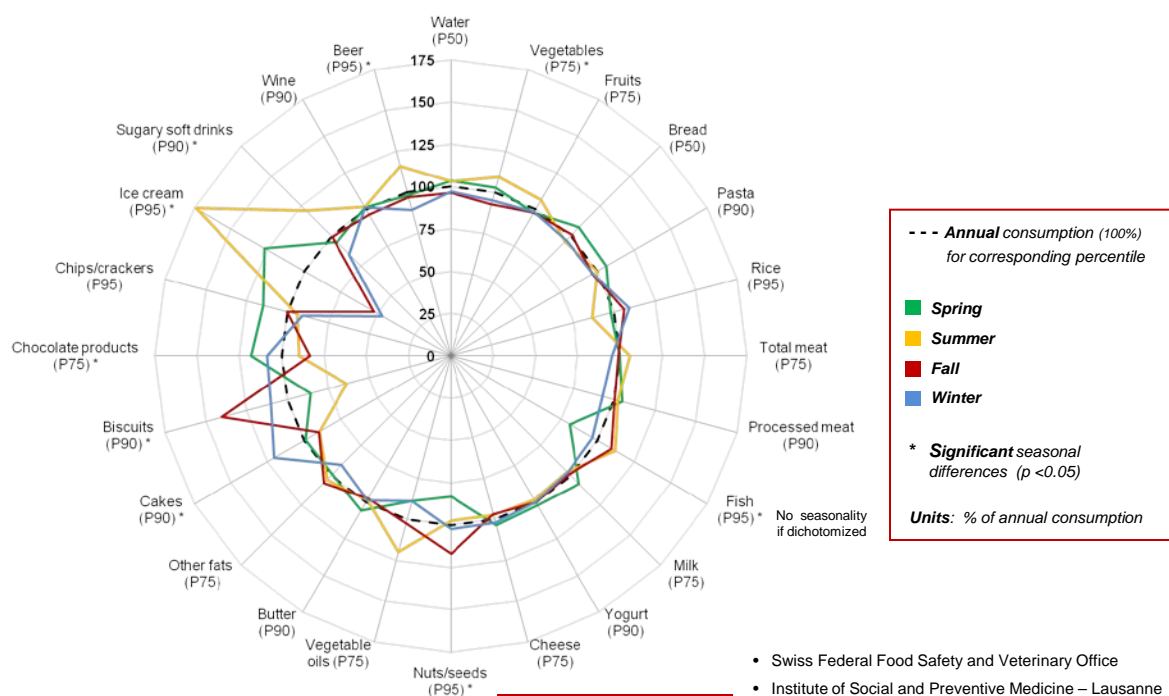
Results

- **2019 adults** aged 18-75 years, 54.1% of women.
- Mean BMI 25.0 kg/m^2, 31% overweight, 13% obese.

Distribution of the 4,038 24HDR by season
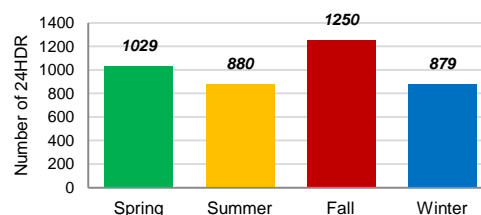
Seasonal variations for 24 food groups

Seasonal daily intakes are presented in proportion to the annual intakes for the corresponding percentile (100%). Percentiles were adjusted for sex, age, weekdays, BMI, linguistic regions, smoking, education, household size and income. Relevant adjusted P50 to P95 have been chosen according to data distribution as most foods were not consumed by everyone in the 2 recorded days.